International Journal of Information, Business and Management

International Journal of Information, Business and Management

ABOUT JOURNAL

The International Journal of Information, Business and Management (IJIBM) was first published in 2009, and is published 4 issues per year. IJIBM is indexed and abstracted in **ROAD, OALib, Ulrich's Periodicals Directory, ProQuest (ABI/INFORM Global) , ZORA (Zurich Open Repository and Archive), IndexCopernicus, JournalSeek, New Jour, getCITED, Directory of Research Journals Indexing, Open J-Gate, Universal Impact Factor, CiteFactor, ResearchBib, EBSCO Open Access Journals, Scientific Indexing Service, InnoSpace - SJIF Scientific Journal Impact Factor, The Index of Information Systems Journals, National Central Library Taiwan, National Library of Australia , National Science Library (Chinese Academy of Sciences), German National Library of Economics, Eurasian Scientific Journal Index, INTERNATIONAL INSTITUTE OF ORGANIZED RESEARCH (I2OR), Stanford University (USA), The University of New South Wales (Australia)**. Since 2013, the IJIBM has been included into the ProQuest (ABI/INFORM Global) list. Since 2014, the IJIBM has been included into the National Science Library (Chinese Academy of Sciences) one of the top databases in China.

IJIBM is an international journal that brings together research papers on all aspects of Information, Business and Management in all areas. The journal focuses on research that stems from academic and industrial need and can guide the activities of managers, consultants, software developers and researchers. It publishes accessible articles on research and industrial applications, new techniques and development trends.

IJIBM serves the academic and professional purposes for those such as scientists, professionals, educators, social workers and managers. It provides new methodology, techniques, models and practical applications in various areas.

International Journal of Information, Business and Management

CONTENTS

International Journal of Information, Business and Management

STUDY TO ASSESS JOB SATISFACTION, ORGANIZATIONAL COMMITMENT AND TURNOVER INTENTION IN THE JORDANIAN ARCHITECTURE SECTOR

Iman Bilto[1], Ghaleb J. Swies[2] , Lilana S. Sukkari[3], Rateb J. Swies[4]

[1] Department of Civil Engineering. The University of Jordan,11942, Amman, Jordan Email: imanbelto@hotmail.com

[2]Department of Civil Engineering.   The University of Jordan,11942, Amman, Jordan Email: Gsweis@ju.edu.jo

[3] Department of Business Administration. The University of Jordan, 11942, Amman, Jordan *Email: sulilana@hotmail.com

[4] Department of Business Administration. The University of Jordan, 11942, Amman, Jordan *Email: r.sweis@ju.edu.jo

Abstract

This research explored the effect of job satisfaction and organizational commitment on turnover intentions among architects in the Jordanian architecture sector. The researcher went through previous studies and then proposed the hypotheses to be tested. Data was collected from a sample of 128 architects through self-report online questionnaire. Results indicated that respondents were moderately satisfied with their jobs, moderately committed to their organizations and moderately considering leaving their jobs. Further analysis showed that work on present job, pay, supervision and affective commitment had negative effect on turnover intention, while people on present job, opportunities for promotion, normative commitment and continuance commitment did not have any effect on turnover intention. It is recommended for organizations to reconsider how much they are paying their employees. Increasing their salaries and opportunities for promotion will definitely lead to more satisfied employees and as a result decrease their turnover intentions**.**

Introduction

As, human resource is one of the main resources any organization has, it is important to maintain and enhance such resource (Ekmekçi, 2011), and the fact that employees have very high impact on organizations is a reason for focusing on improving their satisfaction and commitment, hence reducing their turnover. Especially that turnover and turnover intentions are actually extremely disadvantageous to organizational performance due to the loss of knowledge and replacement costs (Cascio and Boudreau, 2011).

One of human resource management concerns is employees' job satisfaction (JS). JS is a very important attribute that is frequently measured by organizations, as it represents how employees feel about their jobs (Brodke, et al., 2009). Furthermore, Job satisfaction is important as it can affect employees' absenteeism, loyalty and productivity (Aziri, 2011) and JS can be materialized when

employees receive the benefits they expect (Saeed, et al., 2014).

Another concern is employees' organizational commitment (OC). Commitment is an important factor in understanding the behavior of employees (Mowday, et al., 2013). Recent organizational cultural and structural changes have made OC more pertinent than ever. OC is how employees are attached to their organizations, and this attachment can be experienced in several ways, as a result defining one's reaction towards his organization (Becker, et al., 2009).

Employee turnover intention (TI) is also one of the major problems facing human resource management. The 21st century witnessed an increase in organizations' concerns regarding the retention of their employees (Lumley, et al., 2011). Employee turnover can be caused by many factors, such as instability in economy, low salaries, working conditions and employee dissatisfaction in general (Jadayil, et al., 2013).

This research aims to go through the topic of JS, OC and TI. More specifically, it aims to measure the level of the three aspects and to investigate the effect of JS and OC on TI among architects in the Jordanian architecture sector.

Background

*J*ob satisfaction and turnover intention

Job satisfaction is constantly found to be having negative relationship with TI, as many researchers indicated that employees who are dissatisfied with their jobs are more likely to leave their organizations than satisfied employees (Alniacik, et al., 2011; Arnold and Feldman, 1982; Aydogdu and Asikgil, 2011; Jyoti, 2013; Tarigan and Ariani, 2015; Tnay, et al., 2013; Yücel, 2012).

In another study the relationship between JS and TI was moderated by satisfaction with work place culture. The findings of this study confirmed the negative relationship between JS and TI. It was also found that even when holding JS constant, higher workplace cultural satisfaction will lower TI (Medina, 2012).

Laschinger (2012) in his study on newly graduate nurses in Ontario hospital, aimed to investigate factors affecting JS and TI. Results showed that the nurses were dissatisfied with their work environment. Thus, management is advised to consider better strategies that would improve satisfaction and reduce TI. In another research, Alsaraireh, et al. (2014) studied JS and TI among Jordanian nurses, and their result was consistent with others on having a negative relationship between JS and TI.

Olusegun (2013) investigated the influence of JS on TI of Library Personnel in selected universities in South West Nigeria. Results showed significant effect of JS on TI. The researcher provided recommendations to improve JS such as to ensure that salaries and allowances are paid promptly, good working relationships are established among the workers and on the job benefits like housing loans and medical services are provided. Consequently, this study resulted in that there is a positive effect of job satisfaction on employee turnover intention.

H0: There is no statistically effect of job satisfaction (people on present job, opportunities for promotion, pay, supervision, work itself) on employee turnover intention.

Organizational Commitment and Turnover Intention

The importance of commitment comes in its reliable ability to predict some behaviors, such as turnover

(Mowday, et al., 2013). Many studies showed a negative relationship between OC and TI (Hussain and Asif, 2012; John P Meyer and Allen, 1991; Salleh, et al., 2012; Tarigan and Ariani, 2015).

When Saeed, et al. (2014) studied the effect of OC on TI, results were unlike the usual. OC was found to have an insignificant effect on TI. They provided an explanation for such result saying that OC is not the only cause for TI, and people nowadays would not reject any better opportunity, especially with the late economic conditions. Thus, making OC no more affective in decreasing TI.

Pepe (2010) found a significant negative relationship between AC and TI. Alniacik, et al. (2011) results showed negative effect of AC on TI. Other studies revealed that AC is the strongest predictor of turnover (Adenguga, et al., 2013; Lalonde and Mobilité, 2000; Law, 2005; Petter Amdam, et al., 2007). While in a study conducted by Bhat (2012) the relationship between AC and TI was proven to be week.

Continuance commitment had an insignificant relationship with TI (Bhat, 2012). Law (2005) found the same result when he conducted his research on public accountants.

In the study conducted by Tarigan and Ariani (2015) all three components of commitment; AC, NC and CC were found to have significant effect on TI. Same result was obtained by Aydogdu and Asikgil (2011), however their results showed that NC had the weakest effect on TI, while CC had the strongest effect on TI. Consequently, this study resulted in that there is a positive effect of organizational commitment on employee turnover intention.

H02: There is no statistically significant effect of organizational commitment (affective commitment, normative commitment, continuance commitment) on employee turnover intention.

*J*ob satisfaction, organizational commitment and turnover intention

Job satisfaction, organizational commitment and turnover intention in earlier studies where linked to many other factors. In a study conducted by Alniaçik, et al. (2013) the impact of person-organization fit on the relationship between JS, OC and TI was examined. Results revealed that the level of person-organization fit has a significant effect on the relationship between JS and TI, but no such effect was found on the relationship between AC and TI.

While Rai (2013) studied the impact of organizational justice on JS, OC and TI. He suggested that in order to achieve JS and OC, and reduce TI, organizations should focus on developing programs, polices and leadership styles that encourage fairness. Jyoti (2013) measured the impact of organizational climate on JS, OC and TI. In a study conducted by Adenguga, et al. (2013) on Private Universities' Employees in Nigeria, JS was found to be a good predictor of both OC and TI.

Many earlier studies have shown that JS and OC are the two most important antecedents of TI. In his study Yücel (2012) aimed to study the relationship between JS, OC and TI. His results showed that JS is considered an important antecedent of OC and TI.

According to Tarigan and Ariani (2015) the relationship between JS, OC and TI is very complex. JS is one of the factors that contribute to employees' TI. Their results indicated that JS has an indirect effect on TI through OC. OC is found to be an important predictor of turnover.

The study of the relationship between JS, OC and TI has been conducted on many industries. Tnay, et al. (2013) applied the study on the production industry in, while Alniaçik, et al. (2013) gathered data from a sample of 200 employees working at higher educational institutes in Turkey. A study

conducted on call center workers in Pakistan revealed that females are less committed to their organization, thereby suffering from dissatisfaction because they are disgruntled with existing HR practices (Malik, et al., 2013).

However it has been clarified after reviewing the related literature (Sweis, et al., 2008; Rumman, et al., 2009; Sweis, 2009; Sweis, et al., 2009; Sweis and Fellaq, 2011; Sweis, et al., 2011; Watts, et al., 2013; Sweis, et al., 2013; Sweis, et al., 2014; Sweis, et al., 2014; Sweis, et al., 2014; Sweis, 2015; Sweis, et al., 2015; Sweis, et al., 2015; Alawneh, and Sweis, 2016; Omar, et al., 2016; Sweis, et al., 2016; Sweis, et al., 2016; Hussein, et al., 2016; Arafah , et al., 2017; Sweis and Saleh, 2017; Sweis, et al., 2017; Sweis, et al., 2017; Androwis, et al., 2018; Jandali and Sweis, 2018; Jandali and Sweis, 2018; Saleh and Sweis, 2018; Obeid, et al., 2018; Sweis, et al., 2018; ; Sweis, et al., 2018; Nimeh, et al., 2018; Hatamleh, et al., 2018; Yaseen, et al., 2018; Alsayyed, et al., 2019; Sweis, et al., 2019; Sweis, et al., 2019) and as far as to the author's knowledge, that there is lack of research when it comes to the architecture sector in Jordan in general, and among architects in specific. Therefore, this study aims to contribute to the literature and fill the gap by focusing on such population.

Method

The theoretical model for this study consists of three variables, job satisfaction, organizational commitment as independent variables and turnover intention as dependent variable (Figure 1).
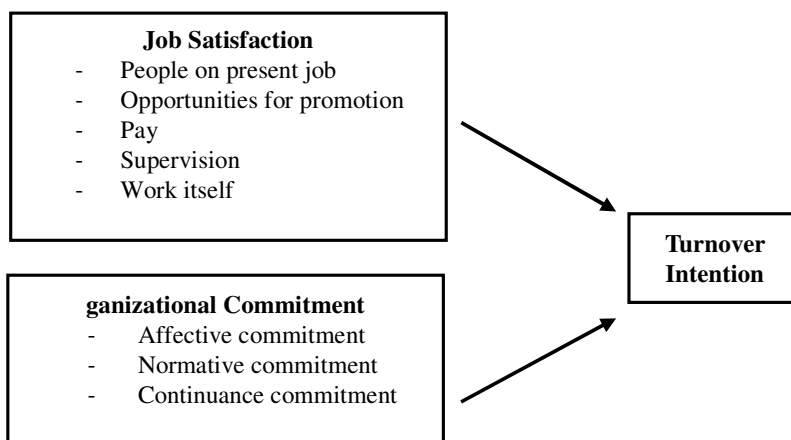
Figure 1. Schematic Diagram for Variables and their Relationships

The population for this research includes all the employed working architects in Jordan. According to Jordan Engineers Association (JEA), there are 10545 architects currently registered in the association (knowing that no architect can sundial profession without being a registered member in JEA), 5065 registered as working architects. Out of the 5065, around 1640 have self - owned engineering offices, 1764 are working abroad and 1661 are considered as working employees.

Out of the population that consisted of 1661 working architects registered in JEA, A total of 128 individuals participated in this study by voluntarily filling in the questionnaire after they were contacted either by email or phone.

Determining the appropriate sample size is really important as it can affect the quality of research results. According to Cochran (2007) the estimation of population variance for research purposes is done by estimating the variance of variables, continues or scaled variables in our case. But there was no need to do the calculations since Kotrlik and Higgins (2001) provided a table for determining the minimum required sample size based on Cochran's formula. Accordingly, for a population size of 1661 in our case, and for continuous data with alpha equals to .05 the minimum required sample size is between 110 and 112, however the actual respondents were 128.

Quantitative method is appropriate to achieve the purposes of this research (Creswell, 2013). Questionnaire was developed and data was collected and analyzed to assess the level of job satisfaction, organizational commitment and turnover intention, and to study the relationships among them as clarified in research model.

The survey was electronically distributed via online survey using Google Drive. There are many benefits of conducting an online survey, starting with the fact that the participants can be reached easily and quickly via internet, avoid additional costs of printing and distributing, obtain electronic form of data automatically, thereby saving a lot of time and money (Sue and Ritter, 2011). Not to mention that an attractive form of the survey can be obtained, and avoid any missing data since you can make all the questions required. Online surveys are even more useful when having a closed population with existing list of members (Sue and Ritter, 2011).

In order to measure the independent variable (job satisfaction). JS was defined by referring to the Job Descriptive Index (JDI) developed by K. Smith, Hulin (1969).

JDI measures satisfaction with five facets of job satisfaction. These facets are: pay, promotion, supervision, co-workers and the work itself. The scale consists of phrases or objectives, and the respondents select "Yes", "No" or "?" responding to these phrases. "Yes" means the phrase describes the situation of the job, "No" means the opposite and "?" means that the respondent can't decide.

In order to measure the independent variable (organizational commitment). The researcher defined OC by referring to the three component model of Meyer and Allen (1993).

The most common measurement of OC in the literature is the survey based on the Three-Component Model (TCM) of commitment. The TCM Survey measures three forms of employee commitment to an organization; affective, normative and continuance commitment. There are two versions of the TCM Employee Commitment Survey, original and revised. For this research the original form was used. This version contains eight items for each the three commitment scales. Both 5-point and 7-point disagree-agree response scales work well for this survey. It was designed, therefore, to use 5-point Likert scale. Finally, it is preferred to include the commitment measures in a separate section among the survey, as mixing content can lead to artificial inflation of the relationship between scores on the measures. And for purposes of survey administration and to avoid biased responses, it is recommended that the items from the three scales be mixed (John P. Meyer and Allen, 2004).

In order to measure the dependent variable (Turnover Intention), turnover intention scale based on the work of Mobley, et al. (1978) was used.

Goodness of research measures was assessed by checking the reliability and validity of scales as follows;

In order to assess the reliability of the measurement scales, internal consistency test is used. One way to determine internal consistency is using Cronbach's alpha. The statistical data in (Table 1) , indicates that the value of Cronbach's alpha for all research variables is above the required level, as Cronbach's alpha coefficient normally ranges between 0 and 1, and the closer it is to 1.0 the greater the internal consistency of the items in the scale (Gliem and Gliem, 2003). However, Hair, et al. (2006) suggested that the minimum required is 60%, and this shows that the questionnaire enjoys a high degree of reliability.

The researcher examined content validity of measures by presenting the developed measure to a panel of judges who attested to the content validity of the instrument.

Table 1. Cronbach's alpha for the Study fields

Variables	Statements	Cronbach's Alpha
People on Your Present Job	18	0.81
Work on Present Job	18	0.89
Pay	9	0.88
Opportunities for Promotion	9	0.88
Supervision	18	0.88
Total	**72**	**0.94**
Employee Continuance Commitment	8	0.66
Employee Affective Commitment	8	0.64
Employee Normative Commitment	8	0.63
Total	24	**0.62**
Employee turnover intention	3	**0.85**

Results

Descriptive statistics, which show the mean and standard deviation for each research variable, are presented in (Table 2) which shows that the mean of job satisfaction, ranged between (1.41 – 0.81), where the whole axis earned a total mean of (1.15), which is a moderate level. Variable 1 (people on your present job) earned the highest mean reaching (1.41), with a standard deviation of (0.39), which is a high level, variable 5 (supervision) came in second place. It earned a mean of (1.37), and a standard deviation of (0.50), which is a high level, variable 2 (work on present job) came in third place. It earned a mean of (1.26), and a standard deviation of (0.50), which is a moderate level. Variable 3 (pay) came in fourth place. It earned a mean of (0.91) and a standard deviation of (0.68), which is a moderate level, and variable 4 (opportunities for promotion) came in the last place. It earned a mean of (0.81) and a standard deviation of (0.61) which is a moderate level too.

Table 2. Mean, Standard deviation, Importance Rank and Level of Satisfaction

No	Statements	Mean	Std. Deviation	Importance Rank	Level of Satisfaction
1	People on Your Present Job	1.41	0.39	1	High
5	Supervision	1.37	0.50	2	High
2	Work on Present Job	1.26	0.50	3	Moderate
3	Pay	0.91	0.68	4	Moderate
4	Opportunities for Promotion	0.81	0.61	5	Moderate
	Total	**1.15**	**0.38**	**-**	**Moderate**

These results indicate that in general, architects in Jordan are moderately satisfied with their jobs, in more details; they are highly satisfied with their supervision and coworkers, and moderately satisfied with pay, work and opportunities for promotion

As shown in (Table 3) the arithmetic mean, standard deviation, importance rank and level of organizational commitment for the three types of commitment

Table 3. Mean, Standard deviation, Importance Rank and Level of Commitment

No	Statements	Mean	Std. Deviation	Importance Rank	Level of Commitment
2	Continuance Commitment	3.25	0.63	1	Moderate
1	Affective Commitment	3.19	0.54	2	Moderate
3	Normative Commitment	2.99	0.49	3	Moderate
	Total	**3.14**	**0.37**	**-**	**Moderate**

As shown in (Table 3) the mean of employee commitment, ranged between (3.25– 2.99), where the whole axis earned a total mean of (3.14), which is a moderate level. Variable 2 (employee continuance commitment) earned the highest mean reaching (3.25), with a standard deviation of (0.63), which is a moderate level. Variable 1 (employee affective commitment) came in second place. It earned a mean of (3.19), and a standard deviation of (0.54), which is a moderate level, and variable 3 (employee normative commitment) came in third place. It earned a mean of (2.77) and a standard deviation of (0.49), which is a moderate level too.

These results indicate that architects in Jordan are moderately committed to their organizations. And

among the three types of commitment, continuance commitment came in first place, then affective commitment and finally normative commitment.

As shown in (Table 4) the mean of employee turnover intention is (3.03), which is a moderate level.

Table 4.   Mean, Standard deviation and Level of Turnover Intention

Statements	Mean	Std. Deviation	Level of TI
Turnover Intention	3.03	1.08	Moderate

This indicates that architects in Jordan are moderately considering leaving their jobs.

In order to understand the relationship between job satisfaction facets and turnover intention, and the relationship between organizational commitment components and turnover intention, the Pearson correlation matrix was used. Obtained results are shown in (Table 5).

Table 5. Pearson Correlation Matrix

		Turnover intention
People on present job	Pearson Correlation	-.403**
	Sig. (2-tailed)	.000
	N	128
Work	Pearson Correlation	-.517**
	Sig. (2-tailed)	.000
	N	128
Pay	Pearson Correlation	-.440**
	Sig. (2-tailed)	.000
	N	128
Opportunities for promotion	Pearson Correlation	-.437**
	Sig. (2-tailed)	.000
	N	128
Supervision	Pearson Correlation	-.554**
	Sig. (2-tailed)	.000
	N	128
Affective commitment	Pearson Correlation	-.543**
	Sig. (2-tailed)	.000
	N	128

Continuance commitment	Pearson Correlation	-.085-
	Sig. (2-tailed)	.340
	N	128
Normative commitment	Pearson Correlation	-.322[**]
	Sig. (2-tailed)	.000
	N	128

P-values in the table at a level of significance ($\alpha \geq 0.05$) indicate that variables; people on your present job, work, pay, Opportunities for promotion, supervision, AC, NC are significantly and negatively related to TI. While continuance commitment seemed to be the only variable with no significant relationship with TI.

Model summary in (Table 6.a) shows that R Square = 45.6%, meaning that 45.6% of the variation in the dependent variable (turnover intention) is explained by the independent variables (work on present job, pay, supervision, people on your present job, and opportunities for promotion). (Table 6.b) shows that the level of significant is 0.000 meaning that the null hypothesis is rejected and there is an effect of JS on TI.

Table 6.a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.675[a]	.456	.433	.81138

a. Predictors: (Constant), supervision, pay, Opportunities, people, work

Table 6.b. ANOVA[b]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.203	5	13.441	20.416	.000[a]
	Residual	80.317	122	.658		
	Total	147.520	127			

a. Predictors: (Constant), supervision, pay, Opportunities, people, work

b. Dependent Variable: employee_ turnover_ intention

From (Table 6.c), P-values of 2.7% for present work, 0.1% for pay and 0.1% for supervision at a level of significance ($\alpha \geq 0.05$) indicates that these variables have significant effect on TI. Moreover, the negative beta values for the three variables indicate that these variables have negative effect on TI.

9

Table 6.c. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.337	.292		18.247	.000
	people	-.258-	.220	-.094-	-1.174-	.243
	work	-.420-	.188	-.196-	-2.231-	.027
	pay	-.421-	.118	-.264-	-3.574-	.001
	Opportunities	-.084-	.151	-.048-	-.559-	.577
	supervision	-.700-	.196	-.323-	-3.570-	.001

a. Dependent Variable: employee_ turnover_ intention

Stepwise Multiple Regression is conducted to determine separately the importance of each independent variable (work on present job, pay and supervision) in contributing to the effect on employee turnover intention, (Table 7) shows that the order of entry independent variables in the regression equation, the variable supervision has occupied the first place with amount (30.7%), while pay with supervision was (41.7%), and work on present job with previous variables effect is (44.8%).

Table 7. Stepwise Multiple Regression test to identify the effect of the work on present, pay, supervision on employee turnover intention

Order of entry of independent elements in the equation to predict	R	R^2	F Value D.O.F	Calculated T	Sig
Supervision	.554a	307.	55.908	-4.910-	0.000
Pay	.646b	417.	44.694	-3.922-	0.000
Work on present job	.669c	448.	33.532	-2.637-	0.000

All these results lead to rejecting the null hypothesis and accepting the alternative hypothesis for variables; work on present job, pay and supervision, and accepting the null hypothesis for variables; people on present job and opportunities for promotion.

It is clear from (Table 8.a) that R Square = 30.8%, meaning that 30.8% of the variation in the

10

dependent variable (TI) is explained by the independent variables (AC, NC, CC). (Table 8.b) shows that the level of significant is 0.000 meaning that the null hypothesis is rejected and there is an effect of OC on TI.

From (Table 8.c), P-values of 0.00% for affective commitment at a level of significance (α ≥0.05) indicates that the effect of the variable AC on TI is significant. Moreover, the negative beta value for this variable indicates that it has a negative effect on TI.

Table 8.a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.555[a]	.308	.291	.90761

a. Predictors: (Constant), employee_ Normative, employee_ Continuance,

employee_ affective

Table 8.b. ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.373	3	15.124	18.360	.000[a]
	Residual	102.147	124	.824		
	Total	147.520	127			

a. Predictors: (Constant), employee_ Normative, employee_ Continuance, employee_ affective

b. Dependent Variable: employee_ turnover_ intention

Table 8.c. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.173	.688		10.424	.000
	employee_ affective	-.988-	.165	-.495-	-5.997-	.000
	employee_ Continuance	-.088-	.128	-.051-	-.683-	.496
	employee_ Normative	-.237-	.184	-.107-	-1.290-	.200

a. Dependent Variable: employee_ turnover_ intention

Stepwise Multiple Regression is conducted. (Table 9) shows that 29.5% of variation in TI is explained by AC.

Table 9. Stepwise Multiple Regression test to identify the effect of the employee affective commitment on employee turnover intention

Order of entry of independent elements in the equation to predict	R	R^2	F Value D.O.F	Calculated T	Sig
Employee affective Commitment (AC)	0.543	0.295	52.700	7.259-	0.000

All these results lead to rejecting the null hypothesis and accepting the alternative hypothesis for affective commitment, and accepting the null hypothesis for continuance and normative commitment.

Discussion

Data analysis was carried out using the data analysis package SPSS version 16. Multiple Regression and Stepwise Multiple Regression were used to test the hypotheses. Furthermore, Statistical significance of the hypotheses was accepted at $p \leq 0.05$.

Findings indicate that the questionnaire used to measure JS, OC and TI showed satisfactory properties in terms of both reliability and validity.

Statistical descriptive analysis on the study variables indicated the level of JS, OC and TI. Results showed that architects are moderately satisfied with their jobs in general, more in details; they are most highly satisfied with their coworkers then with their supervision, and moderately satisfied with their work on their present jobs, then with their pay and most least with opportunities for promotion. For OC results showed that architects are moderately committed to their organizations in general, such result is similar to Sallehm, et al. (2012). And their affective, normative and continuance commitments were moderate as well. However, they had higher level of CC than AC and higher level of AC than NC. TI analysis revealed that respondents are moderately considering leaving their organizations.

The testing of the first hypothesis showed that there is a significant effect of JS on TI. This is expected and consistent with earlier studies (Adenguga, et al., 2013; Alniacik, et al., 2011; Aydogdu and Asikgil, 2011; Jyoti, 2013; Olusegun, 2013; Scott, et al., 2006; Tarigan and Ariani, 2015; Yücel, 2012). Variables: work on present job, pay and supervision had negative effect on TI, meaning that the more employees are satisfied with their work, pay and supervision, the less they intent to leave their jobs. While results didn't show any effect of the variables: people on your present job and opportunities for promotion on TI.

The testing of the second hypothesis showed that there is a significant effect of OC on TI, similar to results obtained in researches like (Aydogdu and Asikgil, 2011; Salleh, et al., 2012; Tarigan and Ariani, 2015). However, AC seemed to be the only one to have a negative effect on TI, the more AC increased the fewer employees intended to leave their organizations. This result is consistent with studies

like (Alniacik, et al., 2011; Lalonde and Mobilité, 2000; Law, 2005; Petter Amdam, et al., 2007).

Continuance commitment and normative commitment didn't show any effect on TI. These findings are parallel with results obtained in studies done by (Bhat, 2012; Lalonde and Mobilité, 2000; Law, 2005).

Conclusion

When employees are satisfied with their work and feel committed to their organizations, they tend not to terminate their employment voluntarily. In this research conducted on architects, results showed that employees are moderately satisfied with work on their present jobs, pay and opportunities for promotion. If organizations are really considering decreasing TI among their employees, they should focus on pay more than any other variable, as pay appeared to be the most variable architects are not satisfied with after opportunities for promotion. However, opportunities for promotion had no significant effect on TI, thus it wouldn't make any different if our concern is decreasing TI. And increasing employees' pay will increase their level of affective commitment as well.

Normative commitment didn't appear to have any relationship with TI in our study. However, results indicated that the highest type of commitment among the architects was NC, meaning that they stay with their organizations because they need to, either because the availability of comparable alternatives is limited, or to avoid costs associated with leaving their organizations (John P Meyer, et al., 1993). This is bad as employees are forced to stay with their organizations, and it definitely would reduce their overall performance, increase their absences and have many other results that would affect the organization.

References

Adenuga, R. A., Adenuga, F. T., & Ayodele, K. O. (2013). Organizational Commitment and Turnover Intention among Private Universities' Employees in Ogun State, Nigeria. Open Journal of Education, 1(2), 31-36.

Alawneh, A & Sweis, R. (2016). THE RELATIONSHIP BETWEEN THE EMOTIONAL INTELLIGENCE LEVEL AND THE EFFECTIVENESS OF A PROJECT MANAGER: THE CASE OF JORDAN.

Alniaçik, E., Alniaçik, Ü., Erat, S., & Akçin, K. (2013). Does Person-Organization Fit Moderate the Effects of Affective Commitment and Job Satisfaction on Turnover Intentions?. Procedia-Social and Behavioral Sciences, 99, 274-281.

Alniacik, U., Cigerim, E., Akcin, K., & Bayram, O. (2011). Independent and Joint Effects of Perceived Corporate Reputation, Affective Commitment and Job Satisfaction on Turnover Intentions. Procedia-Social and Behavioral Sciences, 24, 1177-1189.

Alsaraireh, F., Quinn Griffin, M. T., Ziehm, S. R., & Fitzpatrick, J. J. (2014). Job Satisfaction and Turnover Intention among Jordanian Nurses in Psychiatric Units. International journal of Mental Health Nursing, 23(5), 460-467.

Alsayyed, N., Sweis, R., Ghalion, R., El-Mashaleh, M., Amayreh, I., & Albalkhy, W. (2019). The Effects of Training and Motivating Employees on Improving Performance of Construction Companies The Case of Jordan. International Journal of Business and Management. 11. 179-211.

Arnold, H. J., & Feldman, D. C. (1982). A Multivariate Analysis of the Determinants of Job Turnover. Journal of Applied Psychology, 67(3), 350.

Androwis, N., Sweis, R., Tarhini, A., Moarefi, A., & Amiri, M. (2018). Total quality management practices and organizational performance in the construction chemicals companies in Jordan. Benchmarking An International Journal. 25. 00-00. 10.1108/BIJ-05-2017-0094.

Arafah, M., Sweis, R., Abdelqader, B., Mahmoud Saleh, F., & Abdallah, A. (2017). The effect of TQM dimensions on the performance of international non-governmental organisations operating in Jordan. International Journal of Productivity and Quality Management. 21. 443. 10.1504/IJPQM.2017.10005843.

Aydogdu, S., & Asikgil, B. (2011). An Empirical Study of the Relationship among Job Satisfaction, Organizational Commitment and Turnover Intention. International Review of Management and Marketing, 1(3), 43-53.

Aziri, B. (2011). Job Satisfaction: A Literature Review. Management Research and Practice, 3(4), 77-86.

Becker, T. E., Klein, H. J., & Meyer, J. P. (2009). Commitment in Organizations: Accumulated Wisdom and New Directions. Commitment in Organizations: Accumulated Wisdom and New Directions, 419-452.

Bhat, V. A. (2012). Impact of Organizational Commitment on Turnover Intentions in Bpo Sector. Global J. of Arts & Mgmt, 2(3), 3.

Brodke, M., Sliter, M., Balzer, W., Gillespie, J., Gillespie, M., Gopalkrishnan, P., & Yankelevich, M. (2009). The Job Descriptive Index and Job in General: 2009 Revision Quick Reference Guide. Bowling Green, OH: Bowling Green State University.

Cascio, W. F., & Boudreau, J. (2011). Investing in people: Financial impact of human resource

initiatives (2nd ed.). Upper Saddle River, NJ: FT Press

Cochran, W. G. (2007). Sampling Techniques: John Wiley & Sons.

Creswell, J. W. (2013). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches: Sage publications.

Ekmekçi, A. K. (2011). A Study on Involvement and Commitment of Employees in Turkey. Journal of Public Administration and Policy Research, 3(3), 68-73.

.Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis (Vol. 6). Upper Saddle River, NJ: Pearson Prentice Hall.

Hatamleh, M., Hiyassat, M., Sweis, G., & Sweis, R. (2018). Factors affecting the accuracy of cost estimate: Case of Jordan. Engineering, Construction and Architectural Management. 25. 00-00. 10.1108/ECAM-10-2016-0232.

Hussain, T., & Asif, S. (2012). Is Employees' Turnover Intention Driven by Organizational Commitment and Perceived Organizational Support. Journal of Quality and Technology Management, 8(2), 1-10.

Hussein, R., Hiyassat, M., Sweis, R., Alawneh, A., & Al-Debei, M. (2016). Project management factors affecting the

enterprise resource planning projects' performance in Jordan. Journal of Systems and Information Technology. 18. 230-254. 10.1108/JSIT-03-2016-0020.

Jadayil, W. M. A., Mohsen, M. S., & Al-Bashir, A. (2013). Statistical Model Representing Workers Turnover Problem in Third Developing Countries: Jordanian Industrial Sector. International Journal of Human Resource Studies, 3(4), Pages 102-110.

Jandali, D.,& Sweis, R. (2018). Assessment of factors affecting maintenance management of hospital buildings in Jordan. Journal of Quality in Maintenance Engineering. 24. 00-00. 10.1108/JQME-12-2016-0074.

Jandali, D., & Sweis, R. (2018). Factors affecting maintenance management in hospital buildings: Perceptions from the public and private sector. International Journal of Building Pathology and Adaptation. 10.1108/IJBPA-12-2017-0064.

Jyoti, J. (2013), Impact of Organizational Climate on Job Satisfaction, Job Commitment and Intention to Leave: An Empirical Model. Journal of Business Theory and Practice, 1(1), 66.

Kotrlik, J., & Higgins, C. (2001). Organizational Research: Determining Appropriate Sample Size in Survey Research Appropriate Sample Size in Survey Research. Information Technology, Learning, and Performance Journal, 19(1), 43.

Lalonde, P., & Mobilité, B. (2000). The Measurement and Antecedents of Turnover Intentions among It Professionals.

Laschinger, H. K. S. (2012). Job and Career Satisfaction and Turnover Intentions of Newly Graduated Nurses. Journal of Nursing Management, 20(4), 472-484.

Law, D. W. (2005). Interactive Organizational Commitment and Hardiness in Public Accountants' Turnover. Managerial Auditing Journal, 20(4), 383-393.

Lumley, E., Coetzee, M., Tladinyane, R., & Ferreira, N. (2011). Exploring the Job Satisfaction and Organisational Commitment of Employees in the Information Technology Environment. Southern African Business Review, 15(1), 100-118.

Malik, S. A., Bashir, N., Khan, M. M., & Malik, S. A. (2013). Predicting Employees Turnover in Telecom Mobile Communication Call Centers of Pakistan. Middle-East Journal of Scientific Research, 17(4), 481-494.

Medina, E. (2012). Job Satisfaction and Employee Turnover Intention: What Does Organizational Culture Have to Do with It?

Meyer, J. P., & Allen, N. J. (1991). A Three-Component Conceptualization of Organizational Commitment. Human Resource Management Review, 1(1), 61-89.

Meyer, J. P., & Allen, N. J. (2004). TCM employee commitment survey academic users guide 2004. London, Ontario, Canada: The University of Western Ontario, Department of Psychology.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization. Journal of Applied Psychology, 78(4), 538.

Mobley, W. H., Horner, S. O., & Hollingsworth, A. T. (1978). An Evaluation of Precursors of Hospital Employee Turnover. Journal of Applied Psychology, 63(4), 408.

Mowday, R. T., Porter, L. W., & Steers, R. M. (2013). Employee—Organization Linkages: The Psychology of Commitment,

Absenteeism, and Turnover: Academic Press.

Nimeh, H., Abdallah, A., & Sweis, R. (2018). Lean Supply Chain Management Practices and Performance: Empirical Evidence from Manufacturing Companies. International Journal of Supply Chain Management. 7. 1-15.

Obeid, D., Sharaf Eldin, I., M. Sarea, A., Saleh, R., Sweis, R., & Mahmoud Saleh, F. (2018). Linking soft and hard total quality management practices: evidence from Jordan. International Journal of Business Excellence. 14. 49. 10.1504/IJBEX.2018.10009046.

Olusegun, S. O. (2013). Influence of Job Satisfaction on Turnover Intentions of Library Personnel in Selected Univerisities in South West Nigeria.

Omar, B., Hiyassat, M., Sweis, G., Abdallah, A., Saleh, Rawan., & Sweis, R. (2016). Evaluation of green building awareness in the construction industry: the case of Jordan. Interdisciplinary Environmental Review. 17. 209. 10.1504/IER.2016.080236.

Pepe, M. (2010). The Impact of Extrinsic Motivational Dissatisfiers on Employee Level of Job Satisfaction and Commitment Resulting in the Intent to Turnover. Journal of Business & Economics Research (JBER), 8(9).

Petter Amdam, R., Lang, R., Labatmediene, L., Endriulaitiene, A., & Gustainiene, L. (2007). Individual Correlates of Organizational Commitment and Intention to Leave the Organization. Baltic Journal of Management, 2(2), 196-212.

Puangyoykeaw, K., & Nishide, Y. (2015). Organizational Commitment and Turnover Intention in Low-Skilled Immigrant Workers in Thailand: An Empirical Assessment of Need Satisfaction, Job Satisfaction and Overall Life Satisfaction Factors. International Journal of Business and Management, 10(5), p98.

Rai, G. S. (2013). Impact of Organizational Justice on Satisfaction, Commitment and Turnover Intention: Can Fair Treatment by Organizations Make a Difference in Their Workers' Attitudes and Behaviors? International Journal of Human Sciences, 10(2), 260-284.

Rumman, M., Hiyassat, M., Sweis, G., & Sweis, R. (2009). Assessment of droughts in Jordan: The Yarmouk and Zarqa basins. Management of Environmental Quality: An International Journal. 20. 696-711. 10.1108/14777830910990861.

Saeed, I., Waseem, M., Sikander, S., & Rizwan, M. (2014). The Relationship of Turnover Intention with Job Satisfaction, Job Performance, Leader Member Exchange, Emotional Intelligence and Organizational Commitment. International Journal of Learning and Development, 4(2), Pages 242-256.

Saleh, R., & Sweis, R. (2018). Investigation the impact of hard total quality management practices on operational performance in manufacturing organizations: Evidence from Jordan. Benchmarking An International Journal. 25. 10.1108/BIJ-05-2016-0074.

Salleh, R., Nair, M. S., & Harun, H. (2012). Job Satisfaction, Organizational Commitment, and Turnover Intention: A Case Study on Employees of a Retail Company in Malaysia. World Academy of Science, Engineering and Technology, 72, 316-323.

Scott, A., Gravelle, H., Simoens, S., Bojke, C., & Sibbald, B. (2006). Job Satisfaction and Quitting Intentions: A Structural Model of British General Practitioners. British Journal of Industrial Relations, 44(3), 519-540.

Smith, P. C. (1969). The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes.

Sue, V. M., & Ritter, L. A. (2011). Conducting Online Surveys: SAGE Publications.

Sweis, G., Sweis, R., Abu Hammad, A., & Thomas, H.. (2008). Factors Affecting Baseline Productivity in Masonry Construction: A Comparative Study in the US, UK and Jordan. Architectural Science Review. 51. 146-152. 10.3763/asre.2008.5118.

Sweis, G., Sweis, R., Abu Hammad, A., & Rumman, M. (2009). Modeling the Variability of Labor Productivity in Masonry Construction. Journal of Civil Engineering.

Sweis, R. (2009). Some Construction Quality Human-Related Factors in the Jordanian Housing Sector. Architectural Science Review. 52. 48-53. 10.3763/asre.2008.0052.

Sweis, R., Sweis, G., Attar, G., & Abu Hammad, A. (2011). The Relationship between Information Technology Adoption and Job Satisfaction in the Jordanian Construction Industry. IJITPM. 2. 32-52. 10.4018/jitpm.2011040103.

Sweis, R., & Fellaq, M. (2011). Knowledge Management Processes and Effect on Achieving Competitive Advantages: The Case Study of Jordan Telecom Group. 7. 511-526.

Sweis, G., Sweis, R., Imam, R., & Kassab, G. (2013). Customer Satisfaction in Apartment Buildings: The Case of Jordan. Life Sci J- ACTA ZHENGZHOU UNIVERSITY OVERSEAS EDITION. 12.

Sweis, G., Sweis, R., Bisharat, Sh., & Bisharat, L. (2014). Factors Affecting Contractor Performance on Public Construction Projects. ACTA ZHENGZHOU UNIVERSITY OVERSEAS EDITION. 11(4s). 28-39.

Sweis, R., Shannak, R., Abu ELSamen, A., & Suifan, T. (2014). Factors Affecting Quality in the Jordanian Housing Sector. International Journal of Housing Markets and Analysis. 7. 175-188. 10.1108/IJHMA-01-2013-0004.

Sweis, G., Sweis, R., Hussein, R., Hiyassat, M., & Suifan, T. (2014). Priority Setting for Healthcare Facilities Maintenance. Life Science Journal. 11(2s). 54-64.

Sweis, N., Sweis, R., Mahmoud Saleh, F., Dahiyat, S., Saleh, R., & Diab, H. (2015). Benchmarking of TQM practices in INGOs: a literature review. Benchmarking An International Journal. 23. 10.1108/BIJ-02-2015-0013.

Sweis, R. (2015). An Investigation of Failure in Information Systems Projects: The Case of Jordan. Journal of Management Research. 7. 173. 10.5296/jmr.v7i1.7002.

Sweis, R., Ghawi, N., Al-Zu'bi, Z., Alsaleh, A., Jamal, H., & Obeidat, B. (2015). Benchmarking of TQM: The case of Hikma Pharmaceuticals company. Benchmarking An International Journal. 22. 10.1108/BIJ-05-2013-0059.

Sweis, R., Diab, H., Mahmoud Saleh, F., Suifan, T., & Dahiyat, S. (2016). Assessing service quality in secondary schools: the case of Jordan. Benchmarking: An International Journal. 23. 1207-1226. 10.1108/BIJ-04-2015-0031.

Sweis, R., Saleh, R., Etayyem, R., Bara, N.A., Qasrawi, T., & Mahmoud, A. (2016). Total quality management practices and organisational performance in Jordanian courier services. International Journal of Productivity and Quality Management. 19. 258. 10.1504/IJPQM.2016.078889.

Sweis, R., Al Sharef, R., Jandali, D., Obeidat, B., & Andrawes, N. (2017). The relationship between project team members' effectiveness and acknowledgment of talent: Team members' perspective. International Journal of Construction Education and Research. 1-20. 10.1080/15578771.2017.1356401.

Sweis, R., Hashem, T., & Ajarmah, B. (2017). The effect of 5Q model on patient's satisfaction in military hospitals in Jordan. International Journal of Productivity and Quality Management. 20. 273. 10.1504/IJPQM.2017.10003285.

Sweis, R., & Saleh, R. (2017). The relationships between soft/hard total quality management practices and operational performance in Jordanian manufacturing organisations. International Journal of Management Concepts and Philosophy. 10. 345. 10.1504/IJMCP.2017.10007596.

Sweis, R., Alawneh, A., & Jandali, D. (2018). Factors Affecting Maintenance of Hospital Buildings: A Literature Review. International Journal of Information, Business and Management. 10.

Sweis, R., Moarefi, A., Hosseini-A., Seyyed-M., & Moarefi, S. (2018). Delay factors of the schedule of strategic industrial projects. International Journal of Building Pathology and Adaptation. 10.1108/IJBPA-12-2017-0065.

Sweis, R., Ismaeil, A., & Alsayyed, N. (2019). The Relationship Between Total Quality Management (TQM) Implementation and Organisation Performance: Evidence from the Airlines Companies in UAE. International Journal of Information Business and Management . 11. 58.

Sweis, R., Saleh, R., Sharaireh, Y., & Moarefi, A. (2019). An investigation of the satisfaction of project managers and team members: A comparative study between ISO 9001-certified and non-ISO 9001-certified project based companies in Jordan. International Journal of Quality & Reliability Management. 36. 10.1108/IJQRM-03-2018-0071.

Watts, H., Nasim, M., Sweis, R., Sikka, R., & Kulstad, E. (2013). 69: Further Characterization of the Influence of Crowding on Medication Errors. Journal of emergencies, trauma, and shock. 6. 264-70. 10.4103/0974-2700.120370.

Tarigan, V., & Ariani, D. W. (2015). Empirical Study Relations Job Satisfaction, Organizational Commitment, and Turnover Intention. Advances in Management and Applied Economics, 5(2), 21.

Tnay, E., Othman, A. E. A., Siong, H. C., & Lim, S. L. O. (2013). The Influences of Job Satisfaction and Organizational Commitment on Turnover Intention. Procedia-Social and Behavioral Sciences, 97, 201-208.

Yaseen, M., Sweis, R., Abdallah, A., Obeidat, B., & Sweis, N. (2018). Benchmarking of TQM practices in the Jordanian pharmaceutical industry (a comparative study). Benchmarking An International Journal. 25. 4058-4083. 10.1108/BIJ-04-2017-0076.

Yücel, İ. (2012). Examining the Relationships among Job Satisfaction, Organizational Commitment, and Turnover Intention: An Empirical Study. International Journal of Business and Management, 7(20), p44.

FACTORS AFFECTING CONSUMERS' GREEN PURCHASE BEHAVIOR TOWARDS ENERGY SAVING LIGHTS IN BANGLADESH: THE MEDIATING ROLE OF GREEN PURCHASE INTENTION

Md. Shahinur Rahman[a*], Md. Imran Hossain[b] , Gazi Md. Shakhawat Hossain[c]

[a] Lecturer, Department of Business Administration, Barishal Information Technology College (BITC),

Barishal -8200, Bangladesh.

E-mail Address: srahman.bu367@gmail.com.

[b] Assistant Professor, Department of Marketing, Faculty of Business Studies, University of Barishal. Email:

mihimranmkt@gmail.com.

[c] MBA Student,   Management Science and Engineering (MSE), School of Management (SOM), Huazhong University of

Science and Technology (HUST),

Hubei, Wuhan, P.R. China. E-mail: i201821066@hust.edu.cn

[*]Corresponding Author's E-mail Address: srahman.bu367@gmail.com

ABSTRACT

Green consumption is one of the most promising sources of conserving energy and promoting ecological sustainability. The study aims to examine the relationships of cognitive factors affecting consumers' green purchase behavior (GPB) directly and indirectly via the mediating role of green purchase intention (GPI) towards energy-saving lights (ESLs) in the context of Bangladesh. A total of 314 valid responses were collected through a self-administered survey. The proposed model was analyzed using Structural Equation Modeling (SEM). The results suggest that perceived environmental knowledge (PEK), peer influence (PI), and perceived consumer effectiveness (PCE) significantly and directly affect consumers' GPI, whereas GPI and PCE were found to have significant effects on ESL users' GPB. Moreover, consumers' GPI was found to be the major predictor of GPB. The findings can help marketing practitioners in designing green marketing strategies to promote green consumption and ecological protection.

Keywords: Green Purchase Behavior, Green Purchase Intention, Energy Saving Lights

1. INTRODUCTION

Green consumption is now a buzzword in the modern era as industrial development leads to more consumption of energy which causes environmental pollution, climate change, depletion of natural resources, damaging to the ozone layer, and loss of agricultural lands that drive to change our

19

conventional consumption patterns and purchasing behavior towards environmental sustainability (Jaiswal and Kant, 2018). Due to this environmental degradation, green behavior has emerged as a new marketing discipline in the realm consumer researches (Ottman, 1998; Jones et al., 2008; Peattie and Belz, 2010; Lai and Cheng, 2016).

In the developing world, electricity demand continues to rise to provide for economic growth because about 72% of this growth was met by fossil fuels in 2017 resulting in increasing the world's energy-related emissions by 1.4% (IEA, 2018). Consequently, this high electricity demand is one of the causes of more electricity generation and sometimes this peak demand is met by fossil fuel when the demand is unmet (Khan, 2019). As a result, intensive carbon emission is occurred randomly (Khan, 2018). Hence, previous researchers investigated energy management opportunities using smart home technologies in developed countries; UK (Ford et al., 2017), Taiwan (Chou et al., 2017), Sweden (Nyholm et al., 2016), Canada (Keshtkar et al., 2016) etc.

Though a wide range of studies on green purchase behavior and pro-environment behavior have been conducted in developed countries (Allcott and Taubinsky, 2015; Bradford et al., 2017; Ford et al., 2017), in the Asian emerging economies like Bangladesh, India and China, a few number of studies conducted on the purchase behavior for green products on environmental issues are still not well investigated (Khan, 2019; Chou et al., 2017; Yadav and Pathak, 2016; Kumar et al., 2017).

Particularly in the context of ESLs, a few numbers of studies have been undertaken (Allcott and Taubinsky, 2015; Bradford et al., 2017; Nakano et al., 2018) in developed and developing countries. Thus, to unfold the key issues in the context of ESLs this study aims to investigate the factors that affect the green purchase behavior of consumers. Prior studies revealed that only a limited number of studies have been conducted on ESL adoption in Bangladesh. Therefore, the study postulated the research question as "What are the factors that affect the green purchase behavior of ESL users in Bangladesh?" Moreover, this study attempts to present a unique research model to illustrate the determinants which affect ESL users' green purchase behavior with the mediation of green purchase intention.

2. REVIEW OF LITERATURE AND DEVELOPMENT OF HYPOTHESES

2.1 Review of Literature

In the modern research on consumer purchase behavior, two classical theory: TRA (theory of reasoned action) (Fishbein and Ajzen, 1975), and TPB (theory of planned behavior) (Ajzen and Fishbein, 1980) are widely accepted towards understanding of behavioral attitude. To capture the behavioral measure of green purchase behavior, TRA and TPB have been applied in developing countries (Chan, 2001; Zhou et al., 2013; Yadav and Pathak, 2016; Hsu et al., 2017). However, a large number of studies have found to be failed to explain the green purchase behavior using by TRA and TPB approach, where the constructs; subjective norms, attitude, and perceived behavioral control have shown a weaker relationship between the positive attitude towards green purchasing and the actual purchase decision (Tan, 2011; Joshi and Rahman, 2015). Concerning with these issues, some researchers have recommended to incorporate some other factors like environment knowledge, environmental concern, and perceived consumer effectiveness etc.

with attitude to measure green purchase behavior (Straughan and Roberts, 1999; Mostafa, 2007; Choi and Kim, 2005; Paul et al., 2016; Kumar et al., 2017).

Consumer's perceived effectiveness is considered as the single best predictor of green purchase behavior when consumers intend to buy green products if they believe that their behavior will show a positive impact on their environment (Roberts, 1996; Straughan and Roberts, 1999). Likewise, some other studies found that perceive consumer effectiveness in terms of green products has a significant impact on green purchase behavior (Choi and Kim, 2005; Mostafa, 2006; Kim, 2011). On the other hand, Tan (2011) and Joshi and Rahman (2015) illustrated that perceived environmental knowledge is one of the most effective factors in determining green purchase behavior.

In the context of ESLs, perceived environmental knowledge is found to be influenced by members of society which positively pursue green purchase intention. Some other studies on ESLs found that friends, family members, colleagues, salespersons, celebrities also affect the green purchase intention following the green purchase behavior of consumers (Hafez, 2017; Khorasanizadeh et al., 2015; Khan and Abas, 2011). As a result, consumers drive to change their traditional consumption behavior and attempt to environmentally friendly products rather than other products (Laroche et al., 2001). Therefore, marketers are motivated to develop their products and services with proper visionary to meet requirements of savvy consumers (D'Souza et al., 2006).

To unfold the effects of the key determinants affecting the green purchase behavior of ESL users in Bangladesh, this research is motivated by some previous studies (Hafez, 2017; Khorasanizadeh et al., 2015; Khan and Abas, 2011; Jaiswal and Kant, 2018). After extensive literature, we adapted perceived environmental knowledge, peer influence, perceived consumer effectiveness, green purchase intention followed green purchase behavior to propose a unified conceptual model. Specifically, no earlier studies have shown the unified impact of perceived environmental knowledge, peer influence and perceived consumer effectiveness towards green purchase intention following green purchase behavior of consumers where green purchase intention mediates between perceived environmental knowledge and perceived consumer effectiveness in the context of ESLs.

2.2 Development of Hypotheses

2.2.1 Perceived Environmental Knowledge (PEK)

PEK is defined as a set of concepts, philosophies, facts, and interconnected relationships that focus on the environment and ecological aspects (Fryxell and Lo, 2003; Brosdahl and Carpenter, 2010). In other studies, Conraud-Koellner and Arturo Rivas-Tovar (2009) and Chan and Lau (2000) defined PEK as the sets of ecological knowledge that individuals have considered at the time of purchasing eco-friendly products. Because a significant level of environmental awareness generates a high level of eco-friendly behavior (Kumar et al., 2017; Yadav and Pathak, 2016; Rokicka, 2002) and consumers motivate towards environmental protection, as well as socially responsible behavior (Sawant, 2015; Kempton et al., 1995). Earlier studies found that PEK plays a vital role to influence consumers to buy green products (Mostafa, 2009; Polonsky et al., 2012; Laroche et al., 2001; Mostafa, 2007). Previous studies on this context illustrated that PEK has a significant relationship with green purchase intention (Tan, 2011; Kang et al.,

2013; Nelson et al., 2009). Therefore, the study postulated the following hypotheses:

H1a: PEK has a significant and positive effect on green purchase intention.

H1b: PEK has a significant and positive effect on green purchase behavior.

2.2.2   Peer Influence (PI)

PI can be defined as individuals' attitudes, actions and beliefs which are affected by other people called peers (Makgosa and Mohube, 2007; Ahmad et al., 2014). This PI plays an influential role in choosing eco-friendly products and services as the usage satisfaction of relatives and colleagues motivate consumers to go on changing their purchase behavior. Researchers found that the PI can be classified into three categories named informational, utilitarian and value-expressive (Bearden and Etzel, 1982; Childers and Rao, 1992; Makgosa and Mohube, 2007; Lessig and Whan, 1978). When an individual observes the behavior of other people and tries to find out relevant information from those persons whom he or she thinks relevant (John and Christopher, 2013). Bearden and Etzel (1982)   and Lessig and Whan (1978) also defined utilitarian influence as an extent where an individual's choice is influenced by the likings, expectations, or preferences of others. Finally, value expressive influence occurs when an individual associates his or her intention with others. Thus, the surrounded people like kith and keens, colleagues, salespeople, and celebrity often influence green purchase intention of other consumers (Maram and Kongsompong, 2000; Childers and Rao, 1992). Thus, the study formulated the following hypothesis:

H2:   PI has a significant and positive effect on green purchase intention.

2.2.3   Perceived Consumer Effectiveness (PCE)

PCE is defined as the consumers' perception of what extent to which their actions can make a difference in resolving ecological issues (Ellen et al., 1991). PCE was first demonstrated by Kinnear et al., (1974) who found PCE as a measure of a person's belief of whether he or she has any contribution to ecological protection or not. In the Asian context, to measure consumer green purchase intention, PCE acts as a significant predictor (Mostafa, 2006; Choi and Kim, 2005; Tan, 2011; Kim, 2011; Dagher and Itani, 2014). In other studies, Roberts (1996) and Straughan and Roberts (1999) illustrated consumer's PCE as the single best predictor of measuring their green purchase behavior, whereas they only purchase eco-friendly products when they believe that their behavior will have a positive impact on the environment. Straughan and Roberts (1999) also argued that consumers' high level of PCE persuades towards high purchase intention of green products. Thus, the study hypothesized the following hypotheses:

H3a. PCE has a significant and positive effect on green purchase intention.

H3b. PCE has a significant and positive effect on green purchase behavior.

2.2.4   Green Purchase Intention (GPI) towards Green Purchase Behavior (GPB)

GPB is a cognitive action to which consumers purchase eco-friendly products that are considered as recyclable and beneficial to the ecology and avoid those products which are harmful to environment and

society (Rahman, 2019; Chan, 2001; Mostafa, 2007). To determine GPB, consumer's intention and willingness to buy green products are evaluated (Joshi and Rahman, 2015). In order to validate consumers' GPI and green behavior TRA and TPB have been widely used alike or along with some modifications in Asian context (Zhou et al., 2013; Paul et al., 2016; Yadav and Pathak, 2016; Prakash and Pathak, 2017; Hsu et al., 2017). In the context of ESLs, earlier studies also investigated green purchase intention and green purchase behavior from different extents (Hafez, 2017; Khorasanizadeh et al., 2015; Khan and Abas, 2011).

On the other hand, GPI illustrates consumers' willingness to buy eco-friendly products considering the welfare of environment (Chan, 2001; Akehurst et al., 2012; Dagher and Itani, 2014). Consumers' purchase intention towards environmental products   has been widely investigated (Ozsacmaci, 2018) and researchers found an underlying relationship between GPI and GPB (Kang et al., 2013; Kanchanapibul et al., 2014; Lai and Cheng, 2016). This relationship led to postulate the following hypothesis:

H4. GPI has a significant and positive effect on GPB.
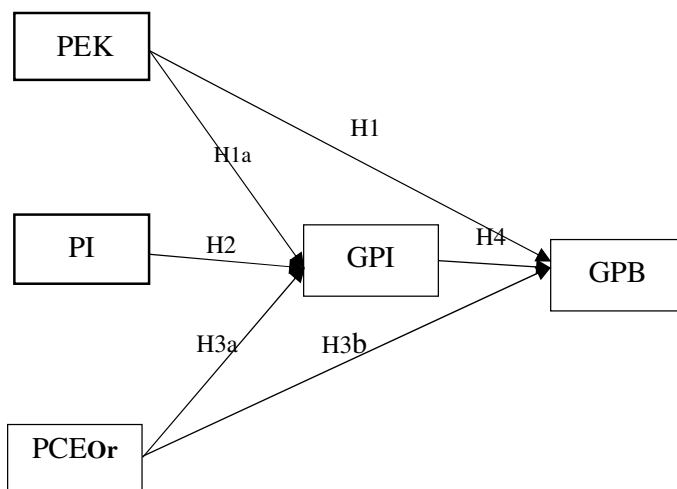
Fig. 1: Research Model (Source: Authors' Contribution)

3. METHODOLOGY

3.1 Research Setting

3.1.1   The target population

The target population of this study was young adult and educated Bangladeshi citizens who have had experience of buying ESLs earlier. Young adult and educated population are more responsive to survey or interview than minors or less educated population when the green behavioral phenomenon is intended to investigate easily (Chan and Lau, 2000; Paul et al., 2016; Kumar et al., 2017).

Table Ⅰ : Demographic Characteristics of the Informants (N=314)

Variables	Description	Frequency	Percentage (%)
Gender	Male	198	63.06
	Female	116	36.94
Age	18-30 Years	166	52.87
	31-39 Years	97	30.89
	More than 40 years	51	16.24
Educational Qualification	Undergraduate	56	17.83
	Bachelor	111	35.35
	Masters	138	43.95
	Others	9	2.87
ESL usage Experience	0-2 Years	102	32.49
	3-5 Years	89	28.34
	More than 5 Years	123	39.17

3.2 Measures

To ensure the content validity of the scales, all the measurement scales for each construct (Table Ⅱ) selected in the study were adopted from the earlier research studies whereas all the items were modified to fit with GPI and GPB in the context of ESLs. That means the items chosen for this study must represent the concept about which generalizations are to be made. Moreover, discussions with academicians, researchers and the literature review of previous studies helped to formulate the generation of scale items. The original four constructs, namely, the perceived consumer effectiveness scale with four items was adopted from (Choi and Kim, 2005; Kim, 2011) while peer influence scale with four items was taken from (Khare, 2015) and perceived environmental knowledge scale with four items was taken from (Mostafa, 2006), followed by three items of green purchase intention scale from (Chan and Lau, 2000; Chan, 2001; Mostafa, 2006). The four items of green purchasing behavior scale were adopted from (Lee, 2008). A Five-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree" was adopted to operationalize all the items.

Table Ⅱ : List of Measures for Questionnaires

Constructs	Items and Statements	Sources
Perceived Environmental Knowledge	PEK1: I am very knowledgeable about environmental issues. PEK2: I know more about environmental issues than the average person. PEK3: I know the reasons to select energy-saving lights which help to protect the environment. PEK4: I understand the environmental phrases and symbols on the package of energy-saving lights. PEK5: I know that buying energy-saving lights is environmentally safe.	(Mostafa, 2006)
Peer Influence	PI1: I have learned a lot about environmental issues from my friends, relatives, colleagues and others. PI2: My friends, relatives and colleagues often discuss the environmental issues related to energy saving lights with me. PI3: My friends, relatives and colleagues often, recommend energy-saving lights to me. PI4: My friends, relatives and colleagues often share their experiences and knowledge about energy-saving lights with me.	(Khare, 2015)
Perceived Consumer Effectiveness	PCE1: Each person's behavior can have a positive effect on society by signing an appeal in support of promoting the environment. PCE2: I feel capable of solving environmental problems. PCE3: I can help to protect the environment by buying energy-saving lights that are friendly to the environment. PCE4: I feel I can help solve natural resource problems by conserving energy.	(Choi and Kim, 2005; Kim, 2011)
Green Purchase Intention	GPI1: I would consider buying energy-saving lights because they are less polluting. GPI2: I would consider switching to other brands for ecological reasons. GPI3: When I have a choice between two equal products, I purchase the one less harmful to other people and the environment	(Chan and Lau, 2000; Chan, 2001; Mostafa, 2006)
Green Purchasing Behavior	GPB1: I prefer energy-saving lights over non-green products when their product qualities are similar. GPB2: I buy energy-saving lights because they are environmentally-friendly. GPB3: I buy energy-saving lights even if they are more expensive than the non-green ones.	(Lee, 2008)

3.3 Pretesting

With the collaboration of subject experts and researchers, the face and content validities of the confirmatory factors were ensured before proceeding to the final study. After that, the questionnaire used in our study were investigated with 25 respondents who voluntarily participated in the pilot study. After getting the results from the pilot test, the questionnaire was modified to align them with the objectives of the study. After pretesting, 19 measurement items, which best fit the value and purchase intention of ESL users, were selected for the study.

3.4 Questionnaire Design and Data Collection

A survey among young adult and educated citizens of Bangladesh was conducted to test our proposed model and hypothesized relationships. Convenient sampling method was employed to locate and gather data from the respondents. As the convenience sampling method is cost-effective, it has been significantly granted in determining green purchase intention (Jaiswal and Kant, 2018). The respondents of this study were screened for whether they had any earlier usage experience of ESLs. After sorting out, only the respondents having earlier experience of purchasing ESLs took part in the interview. A well-trained group of interviewers, having previous experience of conducting a personal survey, took over three weeks to conduct the interview where data were collected through a face to face interaction between interviewers and the respondents. In our study, we divided the questionnaire into two parts-'part A' contains information about respondents' age, gender, educational qualifications, and ESL usage experience. 'Part B' comprises research questions for individual constructs using a 5-point Likert scale. All the respondents considered for the study were allotted the required information documents that helped them illustrate the purpose of the study, where no incentives or gifts were given to the respondents to avoid potential biases as they voluntarily participated in the study. Furthermore, our respondents were given enough time to fill in the questionnaire so that they could respond smoothly and they were also allowed to withdraw their participation at any time as of their rights if they thought so. A total of 350 questionnaires were distributed among the respondents and approximately 326 were given back, showing around 93% response rate. Twelve incomplete questionnaires were excluded from the analysis. After removing the incomplete cases and outliers, 314 valid responses were obtained and were subjected to further analysis. The response rates are acceptable as per the methodological studies (Anderson   and Gerbing, 1988;   Hair et al., 2010).

3.5 Data Analysis

Structural Equation Modeling (SEM) was employed to determine the inter-related dependence of relationship. Besides, confirmatory factor analysis (CFA) was conducted to test the measurement model along with reliability and validity test of the proposed model. Structural model was employed to estimate the regression weights to determine the relationship among constructs and test the proposed hypotheses.

In this study, all the 19 items were examined through SEM to determine the reliability and validity of the scale. Hence, the data analysis of this study was estimated using AMOS 23 software.

4. ANALYSIS AND RESULTS

The demographic profiles of the respondents, who voluntarily participated in our study, are illustrated in Table Ⅰ. Both male and female participants were estimated 63.06% and 36.94% of total respondents whose age level was above 18. In the context of the respondents 'education level', the majority of the respondents were Masters (43.95%); the rest of the respondents were Undergraduates (17.83%) and Bachelor (35.35%). Besides, majority of the respondents experiencing ESL usage ranged from more than 5 years (39.17%).

4.1 Measure Assessments

The measurement model with the multi-item scales of perceived environmental knowledge, peer influence, perceived consumer effectiveness, green purchase intention, and green purchase behavior was tested through CFA by employing the maximum likelihood estimation technique. The model was found to fit the data well as the fit indices were testified. Based on the Table Ⅲ, Chi-square ($\chi2$) =210.076; p<0.01; Chi-square/(degree of freedom) ($\chi2/df$)=1.479; Goodness of fit Index (GFI)=0.937; Adjusted Goodness of fit Index (AGFI)= 0.915; Comparative fit Index (CFI)=0.982; Normed fit Index (NFI)=0.946; Root Mean Square Error of Approximation (RMSEA)=0.039. Measurement items, factor loadings, Cronbach's Alpha coefficients, composite reliability (CR) scores and average variance extracted (AVE) scores are illustrated in Table Ⅳ. Accordingly, CR scores range from 0.795 to 0.928, and Cronbach's Alpha coefficients range from 0.792 to 0.928 which indicate that contracts are highly reliable (Fornell and Larcker, 1981; Nunnally, 1978). According to Table 4, the factor loadings of all items are large and significant (p<0.01) which demonstrates convergent validity. Additionally, AVE ranging from 0.50 to 0.73 indicates additional evidence of convergent validity. Moreover, the discriminant validity of the measures are examined by comparing AVE of each construct is with their squared inter-construct correlation coefficients presented in Table Ⅴ. Fornell and Larcker (1981) also found that the relatively higher AVE values show the evidence of discriminant validity of the constructs. Therefore, the statistics prove that the study fulfills all the possible validity and reliability concerns indeed.

Table Ⅲ: Goodness-of-Fit Indices

Fit Indices	Criteria	Indicators
$\chi2$		210.076
$\chi2/df$	<5 acceptable; <3 good	1.479
AGFI	>0.8 acceptable; >0.9 good	0.915
GFI	>0.8 acceptable; >0.9 good	0.937
CFI	>0.9	0.982
NFI	>0.9	0.946
RMSEA	<0.1acceptable; <0.08 good	0.039

Table ⅣV: Standardized Factor Loadings, Cronbach's Alpha, CR and AVE Scores.

Constructs	Items	Item Loadings	Cronbach's α	CR	AVE
Perceived Environmental Knowledge	PEK1	.87	.928	.928	.722
	PEK2	.81			
	PEK3	.92			
	PEK4	.82			
	PEK5	.82			
Peer Influence	PI1	.77	.878	.881	.652
	PI2	.93			
	PI3	.73			
	PI4	.78			
Perceived Consumer Effectiveness	PCE1	.73	.886	.888	.665
	PCE2	.83			
	PCE3	.86			
	PCE4	.84			
Green Purchase Intention	GPI1	.72	.792	.795	.566
	GPI2	.83			
	GPI3	.70			
Green Purchase Behavior	GPB1	.73	.846	.850	.656
	GPB2	.88			
	GPB3	.81			

Table Ⅴ: Discriminate Validity Results of the Measurement Model

	GPI	PEK	PI	PCE	GPB
GPI	**0.752**				
PEK	0.597	**0.850**			
PI	0.534	0.464	**0.807**		
PCE	0.467	0.402	0.366	**0.816**	
GPB	0.711	0.404	0.301	0.435	**0.810**

4.2 Hypothesis Testing

The structural model was tested with the maximum likelihood estimation technique to test the hypotheses of the study. Fit statistics ($\chi2 = 305.17$ $\chi2$ /df=2.261; RMSEA=0.063; CFI=0.954; GFI=0.929; TLI=0.942; NFI=0.922; IFI=0.955) illustrated that the model fits well to the observed data. Fig. 2 revealed the research model along with estimated path coefficients for the hypothesized relationships among constructs. As per the model, five out of six of the hypothesized effects were supported.
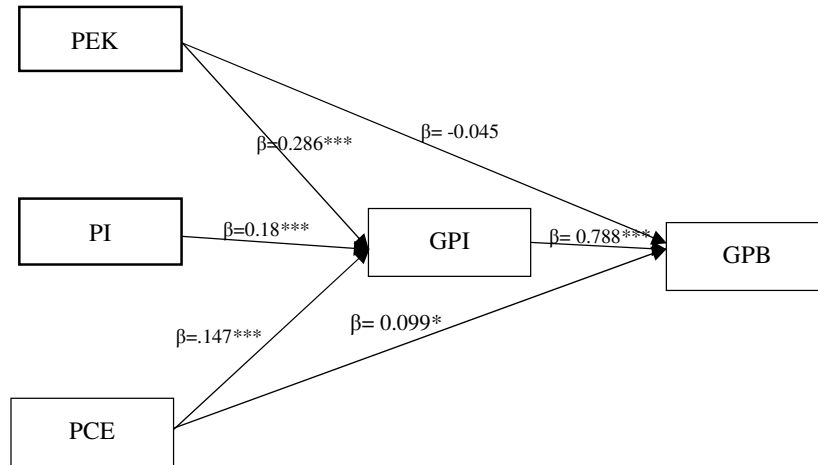
Fig. 2: The Structural Model with Parameter Estimates

Notes: Parameter estimates *p<0.05 ** p<0.01 ***p<0.001

Table VI: Structural Parameter Estimates

Hypotheses	Standardized Estimate	t-value	P-value	Results
H1a. Perceived Environmental Knowledge → Green Purchase Intention	.286	6.354	***	**Supported**
H2. Peer Influence → Green Purchase Intention	.180	3.377	***	**Supported**
H3a. Perceived Consumer Effectiveness → Green Purchase Intention	.147	3.606	***	**Supported**
H1b. Perceived Environmental Knowledge → Green Purchase Behavior	-.045	-.812	.417	**Not Supported**
H4. Green Purchase Intention → Green Purchase Behavior	.788	7.707	***	**Supported**
H3b. Perceived Consumer Effectiveness → Green Purchase Behavior	.099	2.063	.039	**Supported**

Notes: Parameter estimates *p<0.05 ** p<0.01 ***p<0.001

As per the results (Table VI) of hypothesized effects, H1a, postulates a positive effect of perceived environmental knowledge on green purchase intention, is supported in this study showing a significant effect (β=0.286; t=6.354; p<.001). The result illustrates that consumers' environment knowledge

regarding ESLs significantly influences their intention to buy ESLs and avoid harmful incandescent lights. Additionally, H2 shows the relationship between peer influence and green purchase intention and suggests that the influence of peers positively and significantly affects consumers' green purchase intention (β=0.18; t=3.377; p<.001). Thus, H2 is also supported in this study.

Concerning positive effects of perceived consumer effectiveness on green purchase intention; H3a (β=.147; t=3.606; p<.001) is supported. Accordingly, perceived consumer effectiveness influences consumers green purchase intention as they believe that their behavior will have a positive impact on the environment in the context of adopting ESLs. Additionally, H3b, proposing a positive effect of perceived consumer effectiveness on green purchase behavior, shows a positive and significant effect (β= 0.099; t=2.063; p<.05). Furthermore, H4 which shows that consumers green purchase intention on green purchase behavior reveals a positive effect (β= 0.788; t=7.707; p<.01). Therefore, H3b and H4 are supported in this study.

However, H1b which proposes a direct effect of the perceived environmental knowledge on green purchase behavior is not supported (β= -0.045; t= -0.812; p>.05). That means consumers' perceived environmental knowledge has a negative and insignificant effect on green purchase behavior in the context of ESLs.

Through SEM direct, indirect, and total effects of the constructs on each other can be evaluated. Based on this point, direct and indirect partial influences of perceived environmental knowledge and perceived consumer effectiveness on green purchase intention are illustrated. The results are shown in Table Ⅶ which demonstrates that perceived environmental knowledge and perceived consumer effectiveness have no direct significant effect on green purchase behavior. The indirect effects of perceived environmental knowledge and perceived consumer effectiveness expose that green purchase behavior is more significantly affected through green purchase intention than their direct relationships. It means that both of these constructs are fully mediated the relationship with green purchase behavior.

Table Ⅶ: Direct, Indirect, and Total Effects

		Perceived Environmental Knowledge	Peer Influence	Perceived Consumer Effectiveness	Green Purchase Intention
Total Effects					
Green Intention	Purchase	.470**	.199**	.249**	---
Green Behavior	Purchase	.283**	.149**	.346**	.751**
Direct Effect					
Green	Purchase	.470**	.199**	.249**	---

Intention					
Green Behavior	Purchase	-.070	---	.159	.751**
Indirect Effect					
Green Behavior	Purchase	.353**	.149**	.187**	---

Notes: *p<0.05; ** p<0.01.

5. DISCUSSION

5.1 General Discussion

The study investigated the relationships among perceived environmental knowledge (PEK), peer influence (PI), perceived consumer effectiveness (PCE) and green purchase intention (GPI) following green purchase behavior (GPB) in order to gather insights into how these PEK, PI, and PCE influence the GPI and GPB of Bangladeshi consumers in the context of ESLs.   As previous studies suggested that PEK, PI, and PCE influence GPI regarding eco-friendly products (Tan, 2011; Kang et al., 2013; Mostafa, 2006; Choi and Kim, 2005; Maram and Kongsompong, 2000; Jaiswal and Kant, 2018). Additionally, GPI and GPB have been widely examined in consideration of the dearth of academic studies in industrialized countries, this study was conducted with a specific focus on Bangladesh from the context of adopting ESLs. Thus, the findings of this study works as a bridge to narrow this gap.

5.2 Theoretical Contributions

This study helps to clarify the relationship between consumers' PEK and GPB by investigating the moderating role of GPI and PEK was found to have a significant influence toward consumers' GPI in Bangladesh. Earlier studies demonstrated that consumers with a higher level of PEK will be motivated to purchase green products. Nevertheless, other studies also found PEK as a significant determinant of GPI (Tan, 2011; Kang et al., 2013; Nelson et al., 2009). On the other hand, consumers buying intention is often influenced by their peers' suggestions because green purchase decision requires proper knowledge regarding green products and how these products contribute to the ecology and its protection. This study found that peer influence significantly and positively affects GPI of Bangladeshi consumers in purchasing ESLs.

Likewise, PCE was found to be positive and has a significant impact on GPI in the model.   Roberts (1996); Straughan and Roberts (1999) illustrated that PCE is the single best forecaster of the behavior of an environmentally-conscious consumer.   As it considered that green consumers are more internally controlled and associated with a belief to perform those actions willingly that are seemed to be environmentally friendly, not those imposed by government and society (Mostafa, 2006). Hence, consumers with high PCE were relatively contrasting to social norms and government intervention as

they believe that they can handle the ecological issues with their efforts (Ellen et al., 1991).

Therefore, this study will contribute to the corpus of past studies related to this context by exploring that PEK, PI, and PCE intensify the positive relationship with GPI of Bangladeshi consumers.

5.3 Implications for Practitioners

The findings of this study illustrate some implications for business managers as well as policy-makers who seek to develop and design green marketing strategies and promote adoption of ESLs. The finding indicates that PEK has a positive effect on the GPI of Bangladeshi consumers. Therefore, government authorities and private entrepreneurs can work with other non-governmental organizations so that more campaigns related to increasing and promoting the environmental knowledge of consumers can be initiated. These programs should be designed with an eye for stimulating a wide-ranging and accurate understanding of the necessity of using ESLs from both economic and environmental point of views.

Additionally, marketers should also emphasize on generating word of mouth (WOM) and effective communication by claiming environmental and social values of using ESL that will influence consumers to buy ESLs instead of traditional incandescent lights. These efforts of the marketers will help to create a buzz among consumers that might lead to influence the purchase decision of fellows or relatives by their peers. Additionally, marketers can effectively disseminate the message, emphasizing environmental values of products among the society. This effort of the marketers may strongly influence the individual intention to buy green products because of the persuasion of social groups (Chan and Lau, 2002).

Marketers who are associated with ESL business should recognize the importance of PCE for a consumer. Therefore, with information, experience and emotion marketers should highlight the positive contribution of pro-environmental behavior by using different channels.

6. CONCLUSION

The factors affecting green purchase intention and green purchase behavior in the context of adopting ESLs among young adult and educated segments have not been explored yet. To fill this research gap, a conceptual model was proposed by integrating the constructs explored earlier. The proposed model of this study was tested and validated to achieve the objectives by investigating the factors affecting the green purchase intention and green purchase behavior using ESLs in the context of Bangladesh. The increasing rate of adopting ESL among young adult and educated segments has been creating emerging business opportunities for marketers where they can deliver quality products at an affordable price and promote environmental protection. The findings of the study illustrated that young adult and educated consumers' green purchase intention towards adopting ESLs has been significantly and positively influenced by perceived environmental knowledge, peer influence and perceived consumer effectiveness. Therefore, practitioners might be more careful in understanding the constructs that affect young adult and educated consumers' ESL adoption and designing the ESLs as required by those consumers to facilitate environmental protection.

6.1 Limitations and Directions for Future Research

The empirical study summarizes the limitations and directions for future research in three broad areas. First, this study only considers ESLs as an environmentally friendly product. Findings will be different if different types of green products are investigated further.

Second, the study considers only the young adult and educated segment of the target population to collect data from them by employing purposive convenient sampling technique. Thus, the results of the study may differ if the other segments of the population are investigated.

Finally, this study examines three constructs of GPI and GPB as per previous literature though there are so many other constructs like; green value, environmental concern, environmental advertising, green brand etc. that also influence GPI and GPB. These constructs are still a matter of further investigation to form a better understanding and present a better description of GPI and GPB.

REFERENCES

Ahmad, N., M. Yousif, K. Shabeer, and M. Imran, 2014. "A Comprehensive Model on Consumer's Purchase Intention towards Counterfeit Mobiles in Pakistan." *Journal of Basic and Applied Scientific Research*, 4(5), 131–40.

Ajzen, I., and M. Fishbein. 1980. "*Understanding Attitudes and Predicting Social Behaviour.*"

Akehurst, G., C. Afonso, and H.M. Gonçalves, 2012. "Re-Examining Green Purchase Behaviour and the Green Consumer Profile: New Evidences." *Management Decision*, 50(5), 972–88.

Allcott, H., and D., Taubinsky, 2015. "Evaluating Behaviorally Motivated Policy: Experimental Evidence from the Lightbulb Market." *American Economic Review,* 105(8), 2501–38.

Anderson, J. C. and D. W. Gerbing, 1988. "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach." *Psychological Bulletin*, 103(3), 411–23.

Barber, N., C. Taylor, and S. Strick, 2009. "Wine Consumers ' Environmental Knowledge and Attitudes : Infl Uence on Willingness to Purchase." *International Journal of Wine Research* ,1(May), 59–72.

Bearden, W. O., and M. J. Etzel, 1982. "Reference Group Influence on Product and Brand Purchase Decisions." *Journal of Consumer Research,* 9(2), 183.

Bradford, D. C., G. Courtemanche, P. Heutel, McAlvanah, and C. Ruhm, 2017. "Time Preferences and Consumer Behavior." *Journal of Risk and Uncertainty,* 55(2–3), 119–45.

Brosdahl, D. J. C., and M.C. Jason, 2010. "Consumer Knowledge of the Environmental Impacts of Textile and Apparel Production, Concern for the Environment, and Environmentally Friendly Consumption Behavior." *Journal of Textile and Apparel, Technology and Management*, 6(4).

Chan, R., and L. Lau, 2000. "Antecedents of Green Purchases: A Survey in China." *Journal of Consumer Marketing,*17(4), 338–57.

Chan, R.Y. K, 2001. "Determinants of Chinese Consumers' Green Purchase Behavior." *Psychology and Marketing,* 18(4), 389–413.

Chan, R. Y. K., and L. B. Y. Lau, 2000. "Antecedents of Green Purchases: A Survey in China." *Journal of Consumer Marketing,* 17(4), 338–57.

Chan, R. Y. K., and L. B. Y. Lau, 2002. "Explaining Green Purchasing Behavior." *Journal of International Consumer Marketing,* 14(2–3),9–40.

Childers, T. L., and R.R. Akshay, 1992. "The Influence of Familial and Peer-Based Reference Groups on Consumer Decisions." *Journal of Consumer Research*, 19(2),198.

Choi, M. S., and Y. Kim, 2005. "Antecedents of Green Purchase Behavior: An Examination of Collectivism, Environmental Concern, and PCE." *Advances in Consumer Research,* 32(1),592–99.

Chou, C. C., T.C. Cheng, Y.P. Wu, C.P. Chu, and C.Y. Lin, 2017. "Spatiotemporal Analysis and Visualization of Power Consumption Data Integrated with Building Information Models for Energy Savings." *Resources, Conservation and Recycling,* 123, 219–29.

Conraud-Koellner, E., and L. A. Rivas-Tovar, 2009. "Study of Green Behavior with a Focus on Mexican Individuals." *IBusiness,* 01(02), 124–31.

D'Souza, C., M. Taghian, P. Lamb, and R. Peretiatkos, 2006. "Green Products and Corporate Strategy: An Empirical Investigation." *Society and Business Review,* 1(2), 144–57.

Dagher, G. K., and Itani, O, 2014. "Factors Influencing Green Purchasing Behaviour: Empirical Evidence from the Lebanese Consumers." *Journal of Consumer Behaviour*, 13(3),188–95.

Ellen, P. S., Wiener, J.L., and Cobb-Walgren. C, 1991. "The Role of Perceived Consumer Effectiveness in Motivating Environmentally Conscious Behaviors." *Journal of Public Policy & Marketing,* 10(2), 102–17.

Fishbein, M., and I. Ajzen, 1975. "Belief, Attitude, Intention, and Behavior:An Introduction to Theory and Research (Addison Wesley, Reading, Mass)." *Journal of Marketing*.

Ford, R., Marco,P., Angela,S., and Beth, K, 2017. "Categories and Functionality of Smart Home Technology for Energy Management." *Building and Environment* 123,543–54.

Fornell, C., and D. F. Larcker, 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." *Journal of Marketing Research*,18(1), 39.

Fryxell, G. E., and C. W. H. Lo, 2003. "The Influence of Environmental Knowledge and Values on Managerial Behaviours on Behalf of the Environment: An Empirical Examination of Managers in China." *Journal of Business Ethics,* 46(1), 45–69.

Hafez, M, 2017. "Factors Affecting Green Purchase Behavior of Bangladeshi Customers : A Study on Energy Saving Lamp." *Journal of Science and Technology* , 6(1 & 2), 17–29.

Hair, J. F, W. C. Black, B. J. Babin, R. E. Anderson, and R. Tatham, 2010. "Multivariate Data Analysis: Pearson Education." *Upper Saddle River, New Jersey*.

Hsu, C. L., C. Y. Chang, and C. Yansritakul, 2017. "Exploring Purchase Intention of Green Skincare Products Using the

Theory of Planned Behavior: Testing the Moderating Effects of Country of Origin and Price Sensitivity." *Journal of Retailing and Consumer Services,* 34, 145–52.

IEA, 2018. "*Global Energy and CO2 Status Repor".*

Jaiswal, D., and R. Kant, 2018. "Green Purchasing Behaviour: A Conceptual Framework and Empirical Investigation of Indian Consumers." *Journal of Retailing and Consumer Services,* 41, 60–69.

John, S. F., and J. A. Christopher, 2013. "Influence of Peer in Purchase Decision Making of Two-Wheelers : A Study Conducted in Coimbatore." *European Journal of Commmerce and Management Research(EJCMR)Esearch(EJCMR),* 2(1), 1–5.

Jones, P., C. Clarke-Hill, D. Comfort, and D. Hillier, 2008. "Marketing and Sustainability." *Marketing Intelligence & Planning,* 26(2), 123–30.

Joshi, Y., and Z. Rahman, 2015. "Factors Affecting Green Purchase Behaviour and Future Research Directions." *International Strategic Management Review,* 3(1–2), 128–43.

Kanchanapibul, M., E. Lacka, X. Wang, and H. K. Chan, 2014. "An Empirical Investigation of Green Purchase Behaviour among the Young Generation." *Journal of Cleaner Production*, 66, 528–36.

Kang, J., C. Liu, and S. H. Kim, 2013. "Environmentally Sustainable Textile and Apparel Consumption: The Role of Consumer Knowledge, Perceived Consumer Effectiveness and Perceived Personal Relevance." *International Journal of Consumer Studies*,37(4), 442–52.

Kempton, W., Boster, J.S., and Hartley, J. A, 1995. "*Environmental Values in American Culture"*. Cambridge, MA: MIT Press.

Keshtkar, A., S. Arzanpour, and F. Keshtkar, 2016. "Adaptive Residential Demand-Side Management Using Rule-Based Techniques in Smart Grid Environments." *Energy and Buildings*, 133, 281–94.

Khan, H. A., Y. Kamal, and S. Saleem, 2016. "Peer Influence on Young Adults' Products Purchase Decisions." *Business & Economic Review,* 8(Special Edition), 83–92.

Khan, I, 2018. "Importance of GHG Emissions Assessment in the Electricity Grid Expansion towards a Low-Carbon Future: A Time-Varying Carbon Intensity Approach." *Journal of Cleaner Production,* 196,1587–99.

Khan, I, 2019. "Energy-Saving Behaviour as a Demand-Side Management Strategy in the Developing World: The Case of Bangladesh." *International Journal of Energy and Environmental Engineering*.

Khan, N. and N. Abas, 2011. "Comparative Study of Energy Saving Light Sources." *Renewable and Sustainable Energy Reviews*.

Khare, A, 2015. "Antecedents to Green Buying Behaviour: A Study on Consumers in an Emerging Economy." *Marketing Intelligence and Planning,* 33(3), 309–29.

Khorasanizadeh, H., J. Parkkinen, R. Parthiban, and J. D. Moore. 2015. "Energy and Economic Benefits of LED Adoption in Malaysia." *Renewable and Sustainable Energy Reviews*.

Kim, Y, 2011. "Understanding Green Purchase: The Influence of Collectivism, Personal Values and Environmental Attitudes, and the Moderating Effect of Perceived Consumer Effectiveness." *Seoul Journal of Business,* 17(1), 65–92.

Kinnear, T. C., J. R. Taylor, and S. A. Ahmed, 1974. "Ecologically Concerned Consumers: Who Are They?: Ecologically Concerned Consumers CAN Be Identified." *Journal of Marketing,* 38(2), 20–24.

Kumar, B., A. K. Manrai, and L. A. Manrai, 2017. "Purchasing Behaviour for Environmentally Sustainable Products: A Conceptual Framework and Empirical Study." *Journal of Retailing and Consumer Services,* 34, 1–9.

Lai, C. K. M., and E. W. L. Cheng, 2016. "Green Purchase Behavior of Undergraduate Students in Hong Kong." *Social Science Journal*, 53(1), 67–76.

Laroche, M., J. Bergeron, and G. Barbaro-Forleo, 2001. "Targeting Consumers Who Are Willing to Pay More for Environmentally Friendly Products." *Journal of Consumer Marketing,* 18(6),503–20.

Lee, K, 2008. "Opportunities for Green Marketing: Young Consumers." *Marketing Intelligence and Planning,* 26(6), 573–86.

Lessig, V. P. and C. P. Whan, 1978. "Promotional Perspectives of Reference Group Influence Advertising Implications." *Journal of Advertising,* 7(2), 41–47.

Maram, H. K., and K. Kongsompong, 2000. "The Power of Social Influence : East-West Comparison on Purchasing Behavior." *Proceedings of International Marketing Conference on Marketing and Society*.

Mostafa, M. M, 2006. "Antecedents of Egyptian Consumers' Green Purchase Intentions: A Hierarchical Multivariate Regression Model." *Journal of International Consumer Marketing*, 19(2), 97–126.

Mostafa, M. M, 2007. "Gender Differences in Egyptian Consumers' Green Purchase Behaviour: The Effects of Environmental Knowledge, Concern and Attitude." *International Journal of Consumer Studies*, 31(3), 220–29.

Mostafa, M. M, 2009. "Shades of Green: A Psychographic Segmentation of the Green Consumer in Kuwait Using Self-Organizing Maps." *Expert Systems with Applications,* 36(8),11030–38.

Nakano, R., E. Zusman, S. Nugroho, R. L. Kaswanto, N. Arifin, A. Munandar, H. S. Arifin, M. Muchtar, K. Gomi, and T. Fujita, 2018. "Determinants of Energy Savings in Indonesia: The Case of LED Lighting in Bogor." *Sustainable Cities and Society*,42,184–93.

NUnnally, J. C. 1978. "Psychometric Theory (2 Editioned).New York: McGraw Hill Book Company." *McGraw Hill Book Company*.

Nyholm, E., S. Puranik, É. Mata, M. Odenberger, and F. Johnsson, 2016. "Demand Response Potential of Electrical Space Heating in Swedish Single-Family Dwellings." *Building and Environment,* 96, 270–82.

Ottman, J, 1998. "Green Marketing: Opportunity for Innovation." *The Journal of Sustainable Product Design,* 60.

Ozsacmaci, B, 2018. "The Mediation Effect of Green Marketing Activities on Green Brand Awareness and Consumer Purchase Intention." *Business and Economics Research Journal*, 9(4), 945–60.

Paul, J., A. Modi, and J. Patel, 2016. "Predicting Green Product Consumption Using Theory of Planned Behavior and Reasoned Action." *Journal of Retailing and Consumer Services,* 29, 123–34.

Peattie, K., and F. M. Belz, 2010. "Sustainability Marketing — An Innovative Conception of Marketing." *Marketing Review St. Gallen,* 27(5),8–15.

Polonsky, M. J., A. Vocino, S. L. Grau, R. Garma, and A. S. Ferdous, 2012. "The Impact of General and Carbon-Related Environmental Knowledge on Attitudes and Behaviour of US Consumers." *Journal of Marketing Management*, 28(3–4).

Prakash, G., and P. Pathak, 2017. "Intention to Buy Eco-Friendly Packaged Products among Young Consumers of India: A Study on Developing Nation." *Journal of Cleaner Production*, 141, 385–93.

Rahman, M. S, 2019. "GREEN PRODUCTS' ATTRIBUTES AND PRICE: HOW DO THEY AFFECT CONSUMERS' GREEN PURCHASING BEHAVIOR AND LOYALTY STATUS IN BANGLADESH?" *i-Manager's Journal on Management,* 13(3),12–21.

Roberts, J. A, 1996. "Green Consumers in the 1990s: Profile and Implications for Advertising." *Journal of Business Research*, 36(3), 217–31.

Rokicka, E, 2002. "Attitudes Toward Natural Environment: A Study of Local Community Dwellers." *International Journal of Sociology*, 32(3), 78–90.

Sawant, R, 2015. "A Study on Awareness and Demand Pattern amongst Consumers W.R.T Green Products." *International Journal of Marketing and Technology,* 5(1), 136–48.

Straughan, R. D., and J. A. Roberts, 1999. "Environmental Segmentation Alternatives: A Look at Green Consumer Behavior in the New Millennium." *Journal of Consumer Marketing,* 16(6), 558–75.

Tan, B. C, 2011. "The Roles of Knowledge, Threat, and PCE on Green Purchase Behaviour." *International Journal of Business and Management,* 6(12).

Yadav, R., and G. S. Pathak, 2016. "Young Consumers' Intention towards Buying Green Products in a Developing Nation: Extending the Theory of Planned Behavior." *Journal of Cleaner Production,* 135, 732–39.

Zhou, Y., J. Thøgersen, Y. Ruan, and G. Huang, 2013. "The Moderating Role of Human Values in Planned Behavior: The Case of Chinese Consumers' Intention to Buy Organic Food." *Journal of Consumer Marketing,* 30(4), 335–44.

ASSESSMENT OF GOVERNMENT EXPENDITURE ON SECONDARY EDUCATION AND ITS IMPACT ON SECONDARY SCHOOL ENROLMENT AND ECONOMIC GROWTH: AN EMPIRICAL EVIDENCE OF GHANA

Prince Asare Vitenu-Sackey[1], Isaac Akpempah Bathuure[2]
Affiliation: Jiangsu University, School of Finance and Economics
Address: No 301 Xuefu Road, Zhenjiang, 212013, Jiangsu Province, P. R. China

Abstract:

The study examines the effect of government expenditure on secondary education on secondary school enrollment and economic growth in Ghana in time series study from 1971 to 2018. The study employed time series methodologies to make its statistical analysis. However, fully modified ordinary least square, Wald test and granger causality tests were performed to ascertain the long run, short run and direction of causality among the variables. The study found that government expenditure on education has positive effect on economic growth and secondary school enrollment in both the long and short run but has insignificant effect in the short run on secondary school enrollment. Furthermore, government expenditure on secondary education has insignificant effect on both economic growth and secondary school enrollment in the long and short run but negative effect on economic growth in the short run. Moreover, the study found bidirectional causality relationship between secondary school enrollment and pupil-teacher ratio in secondary education. The study recommends that government should focus expending on the entire education sector due its tendency to increase economic growth and secondary school enrollment but not solely focusing on secondary education.

Keywords: Government expenditure; Secondary education; Secondary school enrolment; Economic growth; fully modified ordinary least square; granger causality

Corresponding Author:

Prince Asare Vitenu-Sackey (pavsackey@gmail.com)

1. Introduction

It has become imperative for quality education hence the adoption of SDG 4 (sustainable development goals) which seems "to ensure equitable quality education and and inclusive to promote lifelong learning opportunities for all has gained wider attention for governments to achieve this goal by 2030". Education is a developmental tool for every human being on this earth. Governments have greatly considered

education as a major tool to promote economic development hence the investment in education which will develop the human capital in various countries. Education has a direct benefit to individuals in societies which are highly a lifetime earnings and also contribute highly to national income through highly educated workforce. Significantly, education plays vital role in the accelerating development of economies or countries in the it promotes rise in labour productivity through increase in educational level; as a result, it directly affect the competitiveness of the countries in a positive manner and facilitates openness (Mehmet & Sevgi, 2014).

The rapid implementation of free secondary school education in Ghana by the current government has been widely criticized by scholars, experts, religious leaders, and the media. Many are of the view that the policy seems not to have significant impact on the economy of Ghana and should have been done progressively implemented as has been enshrined in the 1992 constitution. Statistics at UNESCO posits that government expenditure on education as percentage of GDP reduced from 5.77% in 2016 to 4.51% in 2017. However, gross enrollment in primary education dropped from 104.78% in 2017 to 102.47% in 2018 and the net enrollment from 84.59% in 2017 to 83.59% in 2018. Meanwhile, gross enrollment in secondary education increased from 69.95% in 2017 to 72.23% in 2018 and the net enrollment was 56.2% in 2017 to 59.01% in 2018. A critical assessment of this statistics posits that government effort has been channeled into secondary education whiles the basic primary education has not been well catered for which saw a decline in the primary school enrollment figure. An initiative with emphasis on mass public education was christened by the government of Ghana as part of its flagship programs known as "The Free Senior High School programme". As a matter of interest of the government, this initiative intends to provide opportunities to every Ghanaian child; most especially poverty-stricken ones whose parents can't afford them senior high school education. Emphatically, all cost barriers to educational opportunities are arrested under the policy which intends resolve the canker of inequality and equity as well as improve the quality of education to enable the Ghanaian child acquire employable skills after their education.

A study conducted by Sonia (2019) posits that mass secondary education financing curtails some vital issues such as tax justice which should guide all political expediency in pursuit to score political score in order to compromise quality education. The study draws its motivation from this premise to examine the impact of government expenditure on secondary school enrollment and economic growth. There are two approaches that exist to assess the relationship that ensued among education, education expenses and economic growth thus the neo-classical approach and the endogenous growth model (new growth theory). The neo-classical approach assumes that economic growth is expressed with human capital factor which is included in the model and the role of human capital is emphasized in the process of income differences between countries. However, the aim of this model is to explain the source of growth differences in different countries and at different times (Gumus, 2005). Moreover, the endogenous growth theory also known as the new growth theory posits that the human resource is pivotal to growth and endogenous technological development depends on human capital accumulation (McMahon, 1998; Dahlin, 2002; Kaya, 2004). Barro and Martin (1995) studied the relationship between education and economic growth and they averred that access to education variable as measured by the average time spent in secondary and high school has the capacity to exhibit significant relationship with economic growth. Barro (1991) shares

the related findings of Barro and Martin (1995), his studies, he concluded that there is a strong positive relationship between education and economic growth.

Empirically, government's expenditure on education and health have considerably been pinpointed to significantly and positively affect economic growth because health and education expenditure could positively affect human capital which in the long run will boost or promote economic growth at the same time promoting equity and poverty alleviation (Gupta et al., 1998; Doryan, 2001; Razmi et al., 2012). In addition, Ararat (2007) studied the dynamics of education on economic growth in Ukraine and Russia; the study confirmed that the relationship that exist between education and economic growth is positive and strongly significant. Dauda (2009) investigated the impact of education expenditure on economic growth in Nigeria by applying Johansen cointegration test and error correction model in a time series study from 1977 to 2007; the study concluded that there is a long run relationship associated with education expenditure and economic growth consistently in support with Anthonia (2012). Caliskam et al. (2013) investigated the link between secondary school enrollment in Turkey and economic growth; they found that there is a positive relationship between the two. Mehmet and Sevgi (2014) conducted a study into the effect of educational expenditure on economic growth in Turkey and their findings confirmed that there is positive relationship between educational expenditure and economic growth. They recommended that more investment should go into the education sector to experience dynamism. Higher education tends to have correlation with innovation where productivity gains are achieved (Ca, 2006; Pillay, 2011; McCowan et al., 2015; Glenda et al., 2015).

There are many literatures on the nexus of education, education expenditure and economic growth which majority are of the view that there is positive relationship among the three. Upon review of literatures, the study can conclude that there are sparse studies in the area of government expenditure on secondary education, economic growth and secondary school enrollment nexus particularly in Ghana hence the study has taken advantage of this gap to examine the effect that government expenditure has on economic growth and secondary school enrollment and also find the direction of causality among the variables. The study contributes to existing literatures on the subject matter for academic perusal and policy making. The study is divided into four-folds; section 1 introduces the study and review existing literatures, section 2 describes the data and methodology for the study, section 3 reports the finding results and discussion and section 4 concludes the study.

2. Data and Methodology

2.1 Data

The study used secondary data sourced from World Bank's World development Indicators from the period of 1971 to 2018.The study uses two independent variables to measure government expenditure on secondary education and Economic growth is measured by gross domestic product per capita; also some control variables are used to control the independent and dependent variables to examine the impact. The description of the data and variables used can be found below;

1. Expenditure on secondary education as percentage of government expenditure on education (EXPSEC) - Independent variable

2. Government expenditure on education as percentage of GDP (EDEXPGDP) – Independent variable

3. Population growth rate, annual percentage (POPG) – Control variable

4. Pupil-teacher ratio, secondary (PTR) – Control variable

5. School enrollment, secondary (gross); gender parity index (SCHENR) – Control variable/Dependent variable

6. Secondary education duration (years) (SCHDUR) – Control variable

7. Gross domestic product per capita (constant 2010 US$) as measure of economic growth (GDPPC) – Dependent variable/control variable

2.2 Methodology

The study conducts a time series study to examine the effect of government expenditure on secondary education on economic growth and school enrollment in Ghana for the period of 1971 to 2018 hence the utilization of time series methodologies. The methodologies used for the study are as follows; unit root tests, cointegration test, fully modified ordinary least square, Wald test and granger causality test.

Firstly, the study summarizes the data to ascertain the normality in distribution by undertaking Skewness test, Kurtosis test and Jarque-Bera test. Subsequently, group unit root tests are performed to ensure stationarity among the variables; there is an assumption that there is unit root in the variables and the null hypothesis can be rejected if there is significance in the tests for unit root either at level form or first difference. Perhaps, Levin-Lin Chu (Levin et al., 2002) LLC, Im-Pesaran & Shim (Im et al., 2003) IPS and Maddala & Wu (1999) ADF-Fisher and PP-Fisher tests are employed to find stationarity among the variables. These tests are considered due to their ability to resolve homogeneity and heterogeneity in the variables. Furthermore, cointegration test is performed to find the long run relationship among the variables to ascertain whether they are cointegrated. The null hypothesis postulates that the variables are not cointegrated. After the execution of the cointegration test, the study then performs the analysis to ascertain the long run estimations by using fully modified ordinary least square. The method modifies least squares to account for serial correlation effects and for the endogeneity in the regressors that result from the existence of a cointegration relationship. However, wald test is also performed to find out the short run estimations or effects of the independent variables on the dependent variables. Finally, the study performs granger causality test to find the direction of causality among the independent variables and dependent variables. Two directions of causality are expected either bidirectional or unidirectional. The null hypothesis posits that no variable granger causes the other.

All the variables are transformed into their natural logarithm except school enrollment (secondary) to avoid fluctuations in the data series. The econometric model for the study can be written as:

Economic growth = f(edexpgdp, schdur, ptr, schenr, popg) $\qquad$ (1)

Economic growth = f(expsec, schdur, ptr, schenr, popg) $\qquad$ (2)

School enrollment = f(edexpgdp, schdur, ptr, gdppc, popg) $\qquad$ (3)

School enrollment = f(expsec, schdur, ptr, gdppc, popg) $\qquad$ (4)

After taking logarithm of the variables the model can be written as:

$lngdppc_t = \beta0 + \beta1\ lnedexpgdp_t + \beta2\ lnschdur_t + \beta3\ lnptr_t + \beta4\ schenr_t + \beta5\ lnpopg_t + \varepsilon_t$ $\quad$ (5)

$lngdppc_t = \beta0 + \beta1\ lnexpsec_t + \beta2\ lnschdur_t + \beta3\ lnptr_t + \beta4\ schenr_t + \beta5\ lnpopg_t + \varepsilon_t$ $\quad$ (6)

$$schenr_t = \beta0 + \beta1\ lnedexpgdp_t + \beta2\ lnschdur_t + \beta3\ lnptr_t + \beta4\ lngdppc_t + \beta5\ lnpopg_t + \varepsilon_t \quad (7)$$

$$schenr_t = \beta0 + \beta1\ lnexpsec_t + \beta2\ lnschdur_t + \beta3\ lnptr_t + \beta4\ lngdppc_t + \beta5\ lnpopg_t + \varepsilon_t \quad (8)$$

In the models above, $\beta0$ represents the intercept, $\beta1\ to\ \beta5$ represents the independent and control variables, ε represents the error term or disturbances and t represents the time period from 1971 to 2018.

3. Results and discussion

3.1 Summary statistics

Table 1 reports the summary statistics of the variables; from the table, it is evidenced that the mean and the median are closely related and, the standard deviation are homogenously in nature. The Kurtosis test confirms that the distribution are positive and leptokurtic thus tall whiles the Skewness test confirms that mass of the distribution are negatively skewed. Jarque-Bera test confirms that lnexpsec and lnedexpgdp are in normal distribution but the rest of the variables are not in normal distribution.

Table 1 Summary statistics

	lngdppc	lnedexpgdp	lnexpsec	lnsdur	lnptr	schenr	lnpopg
Mean	6.932	1.405	3.613	1.927	2.744	0.740	0.932
Median	6.866	1.404	3.614	1.946	2.884	0.681	0.953
Maximum	7.471	2.097	3.872	1.946	3.198	0.986	1.248
Minimum	6.553	0.592	3.267	1.792	0.000	0.000	0.472
Std. Dev.	0.248	0.391	0.129	0.052	0.723	0.159	0.154
Skewness	0.739	-0.273	-0.538	-2.268	-3.490	-1.784	-0.775
Kurtosis	2.557	2.368	3.500	6.143	13.521	10.707	4.739
Jarque-Bera	4.757	1.393	2.815	60.898	318.817	144.272	10.849
Probability	0.093	0.498	0.245	0.000	0.000	0.000	0.004
Obs.	48	48	48	48	48	48	48

3.2 Group unit root test

The study performed unit root tests to verify whether there is unit root in the variables or not. Four unit root tests were performed thus LLC, IPS, ADF-Fisher and PP-Fisher; table 2 displays the results. The results confirm that at level form all the variables showed stationarity with IPS, ADF-Fisher and PP-Fisher tests except Levin-Lin & Chu test but at first difference all the tests confirm significance and stationarity. The study can infer that at first difference there is evidence of stationarity hence the null hypothesis that there is unit root in the variables.

Table 2 Group unit root test

	Statistic	Prob.	Sig.
Level form			
Levin, Lin & Chu t*	0.904	0.817	
Im, Pesaran and Shin W-stat	-2.669	0.004	**
ADF - Fisher Chi-square	32.305	0.001	***
PP - Fisher Chi-square	66.013	0.000	***

First difference

Levin, Lin & Chu t*	-13.444	0.000	***
Im, Pesaran and Shin W-stat	-18.754	0.000	***
ADF - Fisher Chi-square	139.032	0.000	***
PP - Fisher Chi-square	143.678	0.000	***

Note: *** indicates 1% significance level, ** indicates 5% significance level

3.3 Cointegration test

Cointegration test is usually performed to find the long run relationship among variables; hence the study performed cointegration test and table 3 reports the results. The results confirm that the variables are cointegrated and there is an existence of long run relationship among the variables. Evidence from table 3 confirms that the trace statistics and max-eigen statistics from none to at most 3 are significant at 1% and 5% level hence the null hypothesis that the variables are not cointegrated is rejected.

Table 3 cointegration test

Hypothesized No. of CE(s)	Trace Statistic	Prob.**	sig.	Max-Eigen Statistic	Prob.**	sig.
None *	373.386	0.000	***	174.761	0.000	***
At most 1 *	198.626	0.000	***	104.840	0.000	***
At most 2 *	93.786	0.000	***	44.663	0.002	**
At most 3 *	49.123	0.038	**	23.377	0.158	
At most 4	25.746	0.137		16.656	0.189	
At most 5	9.091	0.357		8.854	0.299	
At most 6	0.237	0.626		0.237	0.626	

Note: *** indicates 1% significance level, ** indicates 5% significance level

3.4 Government expenditure in the education sector and economic growth

By examining the effect of government expenditure on secondary education on economic growth, table 4 exhibits the analysis performed by using fully modified ordinary least square (FMOLS) and Wald test to find out the long run and short run effects concurrently. From the table, it is evidenced that government expenditure on the education sector thus one of the independent variables has positive and significant effect on economic growth in the long run with coefficient of 0.312 and 0.265 in model 1 and 3. Meanwhile, in the short run, government expenditure on the education sector has no significant effect on economic growth. The coefficients signal that percentage increase in government expenditure in the education sector will lead to 0.312% and 0.265% increase in economic growth in Ghana.

Moreover, government expenditure on secondary education showed negative and significant effect on economic growth in model 2 but insignificant in model 3 in the long run estimations. Model 3 takes into consideration the two independent variables in one equation to assess the effect they have on economic growth in the long run. The coefficient of model 2   i.e -0.557 where there is no existence of government expenditure in the education sector; a percentage increase government expenditure on

43

secondary education will lead to 0.557% decrease in economic growth in the long run as well as 2.019 decrease in short run.   The study aimed at finding the effect of secondary school duration on economic growth and the results confirm negative and statistical significant effect on economic growth in the long run but insignificant in the short run. The long run coefficient stands at -2.013, -1.672 and -2.019 respectively confirming that a year or percentage increase in secondary school duration will lead to 2.013%, 1.672 and 2.019 decreases in economic growth in the long run.

Pupil-teacher ratio is a major factor or boost for education hence the study controlled government expenditure on secondary education and economic growth; the results from table 4 exhibits that in the long run, pupil-teacher ratio has negative effect on economic growth but positive effect in the short run. With coefficient of -0.087, -0.118 and -0.071 in the long run and 0.538 in the short run; meaningfully, a percentage increase in pupil-teacher ratio will lead to 0.087%, 0.118% and 0.071% decrease in economic growth in the long run and 0.538% increase in economic growth in the short run. In table 4, the result of the effect of school enrollment in secondary education on economic growth posits that there is positive and statistical significant effect of school enrollment on economic growth in the long run as well as in the short run. The long run coefficients of 0.534, 0.948 and 0.538 as well as 11.173 in the short run signal that a percentage increase in secondary school enrollment will lead to 0.534%, 0.948% and 0.538% increase in economic growth respectively whiles in the short run it will increase by 11.173%.

Population growth is somewhat a major contributing factor to economic growth when the growth commensurate with vibrant and productive economic activities hence the study controlled the independent and dependent variables with population growth. The results report that population growth in Ghana has negative and statistical significant effect on economic growth in the short run and in model 2 in the long run where there is no existence of government expenditure in the education sector.

Table 4 Results of government expenditure on secondary education and economic growth

Dependent Variable LNGDPPC	FMOLS model 1	FMOLS model 2	FMOLS model 3	WALD TEST coefficient	=Short run effect t-statistics	f-statistics	Chi square
LNSDUR	-2.013	-1.672	-2.019	-0.076	-0.532	0.284	0.284
	(-5.053)***	(-3.448)***	(3.150)***				
LNPTR	-0.087	-0.118	-0.071	0.538	3.150**	9.922**	9.922**
	(-2.322)**	(-2.663)**	(-1.856)*				
SCHENR	0.534	0.948	0.538	11.173	10.924***	119.326***	119.326***
	(3.106)**	(5.271)***	(3.150)**				
LNPOPG	-0.011	-0.404	-0.076	-0.071	-1.856*	3.443*	3.443*
	(-0.083)	(-2.937)**	(-0.532)				
LNEDEXPGDP	0.312		0.265	-0.239	-1.458	2.126	2.126
	(5.027)***		(3.809)***				
LNEXPSEC		-0.557	-0.239	-2.019	-5.105***	26.061***	26.061***
		(-3.102)**	(-1.458)				
Constant	10.218	12.151	11.173				

44

	(13.070)***	(10.124)***	(10.924)***
R-squared	0.846	0.812	0.857
Adjusted			
Rsquared	0.827	0.789	0.835

Note: *** indicates 1% significance level, ** indicates 5% significance level, * indicates 10% significance level. T-statistics are in parentheses

3.5 Government expenditure on secondary education and secondary school enrolment

The study's objective to examine the effect of government expenditure on secondary education on secondary school enrollment can be found in table 5. The results confirm that secondary school duration has insignificant effect on school enrollment in the long run but has positive and statistical significant effect in the short run with a short run coefficient of 0.217 which means that a year increase in secondary school duration will lead to 0.217% increase in secondary school enrollment in the short run. The pupil-teacher ratio in the secondary education sector showed positive and 1% significance effect on secondary school enrollment in both long run and short run with coefficients of 0.147, 0.137, 0.137 and 0.394 respectively. However, a percentage increase in the pupil-teacher ratio will lead to 0.147%, 0.137% and 0.137% in the long run, and 0.394% in the short run.

Assessing the effect of economic growth on secondary school enrollment, table 3 confirms that economic growth has positive and 1% statistical significance effect on secondary school enrollment in the long run but negative effect in the short run. The long run coefficients stand at 0.378, 0.533 and 0.394 as well as -2.772 in the short run. The coefficients position that a percentage increase in economic growth will lead to 0.378%, 0.533% and 0.394% increase in secondary school enrollment in the long run and 2.772% decrease in the short run. Seemingly, population growth in Ghana has positive effect on secondary school enrollment in both the long run and short run. Considering the coefficients, a percentage increase population growth will lead to 0.163%, 0.159% and 0.217% increase in secondary school enrollment in the long run and 0.137% increase in the short run.

Table 5 Results of government expenditure on secondary education and school enrolment

Dependent				WALD			
Variable	FMOLS	FMOLS	FMOLS	TEST	Short run effect		
SCHENR	model 1	model 2	model 3	coefficient	Tstatistics	f-statistics	Chi square
LNSDUR	-0.274	0.075	-0.255	0.217	2.356**	5.550**	5.550**
	(-0.784)	(0.214)	(-0.699)				
LNPTR	0.147	0.137	0.137	0.394	3.719***	13.831***	13.831***
	(8.001)***	(6.591)***	(6.959)***				
LNGDPPC	0.378	0.533	0.394	-2.772	-1.874*	3.511*	3.511*
	(3.743)***	(6.241)***	(3.719)***				
LNPOPG	0.163	0.159	0.217	0.137	6.959***	48.422***	48.422***
	(1.957)**	(1.825)*	(2.356)**				
LNEDEXPGDP	0.076			0.097	0.154	1.370	1.876	1.876

45

	(1.548)		(1.865)*				
LNEXPSEC		0.109	0.154	-0.255	-0.699	0.489	0.489
		(0.942)	(1.370)				
Constant	-2.016	-4.016	-2.772				
	(-1.608)	(-2.771)**	(-1.874)*				
R-squared	0.709	0.705	0.716				
Adjusted Rsquared	0.674	0.669	0.673				

Note: *** indicates 1% significance level, ** indicates 5% significance level, * indicates 10% significance level. T-statistics are in parentheses

3.6 Granger causality test

Another objective of the study is to ascertain the direction at which the variables granger causes each other and granger causality test was employed. Table 6 displays the results of granger causality test performed and from the results, there is an evidence of both bidirectional and unidirectional causality or linkage among the variables. The evidence of bidirectional granger causality shows from secondary school enrollment to pupil-teacher ratio vice versa. The bidirectional causality literally means that a change one variable causes in the other variable vice versa. Furthermore, there is an evidence of unidirectional causality or linkage from government expenditure on education to economic growth, economic growth to government expenditure on secondary education, economic growth to secondary school duration, pupil-teacher ratio to economic growth, economic growth to secondary school enrollment, economic growth to population growth, government expenditure on education sector to secondary school enrollment, population growth to government expenditure on education sector, government expenditure on secondary education to secondary school duration, pupil-teacher ratio to government expenditure on secondary education, government expenditure on secondary education to secondary school enrollment, government expenditure on secondary education to population growth, secondary school duration to secondary school enrollment and pupil-teacher ratio to population growth. From the evidence witnessed from table 6, the study rejects the null hypothesis that none of the variables granger causes another.

Table 6 Granger causality test

Null Hypothesis:	Obs	F-Statistic	Prob.	
LNEDEXPGDP does not Granger Cause LNGDPPC	46	4.330	0.020	**
LNGDPPC does not Granger Cause LNEDEXPGDP		1.154	0.325	
LNEXPSEC does not Granger Cause LNGDPPC	46	0.483	0.620	
LNGDPPC does not Granger Cause LNEXPSEC		2.720	0.078	*
LNSCHDUR does not Granger Cause LNGDPPC	46	0.798	0.457	
LNGDPPC does not Granger Cause LNSCHDUR		4.713	0.014	**

46

PTR does not Granger Cause LNGDPPC	46	9.416	0.000	***
LNGDPPC does not Granger Cause PTR		0.251	0.779	
SCHENROL does not Granger Cause LNGDPPC	46	0.254	0.777	
LNGDPPC does not Granger Cause SCHENROL		31.270	0.000	***
LNPOPG does not Granger Cause LNGDPPC	46	1.453	0.246	
LNGDPPC does not Granger Cause LNPOPG		24.399	0.000	***
LNEXPSEC does not Granger Cause LNEDEXPGDP	46	2.160	0.128	
LNEDEXPGDP does not Granger Cause LNEXPSEC		0.363	0.698	
LNSCHDUR does not Granger Cause LNEDUEXPGDP	46	0.048	0.953	
LNEDUEXPGDP does not Granger Cause LNSCHDUR		2.340	0.109	
PTR does not Granger Cause LNEDEXPGDP	46	0.459	0.635	
LNEDEXPGDP does not Granger Cause PTR		0.214	0.808	
SCHENROL does not Granger Cause LNEDEXPGDP	46	1.682	0.199	
LNEDEXPGDP does not Granger Cause SCHENROL		8.971	0.001	***
LNPOPG does not Granger Cause LNEDEXPGDP	46	4.588	0.016	**
LNEDEXPGDP does not Granger Cause LNPOPG		2.017	0.146	
LNSCHDUR does not Granger Cause LNEXPSEC	46	0.068	0.934	
LNEXPSEC does not Granger Cause LNSCHDUR		7.147	0.002	**
PTR does not Granger Cause LNEXPSEC	46	6.934	0.003	**
LNEXPSEC does not Granger Cause LNPTR		0.284	0.754	
SCHENROL does not Granger Cause LNEXPSEC	46	0.447	0.642	
LNEXPSEC does not Granger Cause SCHENROL		5.703	0.007	**
LNPOPG does not Granger Cause LNEXPSEC	46	0.646	0.529	
LNEXPSEC does not Granger Cause LNPOPG		17.610	0.000	***
PTR does not Granger Cause LNSCHDUR	46	0.038	0.963	
LNSCHDUR does not Granger Cause PTR		0.136	0.873	
SCHENROL does not Granger Cause LNSCHDUR	46	1.290	0.286	
LNSCHDUR does not Granger Cause SCHENROL		3.399	0.043	**
LNPOPG does not Granger Cause LNSCHDUR	46	0.111	0.896	
LNSCHDUR does not Granger Cause LNPOPG		0.573	0.568	
SCHENROL does not Granger Cause PTR	46	306.096	0.000	***
PTR does not Granger Cause SCHENROL		83.809	0.000	***
LNPOPG does not Granger Cause PTR	46	0.046	0.955	
PTR does not Granger Cause LNPOPG		5.047	0.011	**
LNPOPG does not Granger Cause SCHENROL	46	0.083	0.920	
SCHENROL does not Granger Cause LNPOPG		0.117	0.890	

Note: *** indicates 1% significance level, ** indicates 5% significance level, * indicates 10% significance level.

4. Conclusion

The study examined the effect of government expenditure on secondary education on economic growth and secondary school enrollment in Ghana in time series study from 1971 to 2018. The study employed time series methodologies such as group unit root tests, cointegration test, fully modified ordinary least square, Wald coefficient restriction test and granger causality test for its statistical analysis.

The study used government expenditure on education as percentage of GDP and government expenditure on secondary education as percentage education sector expenditure as the independent variables, population growth, pupil-teacher ratio in secondary education, secondary school duration as control variables, secondary school enrollment and gross domestic product per capita as both dependent variables and control variable interchangeably. The study found that secondary school duration has negative effect on economic growth in the long run but insignificant effect in the short run. Government expenditure in the education sector has positive effect on economic growth in both the long run and short run.

Meanwhile, government expenditure on secondary education has insignificant on economic growth in the long run but has negative effect in the short run. However, population growth has negative effect on economic growth both in the long and short run, and secondary school enrollment also has positive effect on economic growth in the long and short run respectfully. Taking into the effect the variables have on secondary school enrollment, secondary school duration showed insignificant effect on secondary school enrollment in the long run but has positive effect in the short run. On the other hand, pupil-teacher ratio and population growth showed positive effect on secondary school enrollment in both long and short run. Moreover, economic growth has positive effect on secondary school enrollment in the long run but negative effect in the short run. To conclude, government expenditure on education sector has positive effect on secondary school enrollment in the long run but insignificant effect in the short run. In contrast, government expenditure on secondary education has insignificant effect on secondary school enrollment in both the long and short run.

The study recommends that government should not focus on the expenditure on secondary education but should focus on the entire education sector in particular primary education which will intend to increase the progress to secondary education ratio. Moreover, pupil-teacher ratio should also be taking into consideration for policymaking due to its tendency to increase economic growth and secondary school enrollment. The study recommends further research into this topic to either validate or reject its findings.

References:

Ahmad, D. P., Ubaidillah, Z. (2013), 'The government expenditure efficiency towards human development', *Procedia Economics and Finance,* Vol. 5, 615 – 622.

Anthonia, T. O. (2012), 'Education and economic growth in Nigeria: A comparative Analytical Approach', *European Journal of Globalization and Development Research,* Vol. 5, No. 1, 330 – 342.

Ararat, O. (2017), 'Role of Education in Economic growth in the Russian Federation and Ukraine', Available at: http://mpra.ub.uni-muenchen.de/7590

Barro, R. J. (1991), 'Economic Growth in a Cross Section of Countries', *The Quarterly Journal of Economics*, Vol.106, No.2, 407- 443.

Barro, R. J. and Xavier, S. M. (1995), *Economic Growth*, (London: The MIT Press), p.431.

Ca, T. (2006), 'Universities as Drivers of the Urban Economies in Asia: The Case of Vietnam', *World Bank Policy Research Working Paper 3949*, Washington.

Çalışkan, Ş., Karabacak, M. and Oytun, M. (2013), 'Türkiye'de Eğitim-Ekonomik Büyüme İlişkisi : 1923-2011 (Kantitatif Bir Yaklaşım)', *Yönetim Bilimleri Dergisi,* Cilt:11, Sayı:21, ss.-29 - 48.

Dahlin, B. G. (2002), 'The Impact of Education on Economic Growth: Theory, Findings and   Policy Implications', *Duke University Working Paper*, p.18.

Doryan, E. (2001), 'Poverty, Human Development, and Public Expenditure: Developing Actions for Government and Civil Society, in "*Equity and Health: Views from the Pan American Sanitary Bureau*" Pan American Health Organization', Editor, PAHO, Washington, D.C, pp. 50

Glenda, K., Simon, M., II-haam, P. and Michael, G. (2015), 'Higher education and economic development: The importance of building technological capabilities', *International Journal of Educational Development,* Vol. 43, 22 – 31.

Gupta, S., Clements, B. and Tiongson, E. (1998). 'Public Spending on Human Development. *Finance & Development',* Vol. 35, No. 3, 10 - 13

Gümüş, S. (2005), 'Beşeri Sermaye ve Ekonomik Kalkınma : Türkiye Üzerine Ekonometrik Bir Analiz (1960-2002)', *İstanbul: İktisadi Araştırmalar Vakfı*, s.100.

Government of Ghana (2017), 'President Akufo-Addo launches Free SHS', Available at: http://www.ghana.gov.gh/index.php/news/3972-president-akufo-addo-launches-free-shs

Im, K.S. and Pesaran, Y.S. (2003), 'Testing for unit roots in heterogeneous panels', *Journal of Econometrics,* Vol. 115, 53 -73.

Kaya, A. A. (2004), 'İçsel Büyüme Kuramları" içinde Erol Kutlu (der.)', İktisadi Kalkınma ve Büyüme, (Eskişehir Anadolu Üniversitesi Yayın No. 1575, ss.291-307).

Levin, A., Lin, C.F. and Chu, J. (2002), 'Unit root tests in panel data: asymptotic and finite sample properties', *Journal of Econometrics,* Vol. 108, 1 -24.

Maddala, G.S. and Wu, S. (1999), 'A comparative study of unit root tests with panel data and a new simple test', *Oxford Bulletin of Economics and Statistics, Vol. 61, 631 – 652.*

McCowan, T. and Schendel, R. (2015). '*The impact of higher education on development'*, In: McGrath, S. and Gu, Q. (Eds.), Routledge Handbook of International Education and Development. Routledge, London.

McMahon, W.W. (1998), 'Education and Growth in East Asia', *Economics of Education Review*, Vol.17, No.2, 159-172

Mehmet, M., Sevgi, S. (2014), 'The effect of education on economic growth: The case of Turkey', *Procedia – Social and*

Behavioral Sciences, Vol. 109, 925 – 930.

Pillay, P. (2011), '*Higher Education and Economic Development'*: Literature Review. Centre for Higher Education Transformation, Cape Town.

Razmi, M. J., Abbasian, E. and Mohammadi, S. (2012), 'Investigating the Effect of Government Health Expenditure on HDI in Iran'. *Journal of Knowledge Management Economics and Information Technology,* Vol. 5

Sonia, L. (2019), 'The politics of the education: Financing mass secondary education in Tanzania (2004 – 2012)', *International Journal of Educational Development,* Vol. 66, 96 – 104.

Sustainable Development Goals (2015). Available at: https://sustainabledevelopment.un.org/sdgs

UNESCO (2019). Education and literacy. Available at :http://uis.unesco.org/country/GH

World Bank (2018). World Development Indicators

PREDICTION OF DAILY CO_2 EMISSIONS OF A FACTORY USING ARIMA AND HOLT-WINTERS SEASONAL METHODS

Egemen Hopali[1*], Aslihan Cakmak[2]

[1]Ph.D. Program in Engineering Management, Institute of Pure and Applied Sciences, Marmara University, Turkey

[2]Ph.D. Program in Industrial Engineering, Institute of Pure and Applied Sciences, Marmara University, Turkey

*Corresponding Author (e-mail): e.hopali@gmail.com

Abstract

The increase of the concentrations of greenhouse gases (GHGs), mainly the carbon dioxide (CO_2), causes the earth atmosphere to capture more heat. Human-induced temperature increase affects the climate conditions, weather, and global mean sea level. This study attempts to forecast energy related CO_2 emissions of a factory by employing ARIMA, Holt-Winters' Additive and Holt-Winters' Multiplicative forecasting methods. The main objective of this study is to find the best forecasting model for CO_2 emission of the factory through benchmarking of the forecasting methods. Hourly CO_2 emissions data of factory are analyzed by R software programming. ARIMA $(1,1,1)$ $(1,1,1)_{24}$ is the most appropriate model among these three analyzed forecasting methods. The results show that the CO_2 emissions have significantly increasing trends. Considering sustainable and green energy planning, more targeted policies would be applied to reduce daily increasing trends of CO_2 emissions.

Keywords: Time series, forecasting, GHGs, CO_2 emission, energy, Holt-Winters Seasonal, ARIMA.

1. INTRODUCTION

The atmospheric concentrations of the greenhouse gases (GHGs) have dramatically increased since the Industrial Revolution which started in the 1700s. This is the result of the global economic growth and the combustion of fossil fuels. The increase of the concentrations of GHGs, mainly the carbon dioxide (CO_2), caused the earth atmosphere to capture more heat (Ali et al, 2017). Human-induced temperature increase has changed the weather conditions and the climate. This is the main result of the observed increase in global mean sea level (Ali and Weller, 2014; Stocker, 2014). In addition, the trends in local weather records are similar to the global observations of the climate change.

Figure 1 shows the World CO_2 emissions by years (The World Bank, 2017). As figure shows, World CO_2 emissions have an increasing trend. CO_2 emissions, the primary source of GHG emissions, should be reduced on the purpose of decreasing the hazardous global effects.
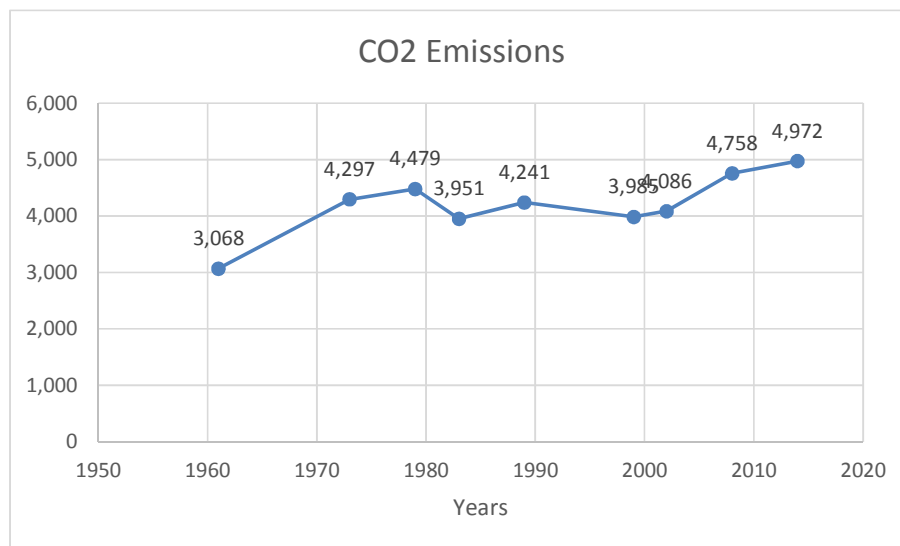
Figure 1. World CO_2 Emissions by years.

Aboumahboub et al. (2012); Curtis et al. (2016); Finenko and Cheah (2016), and Vieira et al. (2018) reveal the increasing trend of CO_2 emissions for different sectors in the worldwide. Previous studies in the literature employ several methods to forecast CO_2 emission through time series. Silva (2013) uses different forecasting techniques such as Holt-Winters, ARIMA, and exponential smoothing with the aim of forecasting energy related CO_2 emissions in the U.S. Tudor (2016) employs seven Automated Forecasting Methods, covering the Holt-Winters, ARIMA, the BATS/TBATS model, exponential smoothing state space model (ETS), the naive model, the structural time series model (STS) and the neural network time series forecasting method (NNAR) to forecast the evolution of CO_2 emissions in Bahrain between the years 2012 and 2021. Ang et al. (2013) employ ARIMA in order to project CO_2 emissions in Malaysia. Lotfalipour et al. (2013) apply ARIMA and predict CO_2 emissions in Iran. Liu et al. (2014) predict GHG emissions for China using ARIMA model. Sen et al. (2016) employ ARIMA in order to forecast GHG emissions for a pig iron manufacturing company in India. ARIMA and exponential smoothing are used to forecast CO_2 emissions in Asian countries (Fatima et al, 2019). Pakroh and Pishabar (2019) propose a hybrid ARIMA-SVR and ARIMA-TSVR models, which combine the autoregressive part of ARIMA model with the support vector regression technique, ARIMA-SVR, in order to predict air pollution concentrations for next year in Iran. Holt Winters Method and Artificial Neural Network are employed to forecast daily harmful atmospheric pollutants such as fine particulate matter, $PM_{2.5}$ (Ventura et al, 2019). Mid-long term electric energy consumption and GHG emissions are forecasted through ARIMA models and Holt's Winter multiplicative model for decision makers in order to develop an optimal energy planning strategy (de Oliveira and Oliveira, 2018).

This study attempts to forecast energy related CO_2 emissions of a factory in the U.S. by employing ARIMA, Holt-Winters' Additive and Holt-Winters' Multiplicative forecasting methods. In the context of this study, factories can make sustainable energy planning decisions. In this study, the data of a factory in the U.S. are used. R software programming is employed to analyze data which include daily average of CO_2 emissions for each hour per month. In other words, data have totally 288 average CO_2 emission

values as 12 months x 24 hours. The data is divided into 2 groups as training set and test set. For the test set, 48 values are kept, and the rest are assigned for the training.

2. METHODS

2.1.Holt-Winters Seasonal Method

Holt's method was extended by Holt and Winters in order to catch the seasonality (Hyndman and Athanasopoulos, 2018). The Holt-Winters Seasonal Method consists of the forecast equation and, also three smoothing equations with smoothing parameters α, β and γ. These three smoothing equations are for the level l_t, trend b_t and seasonal component s_t. The period of the seasonality is shown by m. For instance; $m=4$ for quarterly data and $m=12$ for monthly data.

There are two variations of Holt-Winters Seasonal Method. The difference between these two variations results from the nature of the seasonal component. When the seasonal variations are almost constant through the series, the additive method is used. Otherwise multiplicative one is preferred. It means that the seasonal variations change in multiplicative method. While the seasonal component is expressed in absolute terms in the scale of the observed series in the additive method, it is expressed in percentages in multiplicative method.

2.1.1. Holt-Winters Additive Method

- The component form of the Holt-Winters Additive Method (Hyndman and Athanasopoulos, 2018) is given below:

$$\hat{y}_{t+h|t} = \ell_t + hb_t + s_{t-m+h_m^+} \tag{1}$$

$$\ell_t = \alpha(y_t {}^- s_{t-m}) + (1-\alpha)(\ell_{t-1} + b_{t-1}) \tag{2}$$

$$b_t = \beta^*(\ell_t - \ell_{t-1}) + (1-\beta^*)b_{t-1} \tag{3}$$

$$s_t = \gamma(y_t - \ell_{t-1} - b_{t-1}) + (1-\gamma)s_{t-m} \tag{4}$$

- The equation for the seasonal component:

$$s_t = \gamma^*(y_t - \ell_t) + (1-\gamma^*)s_{t-m} \tag{5}$$

- The error correction form of smoothing equation:

$$\ell_t = \ell_{t-1} + b_{t-1} + \alpha e_t \tag{6}$$

$$b_t = b_{t-1} + \alpha\beta^* e_t \tag{7}$$

$$s_t = s_{t-m} + \gamma e_t \tag{8}$$

2.1.2. Holt-Winters Multiplicative Method

- The component form of the Holt-Winters Multiplicative Method (Hyndman and Athanasopoulos, 2018) is given below:

$$\hat{y}_{t+h|t} = (\ell_t + hb_t)s_{t-m+h_m^+} \tag{9}$$

$$\ell_t = \alpha \frac{y_t}{s_{t-m}} + (1-\alpha)(\ell_{t-1} + b_{t-1}) \tag{10}$$

$$b_t = \beta * (\ell_t - \ell_{t-1}) + (1-\beta*)b_{t-1} \tag{11}$$

$$s_t = \gamma \frac{y_t}{(\ell_{t-1} + b_{t-1})} + (1-\gamma)s_{t-m} \tag{12}$$

Error correction:

$$\ell_t = \ell_{t-1} + b_{t-1} + \alpha \frac{e_t}{s_{t-m}} \tag{13}$$

$$b_t = b_{t-1} + \alpha\beta * \frac{e_t}{s_{t-m}} \tag{14}$$

$$s_t = s_t + \gamma \frac{e_t}{(\ell_{t-1} + b_{t-1})} \tag{15}$$

$$e_t = y_t^- (\ell_{t-1} + b_{t-1})s_{t-m} \tag{16}$$

2.2. Forecasting with Decomposition

Although the decomposition method is basically used for the time series, and analyzing the historical changes over time, it is also used in forecasting.

- For the additive decomposition, the decomposed time series:

$$y_t = \hat{S}_t + \hat{A}_t \tag{17}$$

$$\hat{A}_t = \hat{T}_t + \hat{E}_t \tag{18}$$

- For the multiplicative decomposition:

$$y_t = \hat{S}_t \hat{A}_t \tag{19}$$

$$\hat{A}_t = \hat{T}_t \hat{E}_t \tag{20}$$

54

The seasonal component and the seasonally adjusted component are separately forecasted in the context of decomposed time series. Several non-seasonal forecasting methods can be used for seasonally adjusted component. However, seasonal naive method is applied as the seasonal component in this study.

2.3.ARIMA

ARIMA models are the alternative models to time series forecasting. Both exponential smoothing models and ARIMA models are the most common used on-time series forecasting models. They also ensure complementary approaches to the problems. While ARIMA models determine the autocorrelations in the data, exponential smoothing models determine the description of trend and seasonality in the data.

ARIMA models can be classified as non-seasonal and seasonal models. Seasonal ARIMA models are generally denoted as ARIMA (p, d, q) (P, D, Q)$_m$ where p, d, and q are non-negative integers. P, D, and Q respectively refer to the autoregressive, differencing, and moving average terms of the model, where m refers to the period number in each season.

The difference between the seasonal and non-seasonal parts of the model is that the seasonal part includes the backshifts of the seasonal period. The seasonal lags of auto-correlation function (ACF) and partial auto-correlation function (PACF) reveal the seasonal part of Auto Regressive (AR) or Moving Average (MA) model.

3. RESULTS

In this study, ARIMA, Holt-Winters' Additive and Holt-Winters' Multiplicative methods are employed through R Statistical Computing Software Package. Figure 2 and Figure 3 show how CO_2 emissions data demonstrates the seasonality and trends.
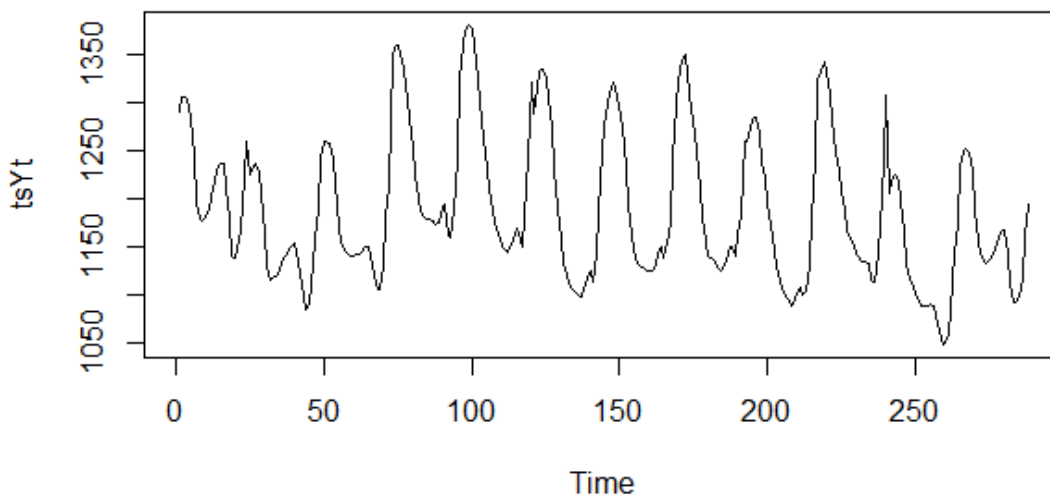
Figure 2. Time Series Graph of CO_2 Emissions.

Decomposition of additive time series
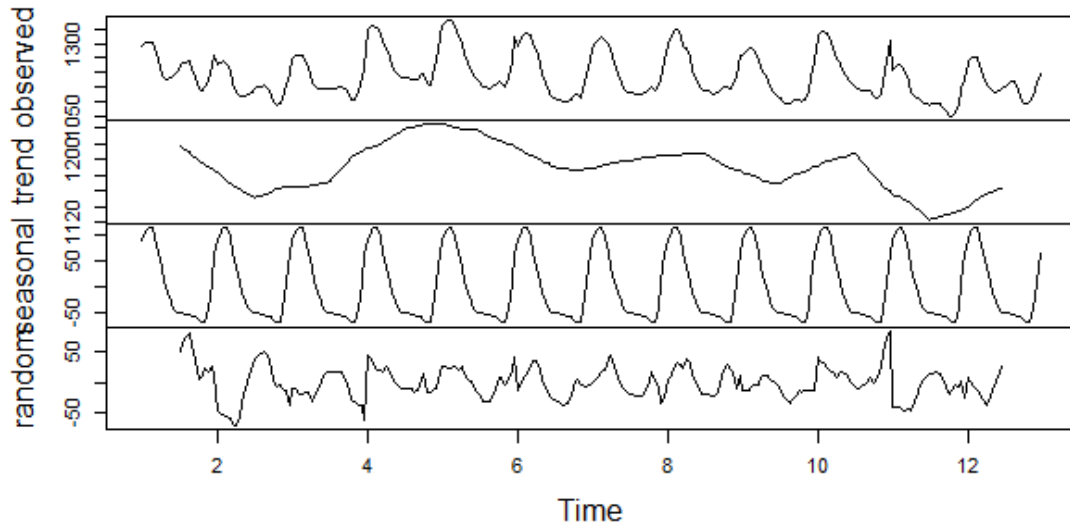
Figure 3. Decomposition of Additive Time Series.

Seasonality has observed through ACF and Partial ACF graphs. Also, Partial ACF shows significant spikes at lags 1, 2, 3 and after lag 15 specifically at lag 24 as shown in Figure 4 and Figure 5.

Series tsYt
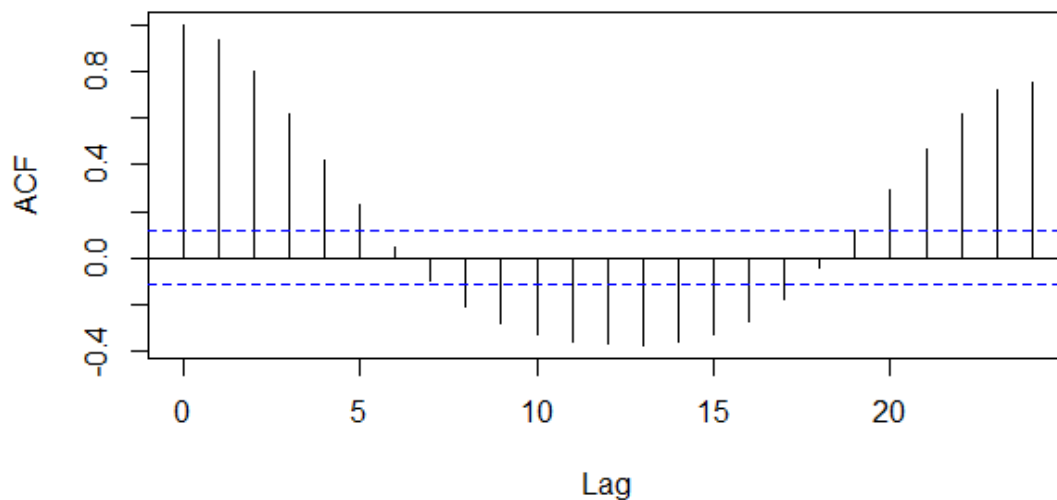
Figure 4. ACF Graph of CO_2 Emissions.

Series tsYt
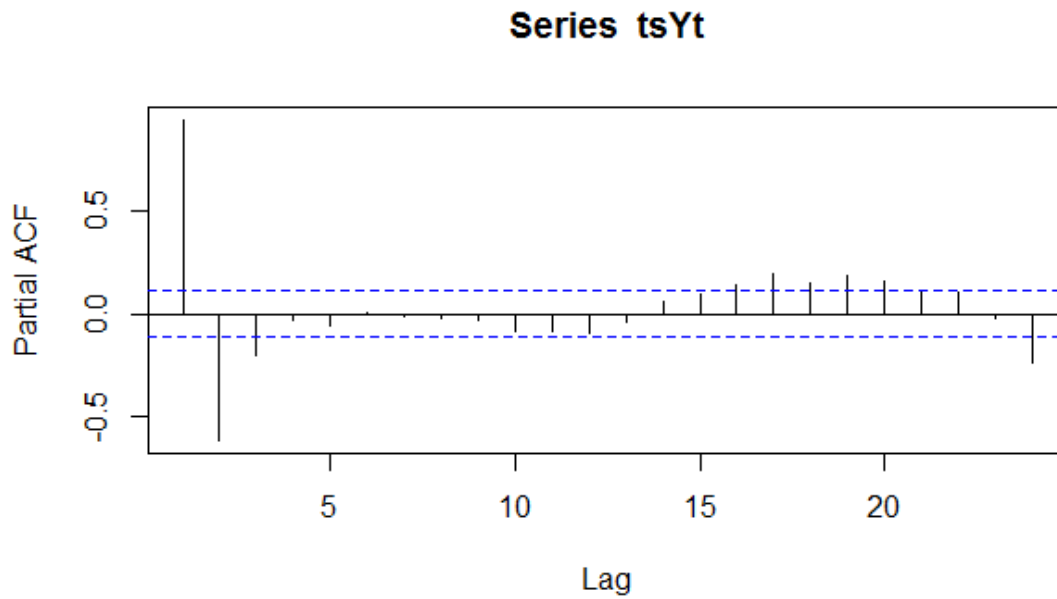
Figure 5. Partial ACF Graph of CO_2 Emissions.

CO_2 emissions data is non-stationary with some seasonality. Firstly, the seasonal difference is examined for seasonal length of 24 hours. The seasonally differenced data are shown in Figure 6.
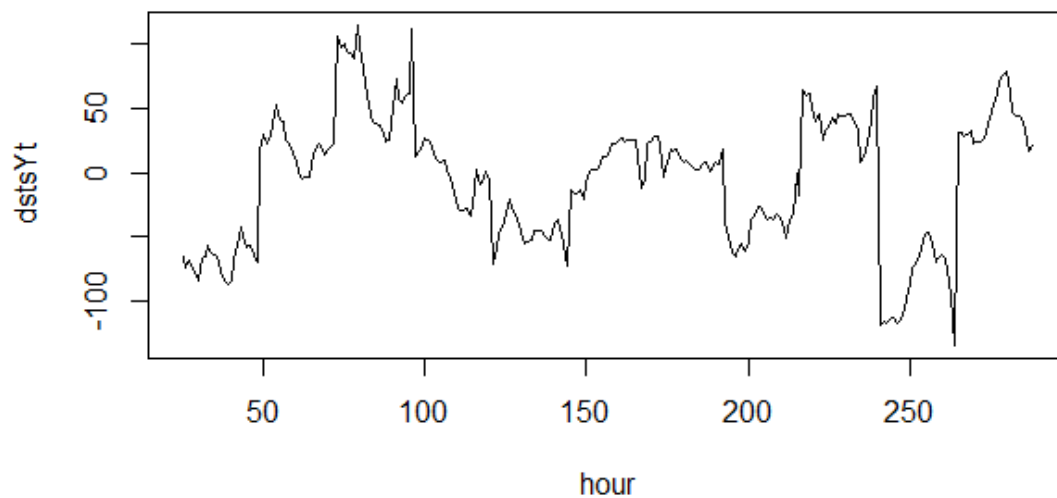
Figure 6. Seasonally Differenced CO_2 Emissions Data.

Some non-stationary fluctuations are also shown in the seasonal differenced data. Then additional non-seasonal difference is examined to prepare the data for ARIMA and Holt Winters models (Figure 7). After differenced data being handled, the data become stationary around the mean value.

57
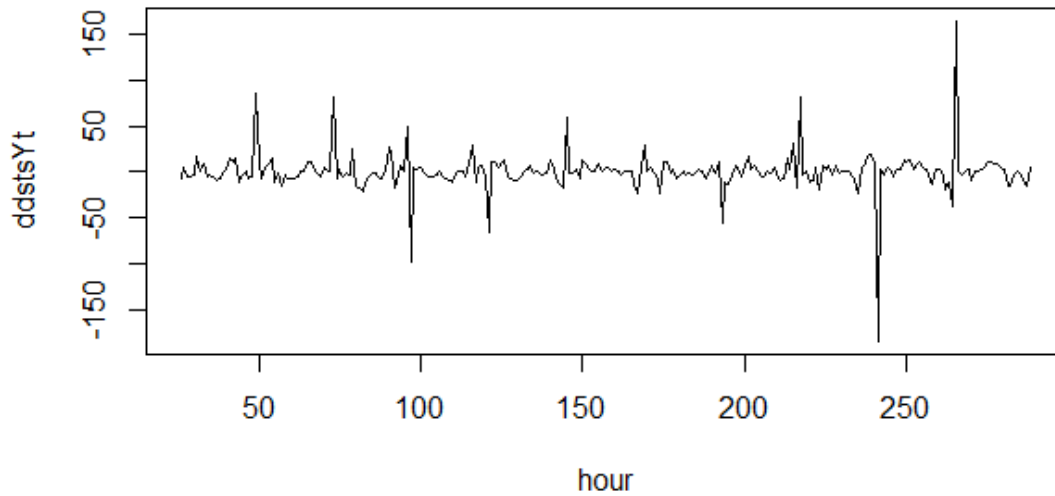
Figure 7. Double Differenced CO_2 Emissions Data.

ARIMA $(1,1,1)$ $(1,1,1)_{24}$ model gives the best result among other ARIMA models. Even so, as seen in Figure 8, CO_2 emissions data couldn't get rid of the seasonality in some periods because of the double seasonal effect of hourly data.
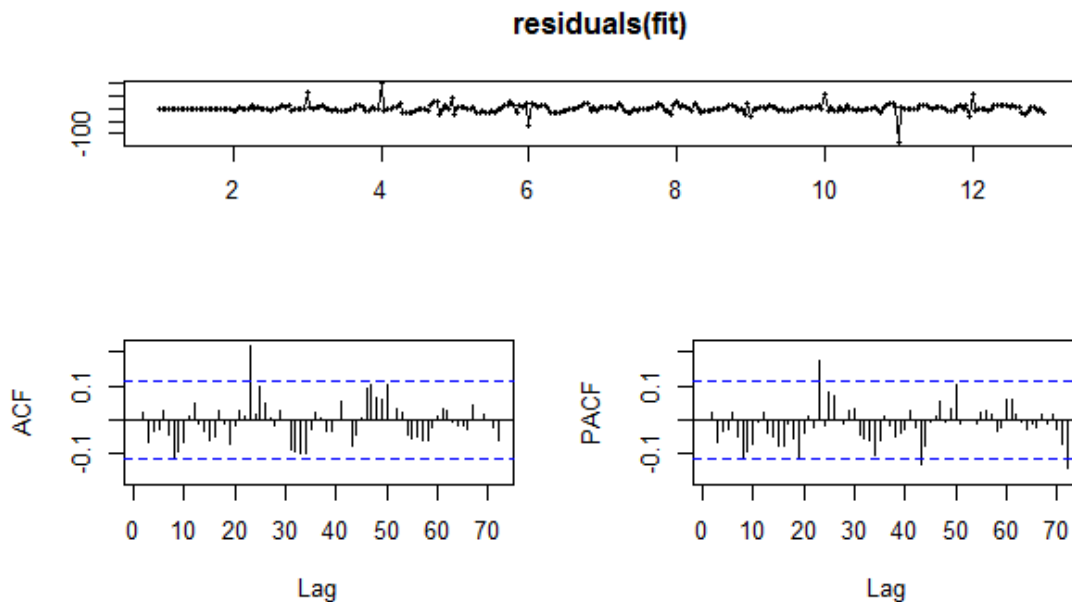
Figure 8. Residuals from the fitted ARIMA $(1,1,1)$ $(1,1,1)_{24}$ model for CO_2 Emissions.

Holt-Winters' Additive and Holt-Winters' Multiplicative methods are applied to CO_2 emissions data and observed trends are shown in Figure 9 and Figure 10.

Forecasts from Holt-Winters' additive method
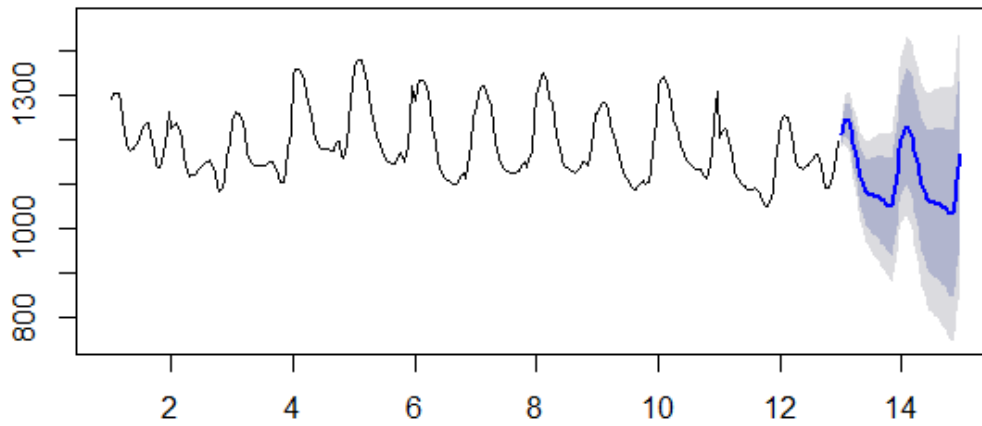
Figure 9. Graph of Holt Winters Additive Method.

Forecasts from Holt-Winters' multiplicative method
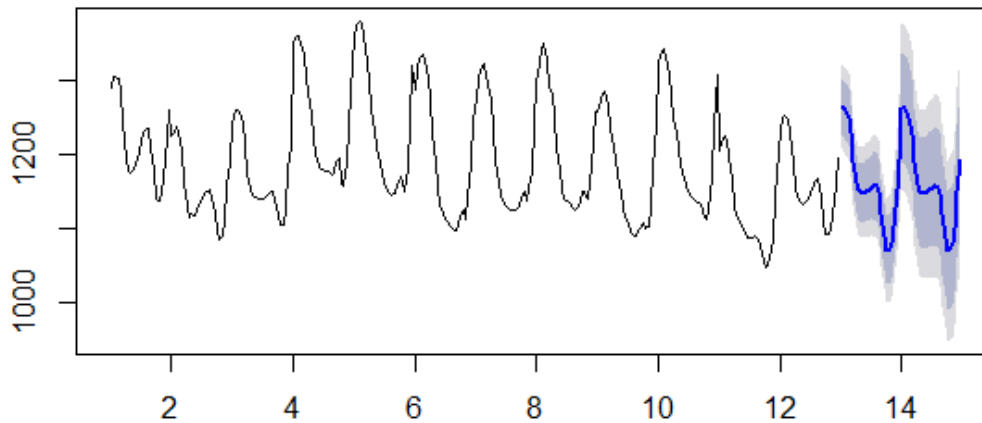
Figure 10. Graph of Holt Winters Multiplicative Method.

Error measures of the methods in the training set are demonstrated in Table 1. Due to the lowest MAPE among models, ARIMA $(1,1,1)$ $(1,1,1)_{24}$ model gives the best result for CO_2 emissions data.

Table 1. Error Measures of the Methods.

Holt Winters Additive Method			
ME	**MSE**	**MAE**	**MAPE**
0,3079062	0,0948062	10,22916	0,8558381
Holt Winters Multiplicative Method			
ME	**MSE**	**MAE**	**MAPE**
1,173532	1,377177355	20,46228	1,691013
ARIMA Method			
ME	**MSE**	**MAE**	**MAPE**
-0,0004446384	0,0000001977	0,007398845	0,1043062

The data is divided into 2 groups as the training set and the test set. For the test set, 48 values of total 288 average CO_2 emissions values are kept. Based on the forecasts from ARIMA model, it is predicted that the CO_2 emissions will have a significant increasing trend as seen in Figure 11.
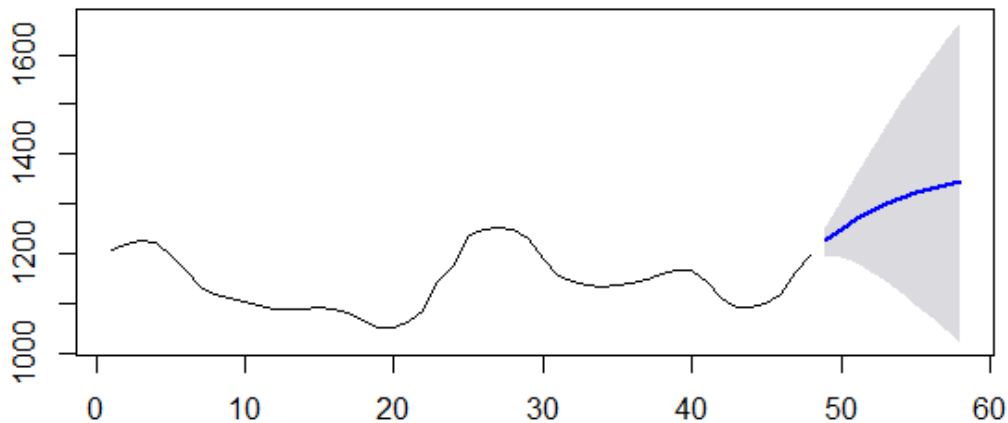
Figure 11. Forecasting of CO_2 Emissions using an ETS Model (ARIMA).

4. CONCLUSION

The main objective of this study is to identify and select one of the best possible ARIMA models; Holt-Winters' Additive or Holt-Winters' Multiplicative methods in order to forecast energy related CO_2

emissions for a factory. The aim of this study is extremely important because CO_2 emissions cause the earth atmosphere to capture more heat. Selection of the best possible forecasting method and its model is crucial to understand the current trend of CO_2 emissions. The novelty of this study is the detection of current trends of CO_2 emissions which are beneficial to develop a better environmental policy and managerial implications.

Three forecasting methods have gradually employed in this study. Considering the error measures of the methods, the best method is ARIMA which is followed by Holt-Winters' Additive and Holt-Winters' Multiplicative. ARIMA $(1,1,1)$ $(1,1,1)_{24}$ model has given the best result for CO_2 emissions. According to the forecasting of this model, CO_2 emissions have significantly increasing trends day by day. The results show that more targeted policies would be applied to reduce daily increasing trends of CO_2 emissions through energy planning.

References

Aboumahboub T, Schaber K, Wagner U and Hamacher T (2012). On the CO_2 emissions of the global electricity supply sector and the influence of renewable power-modeling and optimization. Energy Policy 42: 297-314.

Ali H, Sanjaya S, Suryadi B and Weller S R (2017). Analysing CO_2 emissions from Singapore's electricity generation sector: Strategies for 2020 and beyond. Energy 124: 553-564.

Ali H and Weller S R (2014). Carbon dioxide mitigation strategies for the Singapore power generation sector. World Congress on Sustainable Technologies (WCST): 42-47.

Ang C T, Morad N, Ismail M T and Ismail N (2013). Projection of carbon dioxide emissions by energy consumption and transportation in Malaysia: a time series approach. Journal of Energy Technologies and Policy 3(1): 63-75.

Curtis J, Lynch M Á and Zubiate L (2016). Carbon dioxide (CO_2) emissions from electricity: The influence of the North Atlantic Oscillation. Applied energy 161: 487-496.

de Oliveira E M and Oliveira F L C (2018). Forecasting mid-long term electric energy consumption through bagging ARIMA and exponential smoothing methods. Energy 144: 776-788.

Fatima S, Ali S S, Zia S S, Hussain E, Fraz T R and Khan M S (2019). Forecasting Carbon Dioxide Emission of Asian Countries Using ARIMA and Simple Exponential Smoothing Models. International Journal of Economic and Environmental Geology 10 (1): 64-69.

Finenko A and Cheah L (2016). Temporal CO_2 emissions associated with electricity generation: Case study of Singapore. Energy policy 93: 70-79.

Hyndman R J and Athanasopoulos G (2018). Forecasting: principles and practice. OTexts.

Liu L, Zong H, Zhao E, Chen C and Wang J (2014). Can China realize its carbon emission reduction goal in 2020: From the perspective of thermal power development. Applied Energy 124: 199-212.

Lotfalipour M R, Falahi M A and Bastam M (2013). Prediction of CO_2 emissions in Iran using Grey and ARIMA

models. International Journal of Energy Economics and Policy 3(3): 229-237.

Pakrooh P and Pishbahar E (2019). Forecasting Air Pollution Concentrations in Iran, Using a Hybrid Model. Pollution 5(4): 739-747.

Sen P, Roy M, and Pal P (2016). Application of ARIMA for forecasting energy consumption and GHG emission: A case study of an Indian pig iron manufacturing organization. Energy 116: 1031-1038.

Silva E S (2013). A combination forecast for energy-related CO_2 emissions in the United States. International Journal of Energy and Statistics 1(4): 269-279.

Stocker T (2014). Climate change 2013: the physical science basis: Working Group I contribution to the Fifth assessment report of the Intergovernmental Panel on Climate Change. Cambridge University Press.

The World Bank (2017). CO_2 emissions (metric tons per capita). https://data.worldbank.org/indicator/EN.ATM.CO2E.PC, accessed 10 December 2019.

Tudor C (2016). Predicting the evolution of CO_2 emissions in Bahrain with automated forecasting methods. Sustainability 8(9): 923.

Ventura L M B, de Oliveira Pinto F, Soares L M, Luna A S and Gioda A (2019). Forecast of daily $PM_{2.5}$ concentrations applying artificial neural networks and Holt–Winters models. Air Quality, Atmosphere and Health 12(3): 317-325.

Vieira N D B, Nogueira L A H and Haddad J (2018). An assessment of CO_2 emissions avoided by energy-efficiency programs: A general methodology and a case study in Brazil. Energy 142: 702-715.

BEST PRACTICES IN ONLINE EDUCATION

Charles E. Downing, Ph.D.[*1]

Operations Management and Information Systems Department, College of Business, Northern Illinois University,

DeKalb, IL 60115

1 cdowning@niu.edu

Abstract

Online or distance education is growing and becoming a strategic imperative for colleges and universities. As this trend continues, "getting it right" becomes critical. Much has been written about the components of online education, and this research will synthesize published studies of best practices in Content Delivery, Instructor-to-Student Interaction, Student-to-Student Interaction, and Assessment. Additionally, actual and potential online students were surveyed to gauge whether these best practices are still preferred, and to what degree. Results show that students believe content delivery is still best achieved in a traditional classroom setting, but live interactive videos online, interactive animations online, and/or watching videos online (no differentiation) are a close second. Regarding instructor-to-student interaction, students ranked traditional classes as tied with online classes where the instructor shares knowledge of tools to use (IT or other), shows how to succeed in all communications, establishes trust / credibility / humility / Teaming Environment, and responds to posts with pertinent examples to share. In the area of student-to-student interaction, students ranked traditional classes as the best by a wide margin, with discussion boards and newer technologies such as VoiceThread as a distant second. Finally, in the area of Assessment, students believe that they will be assessed equally in a traditional or online class, as long as authentic assessment such as interactive formative feedback and portfolio assessment is used. If the assessment method is multiple choice, students are concerned about being assessed properly in an online class. Concerning cheating, students only feel it is a problem in an online class whose assessment consists mostly of multiple choice quizzes and tests.

INTRODUCTION AND LITERATURE REVIEW

Since 2002, the Babson Survey Research Group (in partnership with the College Board) has annually surveyed and received responses from more than 2,800 colleges and universities regarding their opinions on the state of online/distance education in the United States. One of their findings in 2012 was that "The proportion of chief academic leaders that say online learning is critical to their long-term strategy is now at 69.1 percent – the highest it has been for this ten-year period." (Allen & Seaman, 2013, p. 4). The trend had begun and has not slowed down. In 2018, the same group reported that "since 2012

distance growth has continued its steady increase in an environment that saw overall enrollments decline for four straight years" (Seaman, Allen, & Seaman, 2018, p. 3).   Additionally, "The number of distance education students grew by 5.6% from Fall 2015 to Fall 2016 to reach 6,359,121 who are taking at least one distance course, representing 31.6% of all students. Total distance enrollments are composed of 14.9% of students (3,003,080) taking exclusively distance courses, and 16.7% (3,356,041) who are taking a combination of distance and non-distance courses." (Seaman, Allen, & Seaman, 2018, p. 3).   And as the for-profit offerings fall out of favor and continue to lose enrollment (Seaman, Allen, & Seaman, 2018), public universities are seeing enrollments rise and are positioned to grow their offerings of online/distance education for the foreseeable future.   To avoid the fate of the for-profits, universities need to get it right.   Getting it right involves providing excellence in four keys areas of online education: Content Delivery, Instructor-to-Student Interaction, Student-to-Student Interaction, and Assessment.

Content Delivery: Video remains the primary mechanism for content delivery in online education, however there is "little conclusive research to show that video is indeed an effective method for learning" (Hansch et al., 2015, p. 10).   Hansch et al. (2015) recommend that other forms of media (e.g. podcasts and interactive animations) and other uses of video (e.g. live video) be explored, and they also offer suggestions to make the best use of video as a medium.   Ebooks and blog content are also popular, but less used and possibly even less effective (Vo, Ledbetter, & Zuckerman, 2019).

Instructor-to-Student Interaction: While email remains the most-used method to communicate with online students (Hicks, Gray & Bond, 2019), the Instructional Online Model (IOM) provides additional recommendations for how instructors should interact with their online students (Schmaltz, Carpenter & Petersen, 2018).   Table 1 summarizes these recommendations (Schmaltz, Carpenter & Petersen, 2018, p. 5):

Table 1

Instructional Online Model Interaction and Occurrence

Instructional Online Model (IOM)	
Type of Interaction	**Occurrence**
Establish trust / credibility / humility / Teaming Environment	Continual
Daily Engagement: Show how to succeed in all you communicate (grading comments, and in discussion posts)	
Say 'Thank you' in all communications	
Use the student's name when communicating	
Share knowledge of tools to use (IT or other)	
Post a variety of content in your announcements with attached articles of interest cited	Daily
Responding to Posts with pertinent examples to share	Daily

Student-to-Student Interaction: Instructor-provided discussion boards remain the predominant student-to-student interaction tool (Gokhale & Machina, 2018), but improvements can certainly be made with carefully placed instructor involvement (Parks-Stamm, Zafonte & Palenque, 2017).   Additionally, VoiceThread technology and other innovations have been shown to enhance the online experience (Bickle & Rucker, 2018).

Assessment: Without proper assessment, the online educational model breaks down.   The Babson Research Group reports that private, for-profit online institutions (e.g., University of Phoenix) have seen a decline in total enrollments for the fourth year in a row (through 2018) (Seaman, Allen, & Seaman, 2018). This could very well be a loss of credibility resulting from poor assessment and accountability (Olt, 2002).

Gikandi, Morrow & Davis (2011) suggest that ongoing authentic assessment, and interactive formative feedback, deter threats to validity and reliability of assessment. Reeves (2000) reports how the alternative assessment methods of cognitive assessment, performance assessment, and portfolio assessment can help alleviate concerns.

Research Questions and Hypotheses

The research questions and hypotheses are built on an extension of the literature review and will focus on the four areas: Content Delivery, Instructor-to-Student Interaction, Student-to-Student Interaction, and Assessment. Respondents were asked to rate their agreement/disagreement with the following statements on a Likert-scale. Are the methods proposed better than those currently used? Coding was used for each area (e.g., "CD1" = The first question in the Content Delivery area) to make the results more readable.

Content Delivery
1. **CD1:** I believe attending a traditional class is the most effective way for me to learn.
2. **CD2:** I believe watching videos online is the most effective way for me to learn.
3. **CD3:** I believe an EBook online is the most effective way for me to learn.
4. **CD4:** I believe blog content online is the most effective way for me to learn.
5. **CD5:** I believe podcasts are the most effective way for me to learn.
6. **CD6:** I believe interactive animations online are the most effective way for me to learn.
7. **CD7:** I believe live interactive videos online are the most effective way for me to learn.

H1: Proposed newer online methods are superior to traditional classes for effective content delivery.

Instructor-to-Student Interaction
1. **IS1:** I believe attending a traditional class is the most effective way for me to interact with my instructor.
2. **IS2:** I believe email is the most effective way for me to interact with my instructor.
3. **IS3:** I believe it is important for effective Instructor-to-Student interaction for the instructor to establish trust / credibility / humility / Teaming Environment in an online class.
4. **IS4:** I believe it is important for effective Instructor-to-Student interaction for the instructor to show how to succeed in all communications (grading comments, and in discussion posts) in an online class.
5. **IS5:** I believe it is important for effective Instructor-to-Student interaction for the instructor to say 'Thank you' in all communications in an online class.
6. **IS6:** I believe it is important for effective Instructor-to-Student interaction for the instructor to use my name when communicating with me in an online class.

7. **IS7:** I believe it is important for effective Instructor-to-Student interaction for the instructor to share knowledge of tools to use (IT or other) in an online class.

8. **IS8:** I believe it is important for effective Instructor-to-Student interaction for the instructor to post a variety of content in the announcements with attached articles of interest cited in an online class.

9. **IS9:** I believe it is important for effective Instructor-to-Student interaction for the instructor to respond to posts with pertinent examples to share in an online class.

H2:   Proposed newer online methods are superior to traditional classes for effective instructor-to-student interaction.

Student-to-Student Interaction

1. **SS1:** I believe attending a traditional class is the most effective way for me to interact with my classmates.

2. **SS2:** I believe instructor-provided discussion boards are the most effective way for me to interact with my classmates.

3. **SS3:** VoiceThread is a learning tool for enhancing student engagement and online presence. With VoiceThread, instructors and/or students can create, share, and comment on images, Microsoft PowerPoint presentations, videos, audio files, documents, and PDFs, using microphone, webcam, text, phone, and audio-file upload.   I believe VoiceThread in an online class is the most effective way for me to interact with my classmates

H3:   Proposed newer online methods are superior to traditional classes for effective student-to-student interaction.

Assessment

1. **AS1:** I believe I will be assessed properly (results will show what I truly learned) in a traditional class which consists mostly of multiple choice quizzes and tests.

2. **AS2:** I believe I will be assessed properly (results will show what I truly learned) in a traditional class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

3. **AS3:** I believe I will be assessed properly (results will show what I truly learned) in an online class which consists mostly of multiple choice quizzes and tests.

4. **AS4:** I believe I will be assessed properly (results will show what I truly learned) in an online class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

5. **AS5:** I believe cheating will be a large problem in a traditional class which consists mostly of multiple choice quizzes and tests.

6. **AS6:** I believe cheating will be a large problem in a traditional class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

7. **AS7:** I believe cheating will be a large problem in an online class which consists mostly of multiple choice quizzes and tests.

8. **AS8:** I believe cheating will be a large problem in an online class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

H4:   Assessment in an online class will be as effective as assessment in a traditional class.

Methodology

To explore these questions and test these hypotheses, surveys (constructed using the questions enumerated in the four areas above) were made available electronically, on a voluntary basis, to undergraduate students who have taken online courses or are considering taking online courses. Students were informed that all responses are anonymous, participation is voluntary, and all collected results will be reported in aggregate only.

Data Collection, Analysis and Results

A seven-point Likert-scale was used for each question in the survey administered to the students. Answers ranged from "Strongly Agree" (numeric value 1) to "Strongly Disagree" (numeric value 7). Three hundred and forty-seven students responded out of 448 given the opportunity (response rate = $347/448 = 77\%$).   The full survey instrument is available upon request.   The mean responses to each question, for each area, appear in Tables 1-4.

To determine whether there was differences in the means within each of the questions in the four categories (Content Delivery, Instructor-to-Student Interaction, Student-to-Student Interaction, and Assessment), ANOVA testing was done.   If the F statistic was far greater than 1 (at $\alpha = .10$), then a Tukey Honest Significant Difference (HSD) test was run to determine which means were different. Both of these tests were conducted using the open source statistics and data analytics package RStudio. The script file to conduct the ANOVA and TukeyHSD tests for the first hypothesis (H1) in RStudio are shown in Figure 1.   Using this code, the F value was determined to be significantly greater than 1 for all four categories, and those results have not been shown.   The same script was used for the remaining hypotheses, with appropriate changes made to reflect the new data being tested.   Test results, means and significance levels are shown in Tables 1-4.

```
Content Delivery
H1 Testing, ANOVA.

   install.packages("readxl")
   library(readxl)
   BestP_data <- read_excel("Best Practices in Online.xlsx")
   H1_data <- data.frame(BestP_data$CD1, BestP_data$CD2,
BestP_data$CD3,BestP_data$CD4,BestP_data$CD5,BestP_data$CD6,BestP_data$CD7)

   summary(H1_data)
   H1_data_stacked <- stack(H1_data)

   analysis <- aov(values ~ ind, data = H1_data_stacked)
   summary(analysis)
   # F is far greater than 1... there is a difference (reject the Null hypothesis)
TukeyHSD(analysis)
```

FIGURE 1.   RSTUDIO ANOVA RESULTS FOR H1

Table 1.   means and anova results for Content Delivery ("CD").

```
> TukeyHSD(analysis)

   Tukey  multiple  comparisons  of  means
     95%  family-wise  confidence  level


Fit: aov(formula = values ~ ind, data = H1_data_stacked)


$ind
```

	diff	lwr	upr	p adj
BestP_data.CD2-BestP_data.CD1	1.014409222	0.6744046	1.354414e+00	0.0000000
BestP_data.CD3-BestP_data.CD1	2.144092219	1.8040876	2.484097e+00	0.0000000
BestP_data.CD4-BestP_data.CD1	2.149855908	1.8098513	2.489861e+00	0.0000000
BestP_data.CD5-BestP_data.CD1	1.804034582	1.4640299	2.144039e+00	0.0000000
BestP_data.CD6-BestP_data.CD1	0.714697406	0.3746928	1.054702e+00	0.0000000
BestP_data.CD7-BestP_data.CD1	0.593659942	0.2536553	9.336646e-01	0.0000058
BestP_data.CD3-BestP_data.CD2	1.129682997	0.7896784	1.469688e+00	0.0000000
BestP_data.CD4-BestP_data.CD2	1.135446686	0.7954420	1.475451e+00	0.0000000
BestP_data.CD5-BestP_data.CD2	0.789625360	0.4496207	1.129630e+00	0.0000000
BestP_data.CD6-BestP_data.CD2	-0.299711816	-0.6397165	4.029282e-02	0.1259742
BestP_data.CD7-BestP_data.CD2	-0.420749280	-0.7607539	-8.074464e-02	0.0049566
BestP_data.CD4-BestP_data.CD3	0.005763689	-0.3342410	3.457683e-01	1.0000000
BestP_data.CD5-BestP_data.CD3	-0.340057637	-0.6800623	-5.299781e-05	0.0499340
BestP_data.CD6-BestP_data.CD3	-1.429394813	-1.7693995	-1.089390e+00	0.0000000
BestP_data.CD7-BestP_data.CD3	-1.550432277	-1.8904369	-1.210428e+00	0.0000000
BestP_data.CD5-BestP_data.CD4	-0.345821326	-0.6858260	-5.816687e-03	0.0431846

BestP_data.CD6-BestP_data.CD4 -1.435158501	-1.7751631	-1.095154e+00	0.0000000
BestP_data.CD7-BestP_data.CD4 -1.556195965	-1.8962006	-1.216191e+00	0.0000000
BestP_data.CD6-BestP_data.CD5 -1.089337176	-1.4293418	-7.493325e-01	0.0000000
BestP_data.CD7-BestP_data.CD5 -1.210374640	-1.5503793	-8.703700e-01	0.0000000
BestP_data.CD7-BestP_data.CD6 -0.121037464	-0.4610421	2.189672e-01	0.9420417

Rank of Statements for Content Delivery, with Means and Significance Compared to Next Closest:

1. **CD1:** I believe attending a traditional class is the most effective way for me to learn.
   Mean = 2.308, p = 0.0000058

2. **(tie) CD7:** I believe live interactive videos online are the most effective way for me to learn.
   Mean = 2.902, p = 0.9420417

2. **(tie) CD6:** I believe interactive animations online are the most effective way for me to learn.
   Mean = 3.023, p = 0.1259742

2. **(tie) CD2:** I believe watching videos online is the most effective way for me to learn.
   Mean = 3.323, p = 0.0000000

5. **CD5:** I believe podcasts are the most effective way for me to learn.
   Mean = 4.112, p = 0.0431846

8. **(tie) CD3:** I believe an EBook online is the most effective way for me to learn.
   Mean = 4.452, p = 1.00000

9. **(tie) CD4:** I believe blog content online is the most effective way for me to learn.
   Mean = 4.458

Table 2.   means and anova results for Instructor-to-Student Interaction ("IS").

> TukeyHSD(analysis)

  Tukey multiple comparisons of means

    95% family-wise confidence level

Fit: aov(formula = values ~ ind, data = H1_data_stacked)

$ind

	diff	lwr	upr	p adj
BestP_data.IS2-BestP_data.IS1	0.93017774	0.64927261	1.21108287	0.0000000
BestP_data.IS3-BestP_data.IS1	0.19618260	-0.08492630	0.47729150	0.4282639
BestP_data.IS4-BestP_data.IS1	0.09221902	-0.18848336	0.37292140	0.9840899
BestP_data.IS5-BestP_data.IS1	1.10086455	0.82016217	1.38156694	0.0000000
BestP_data.IS6-BestP_data.IS1	0.61803901	0.33713388	0.89894414	0.0000000
BestP_data.IS7-BestP_data.IS1	0.05156502	-0.22934011	0.33247016	0.9997358
BestP_data.IS8-BestP_data.IS1	0.43227666	0.15157427	0.71297904	0.0000641
BestP_data.IS9-BestP_data.IS1	0.22478386	-0.05591852	0.50548625	0.2392413
BestP_data.IS3-BestP_data.IS2	-0.73399514	-1.01530650	-0.45268378	0.0000000
BestP_data.IS4-BestP_data.IS2	-0.83795872	-1.11886385	-0.55705359	0.0000000
BestP_data.IS5-BestP_data.IS2	0.17068681	-0.11021832	0.45159194	0.6235309
BestP_data.IS6-BestP_data.IS2	-0.31213873	-0.59324646	-0.03103100	0.0167535
BestP_data.IS7-BestP_data.IS2	-0.87861272	-1.15972045	-0.59750499	0.0000000
BestP_data.IS8-BestP_data.IS2	-0.49790108	-0.77880621	-0.21699595	0.0000015
BestP_data.IS9-BestP_data.IS2	-0.70539388	-0.98629901	-0.42448875	0.0000000
BestP_data.IS4-BestP_data.IS3	-0.10396358	-0.38507248	0.17714532	0.9667290
BestP_data.IS5-BestP_data.IS3	0.90468195	0.62357305	1.18579086	0.0000000
BestP_data.IS6-BestP_data.IS3	0.42185641	0.14054505	0.70316777	0.0001174
BestP_data.IS7-BestP_data.IS3	-0.14461758	-0.42592893	0.13669378	0.8074921
BestP_data.IS8-BestP_data.IS3	0.23609406	-0.04501485	0.51720296	0.1839325
BestP_data.IS9-BestP_data.IS3	0.02860126	-0.25250764	0.30971017	0.9999972
BestP_data.IS5-BestP_data.IS4	1.00864553	0.72794315	1.28934792	0.0000000
BestP_data.IS6-BestP_data.IS4	0.52581999	0.24491486	0.80672512	0.0000002
BestP_data.IS7-BestP_data.IS4	-0.04065400	-0.32155913	0.24025113	0.9999565
BestP_data.IS8-BestP_data.IS4	0.34005764	0.05935525	0.62076002	0.0054161
BestP_data.IS9-BestP_data.IS4	0.13256484	-0.14813754	0.41326723	0.8713186
BestP_data.IS6-BestP_data.IS5	-0.48282554	-0.76373067	-0.20192041	0.0000036
BestP_data.IS7-BestP_data.IS5	-1.04929953	-1.33020466	-0.76839440	0.0000000
BestP_data.IS8-BestP_data.IS5	-0.66858790	-0.94929028	-0.38788551	0.0000000
BestP_data.IS9-BestP_data.IS5	-0.87608069	-1.15678308	-0.59537831	0.0000000

70

BestP_data.IS7-BestP_data.IS6	-0.56647399	-0.84758172	-0.28536626	0.0000000
BestP_data.IS8-BestP_data.IS6	-0.18576236	-0.46666749	0.09514277	0.5064018
BestP_data.IS9-BestP_data.IS6	-0.39325515	-0.67416028	-0.11235002	0.0004871
BestP_data.IS8-BestP_data.IS7	0.38071163	0.09980650	0.66161676	0.0008917
BestP_data.IS9-BestP_data.IS7	0.17321884	-0.10768629	0.45412397	0.6039983
BestP_data.IS9-BestP_data.IS8	-0.20749280	-0.48819518	0.07320959	0.3456837

Rank of Statements for Instructor-To-Student Interaction, with Means and Significance Compared to IS1:

1. **(tie) IS1:** I believe attending a traditional class is the most effective way for me to interact with my instructor.

   Mean = 1.841

1. **(tie) IS7:** I believe it is important for effective Instructor-to-Student interaction for the instructor to share knowledge of tools to use (IT or other) in an online class.

   Mean = 1.893, p = 0.9997358

1. **(tie) IS4:** I believe it is important for effective Instructor-to-Student interaction for the instructor to show how to succeed in all communications (grading comments, and in discussion posts) in an online class.

   Mean = 1.934, p = 0.9840899

1. **(tie) IS3:** I believe it is important for effective Instructor-to-Student interaction for the instructor to establish trust / credibility / humility / Teaming Environment in an online class.

   Mean = 2.038, p = 0.4282639

1. **(tie) IS9:** I believe it is important for effective Instructor-to-Student interaction for the instructor to respond to posts with pertinent examples to share in an online class.

   Mean = 2.066, p = 0.2392413

6. **(tie) IS8:** I believe it is important for effective Instructor-to-Student interaction for the instructor to post a variety of content in the announcements with attached articles of interest cited in an online class.

   Mean = 2.274, p = 0.0000641

6. **(tie) IS6:** I believe it is important for effective Instructor-to-Student interaction for the instructor to use my name when communicating with me in an online class.

   Mean = 2.46, p = 0.0000000

8. **(tie) IS2:** I believe email is the most effective way for me to interact with my instructor.

   Mean = 2.772, p = 0.0000000

8. **(tie) IS5:** I believe it is important for effective Instructor-to-Student interaction for the instructor to say 'Thank you' in all communications in an online class.

   Mean = 2.942, p = 0.0000000

Table 3. means and anova results for Student-to-Student Interaction ("SS").

> TukeyHSD(analysis)

  Tukey multiple comparisons of means

    95% family-wise confidence level

Fit: aov(formula = values ~ ind, data = H1_data_stacked)

$ind

	diff	lwr	upr	p adj
BestP_data.SS2-BestP_data.SS1	1.4450867	1.1701889	1.719984	0.0000000
BestP_data.SS3-BestP_data.SS1	1.3323699	1.0574722	1.607268	0.0000000
BestP_data.SS3-BestP_data.SS2	-0.1127168	-0.3876145	0.162181	0.6008645

Rank of Statements for Student-To-Student Interaction, with Means and Significance Compared to SS1:

1. **SS1:** I believe attending a traditional class is the most effective way for me to interact with my classmates.
   Mean = 1.936

2. **(tie) SS2:** I believe instructor-provided discussion boards are the most effective way for me to interact with my classmates.
   Mean = 3.382, p = 0.000000

2. **(tie) SS3:** VoiceThread is a learning tool for enhancing student engagement and online presence. With VoiceThread, instructors and/or students can create, share, and comment on images, Microsoft PowerPoint presentations, videos, audio files, documents, and PDFs, using microphone, webcam, text, phone, and audio-file upload. I believe VoiceThread in an online class is the most effective way for me to interact with my classmates.
   Mean = 3.269, p = 0.000000

Table 4. means and anova results for Assessment ("AS").

> TukeyHSD(analysis)

  Tukey multiple comparisons of means

    95% family-wise confidence level

Fit: aov(formula = values ~ ind, data = H1_data_stacked)

$ind

	diff	lwr	upr	p adj
BestP_data.AS2-BestP_data.AS1	-0.2890173	-0.67037579	0.09234111	0.2944848
BestP_data.AS3-BestP_data.AS1	0.3732356	-0.00867670	0.75514800	0.0609641

BestP_data.AS4-BestP_data.AS1	-0.0453690	-0.42728135	0.33654335 0.9999630
BestP_data.AS5-BestP_data.AS1	1.3238170	0.94190469	1.70572940 0.0000000
BestP_data.AS6-BestP_data.AS1	1.7456647	1.36430629	2.12702319 0.0000000
BestP_data.AS7-BestP_data.AS1	0.2310044	-0.15063026	0.61263914 0.5953518
BestP_data.AS8-BestP_data.AS1	1.0346821	0.65332363	1.41604053 0.0000000
BestP_data.AS3-BestP_data.AS2	0.6622530	0.28034064	1.04416534 0.0000043
BestP_data.AS4-BestP_data.AS2	0.2436483	-0.13826401	0.62556069 0.5266342
BestP_data.AS5-BestP_data.AS2	1.6128344	1.23092204	1.99474674 0.0000000
BestP_data.AS6-BestP_data.AS2	2.0346821	1.65332363	2.41604053 0.0000000
BestP_data.AS7-BestP_data.AS2	0.5200218	0.13838708	0.90165648 0.0009614
BestP_data.AS8-BestP_data.AS2	1.3236994	0.94234097	1.70505787 0.0000000
BestP_data.AS4-BestP_data.AS3	-0.4186047	-0.80107010	-0.03613921 0.0205263
BestP_data.AS5-BestP_data.AS3	0.9505814	0.56811595	1.33304684 0.0000000
BestP_data.AS6-BestP_data.AS3	1.3724291	0.99051674	1.75434144 0.0000000
BestP_data.AS7-BestP_data.AS3	-0.1422312	-0.52441941	0.23995699 0.9505987
BestP_data.AS8-BestP_data.AS3	0.6614464	0.27953408	1.04335878 0.0000045
BestP_data.AS5-BestP_data.AS4	1.3691860	0.98672060	1.75165149 0.0000000
BestP_data.AS6-BestP_data.AS4	1.7910337	1.40912139	2.17294609 0.0000000
BestP_data.AS7-BestP_data.AS4	0.2763734	-0.10581476	0.65856164 0.3559198
BestP_data.AS8-BestP_data.AS4	1.0800511	0.69813873	1.46196343 0.0000000
BestP_data.AS6-BestP_data.AS5	0.4218477	0.03993534	0.80376004 0.0185538
BestP_data.AS7-BestP_data.AS5	-1.0928126	-1.47500080	-0.71062441 0.0000000
BestP_data.AS8-BestP_data.AS5	-0.2891350	-0.67104731	0.09277739 0.2958147
BestP_data.AS7-BestP_data.AS6	-1.5146603	-1.89629500	-1.13302560 0.0000000
BestP_data.AS8-BestP_data.AS6	-0.7109827	-1.09234111	-0.32962421 0.0000005
BestP_data.AS8-BestP_data.AS7	0.8036776	0.42204294	1.18531234 0.0000000

Notable Pair Comparisons for Assessment, with Means and Significance:

AS1: I believe I will be assessed properly (results will show what I truly learned) in a traditional class which consists mostly of multiple choice quizzes and tests.

Mean = 2.697

AS2: I believe I will be assessed properly (results will show what I truly learned) in a traditional class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

Mean = 2.408

AS3: I believe I will be assessed properly (results will show what I truly learned) in an online class which consists mostly of multiple choice quizzes and tests.

Mean = 3.07

AS4: I believe I will be assessed properly (results will show what I truly learned) in an online class

73

which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

Mean = 2.651

AS5: I believe cheating will be a large problem in a traditional class which consists mostly of multiple choice quizzes and tests.

Mean = 4.02

AS6: I believe cheating will be a large problem in a traditional class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

Mean = 4.442

AS7: I believe cheating will be a large problem in an online class which consists mostly of multiple choice quizzes and tests.

Mean = 2.928

AS8: I believe cheating will be a large problem in an online class which consists mostly of authentic assessment such as interactive formative feedback and portfolio assessment.

Mean = 3.731

AS1 > AS3 ($p = 0.0609641$), AS5 ($p = 0.0000000$), AS6 ($p = 0.0000000$), and AS8 ($p = 0.0000000$)

AS2 > AS3 ($p = 0.0000043$), AS5 ($p = 0.0000000$), AS6 ($p = 0.0000000$), AS7 ($p = 0.0009614$) and AS8 ($p = 0.0000000$)

AS3 > AS5 ($p = 0.0000000$), AS4 ($p = 0.0205263$), AS6 ($p = 0.0000000$), and AS8 ($p = 0.0000045$)

AS4 > AS5 ($p = 0.0000000$), AS6 ($p = 0.0000000$), and AS8 ($p = 0.0000000$)

AS5 > AS6 ($p = 0.0185538$), AS7 ($p = 0.0000000$)

AS6 > AS7 ($p = 0.0000000$), AS8 ($p = 0.0000005$)

AS7 > AS8 ($p = 0.0000000$)

Discussion and Conclusions

Tables 1-4 give rich information about the four hypotheses and best practices in online education. From a high-level, students believe content delivery is still best achieved in a traditional classroom setting, but live interactive videos online, interactive animations online, and/or watching videos online (no differentiation) are a close second. Regarding instructor-to-student interaction, students ranked traditional classes as tied with online classes where the instructor shares knowledge of tools to use (IT or

other), shows how to succeed in all communications, establishes trust / credibility / humility / Teaming Environment, and responds to posts with pertinent examples to share.   In the area of student-to-student interaction, students ranked traditional classes as the best by a wide margin, with discussion boards and newer technologies such as VoiceThread as a distant second.   Finally, in the area of Assessment, students believe that they will be assessed equally in a traditional or online class, as long as authentic assessment such as interactive formative feedback and portfolio assessment is used.   If the assessment method is multiple choice, students are concerned about being assessed properly in an online class.   Concerning cheating, students only feel it is a problem in an online class whose assessment consists mostly of multiple choice quizzes and tests.

Extra discussion of each area can help illuminate these conclusions further.

Content Delivery:
The Hansch et al. (2015) assertion that video learning is still in question in supported, given that traditional classes beat videos in student rankings of content delivery effectiveness.   However, the proximate means for videos as shown in Table 1 (2.902, 3.023, 3.323 compared to 2.308) gives hope that video is being increasingly accepted by students and can be an effective method for content delivery moving forward.

Instructor-to-Student Interaction:
The Instructional Online Model (IOM) for instructor-to-student interaction proposed by Schmaltz, Carpenter & Petersen (2018) received general support, with instructors who share knowledge of tools to use (IT or other), show how to succeed in all communications, establish trust / credibility / humility / Teaming Environment, and respond to posts with pertinent examples to share in online classes being tied with traditional classes as far as students' perception of effective instructor-to-student interaction (as shown in Table 2).   However, whether an instructor "uses my name when communicating with me", uses email, or say 'Thank you' in all communications did not qualify as effective instructor-to-student interaction as judged by the students responses.

Student-to-Student Interaction:
As shown in Table 3, students overwhelmingly reported preferring traditional classes for student-to-student interaction.   The instructor-provided discussion boards explained by Gokhale & Machina (2018) had disappointing results, not even finishing ahead of newer technologies like VoiceThread in student preferences for effective interaction with their classmates.

Assessment:
Authentic assessment methods such as interactive formative feedback and portfolio assessment still receive student preference for alleviating fears of not being assessed properly or cheating, whether in a traditional or online class.   As shown in Table 4, students can tolerate multiple choice assessment as long as it is used in a traditional class, but have greater reservations if the class is online.

While these results are important, there are limitations to this study.   The study would gain value with a larger sample size and higher response rates over multiple universities.   Also, as more students take

more online classes, results could be refined.

REFERENCES

[1] Allen, I. E., & Seaman, J. (2013). Changing course: Ten years of tracking online education in the United States. Sloan Consortium. PO Box 1238, Newburyport, MA 01950.

[2] Bickle, M. C., & Rucker, R. (2018). STUDENT-TO-STUDENT INTERACTION: Humanizing the Online Classroom Using Technology and Group Assignments. Quarterly Review of Distance Education, 19(1), 1-56.

[3] Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. Computers & education, 57(4), 2333-2351.

[4] Gokhale, A., & Machina, K. (2018). Guided Online Group Discussion Enhances Student Critical Thinking Skills. International Journal on E-Learning, 17(2), 157-173.

[5] Hansch, A., Hillers, L., McConachie, K., Newman, C., Schildhauer, T., & Schmidt, J. P. (2015). Video and online learning: Critical reflections and findings from the field.

[6] Hicks, N., Gray, D. M., & Bond, J. (2019). A Blueprint for Executing Instructor-Student Interactions in the Online Classroom Using Marketing Touchpoints. Journal of Educators Online, 16(1), n1.

[7] Olt, M. R. (2002). Ethics and distance education: Strategies for minimizing academic dishonesty in online assessment. Online journal of distance learning administration, 5(3), 1-7.

[8] Parks-Stamm, E. J., Zafonte, M., & Palenque, S. M. (2017). The effects of instructor participation and class size on student participation in an online class discussion forum. British Journal of Educational Technology, 48(6), 1250-1259.

[9] Reeves, T. C. (2000). Alternative assessment approaches for online learning environments in higher education. Journal of Educational Computing Research, 23(1), 101-111.

[10] Schmaltz, P., Carpenter, J., & Petersen, D. J. (2018). Evaluating the Way Forward in Online Student Engagement.

[11] Seaman, J. E., Allen, I. E., & Seaman, J. (2018). Grade Increase: Tracking Distance Education in the United States. Babson Survey Research Group.

[12] Vo, T., Ledbetter, C., & Zuckerman, M. (2019). Video delivery of toxicology educational content versus textbook for asynchronous learning, using acetaminophen overdose as a topic. Clinical Toxicology, 1-5.

IMPACT OF NURSES' WORK PATTERNS ON NURSES AND PATIENTS IN CRITICAL CARE AND TOXICOLOGY CARE UNITS OF ALEXANDRIA UNIVERSITY HOSPITALS

Nagah Abd El-Fattah Mohamed Aly[1], Safaa M. El-Shanawany[2], Tamer A. Maher Ghoneim[3], Osama Saeed Hassan[4]

Nursing Administration1, Faculty of Nursing, Alexandria University, Matrouh Branch, Egypt

Forensic Medicine and Clinical Toxicology2, Anesthesia & Surgical Intensive Care3, Critical Medicine4,

Faculty of Medicine, Alexandria University, Egypt

Email: eldaghar@yahoo.com

Abstract:

Background: Nowadays, there are difficulties in recruiting and retaining nursing staff with increasing pressures and demands on nurses working in critical care areas. The role of nursing care in patients' safety and healthcare outcomes has led to increased interest in measuring and reporting nurses' work patterns and their consequences on nurses and patients. **Objectives**: Describe nurses' work patterns and their impacts on nurses and patient outcomes. **Methods**: Self-report forms were used to collect data regarding nurses' time spent on direct and indirect nursing activities, non- nursing care and personal activities as well as care left undone. Questionnaires were used to measure stress, tension, conflict, nurses' intent to leave, nurses' satisfaction and patient satisfaction **Results**: nurses spent their working time on direct nursing care (36.64 %); indirect nursing care (28.18 %), non-nursing care (30.64 %) and personal activities (4.7%). Profile of direct and indirect patient care and personal activities increased in night shifts, while the profile of non-nursing tasks increased in morning shifts. There was a positive correlation between care left undone and three non-nursing tasks. Besides, there was a positive correlation between left care undone, non-nursing duties and four nursing job outcomes. There also was a negative correlation between care left undone, non-nursing tasks and nurses' and patients' satisfaction. **Conclusion**: the study focused on the importance of direct patient care on improving quality of care and patient safety. Reducing the performance of non-nursing duties by nurses and decreasing care left undone will most likely result in greater nurses' and patients' satisfaction, reduced stress, tension, and conflict and decreased numbers of nurses' leaving their jobs.

Keywords: work, patterns, nurses, patients, outcomes

INTRODUCTION:

Nursing care is one of the fundamental services, especially in the critical care and toxicology care units, where patients need to receive more service and care. Nurses are the front line of caregivers and have a key role in providing patient care in these units (Nayeri, 2005; Hendrich et al., 2008). Efficient

nurses' work patterns include optimizing the use of nurses' time and effort to meet patients' needs (Brillhart and Sills, 1994).   Thus, nursing work patterns involve multitasking and spending time in four main activities. The first activity is *direct nursing care activities.*   These activities are carried out by a nurse during a shift and occur in the presence of a patient, including patient assessment; basic and routine nursing care as hygiene, nutrition, and elimination; nursing procedures; administering medication; and monitoring vital signs. The second activity is *indirect nursing care activities.* They occur away from the patient; involving preparing for nursing interventions, medications and therapies, and documentation of nursing care. The third activity is *non-nursing tasks*.   They refer to the activities carried out by a nurse during a shift, which do not require specific nursing qualifications or expertise and have no direct therapeutic value and direct patient care. They include clerical work, housekeeping, dietary services, coordinating ancillary services and transporting patients. The last activity is *personal activities*. They are not directed towards patient care or unit management, including mealtimes, breaks and are called non-productive time (Hendrickson and Doddato, 1990; Brillhart and Sills, 1994; Lundgren and Segesten, 2001).

Shortages of nurses have been recognized as a worldwide problem that is seriously affecting the quality of patient care. This shortage mostly affects specialty areas such as the critical care units, the operating rooms, and pediatric intensive care units. In light of current nursing shortages, it is time to consider some of the factors, which have affected the nurses' work, which in turn, affect the time available to provide direct patient care.

The important factors affecting the work of nurses are non-nursing duties (Norrie 1997; Harrison and Nixon, 2002; Duffield and Gardner, 2008). The performance of non - nursing tasks such as cleaning and making beds, ordering supplies, transporting patients, and assembling patient charts are more stressful, increasing role conflict   and compromising the quality of care. In addition, they have a direct effect on nurses pushing them to leave hospitals for less demanding jobs (Kearney, 2016). Non - nursing tasks are considered one of nurses' workload, leading to in-completing nursing activities in nursing care units (Al-Kandari and Thomas, 2009).

Removing of non-nursing tasks from nurses' roles and responsibilities would allow nurses to carry out their professional roles, help the nurses to provide direct patient care, and improve quality of care and patient's satisfaction (Kearney, 2016). Support staffs are the most appropriate group to perform non-nursing care activities in the hospitals. If support staff assigned to transfer and messenger duties and all other activities that are not related to patient care, they would save nurses' time to spend in performing essential nursing tasks (Davis, 1982; McGillis and O'Brien-Pallas L, 2000; Joanne, 2007; Ausserhofer et al., 2013).

The shortage of nurses also linked to unrealistic nurse workloads (Aiken et al, 2002). If the nurses have less and less time to spend with their patients because of over workload, the nurses have a lack time to perform essential nursing measures and interventions (Booth, 2002). Gurses (2005) argued that nurses stressed with obstacles of workload and time availability have reported not performing detailed nursing care and spending inadequate time with the patients/families. Nursing care activity/task left undone refers to any nursing task required for patient care, but which the nurse was unable to perform

fully during the shift (Al-Kandari and Thomas, 2009).

Many studies report that nursing care activities left undone frequently occurred in nursing care units. The most common nursing care omissions recorded were: comforting/talking with patients, developing or updating nursing care plans, documentation of nursing care as well as assessing the effectiveness of medications, turning patients and mouth care (Al-Kandari and Thomas,2009; Ausserhofer et al. ,2014 ; Ball et al ,2014 ;Bekker et al ,2015) . Recent studies suggest associations between omitting nursing care and poorer patient outcomes, including increased inpatient mortality, medication errors, patient falls, pressure ulcers and nosocomial infections (Sochalski ,2001 ; Schubert et al. ,2008 ; Kalisch et al. ,2012; Schubert et al. ,2012; Ausserhofer et al. ,2013) . Additionally, higher levels of omitted nursing care are also associated with adverse nurse outcomes, including reduced job satisfaction, increased stress and tension with role conflict, and increased intention to leave (Tschannen   et al., 2010; Kalisch et al., 2011; Aiken et al.; 2013).

Across the world, nurses' working time has been subject to discussion and become the area of interest of policy makers and nurse managers (Lundgren and Segesten, 2001).   Today, understanding of how nurses spend their time and use of their skill to meet the needs of patients are the first priority in health care systems and accreditation agencies (Gholizadehc et al., 2014). Assessment of nurses' activities is considered a bone stone of improving the quality of care and nursing care effectiveness (Poor et al., 2016).   Work sampling is one method that is used to assess nurses' activities and estimate amount of nursing time spent on these activities.

Work sampling can employ a self-reporting technique where nurses record the activity they are undertaking when prompted, or by the observational technique where a researcher observes and records the activities of the worker. Much of the work sampling literature discusses the advantages and disadvantages of these two techniques. Although the self-reporting technique has been advocated and has certain advantages over the observational method, few work-sampling studies in critical care units have employed this method (Ampt, 2007).

The present study used the self-report technique to assess patterns of nursing activities and the utilization of nursing time. Although nurses' work patterns and their consequences on nurse and patient outcomes are likely to study across all countries (Tschannen   et al. ,2010 ; Kalisch et al., 2012 ; Kalisch et al. ,2011; Aiken et al. ,2013; Ausserhofer et al. ,2014 ; Ball et al. ,2014 ; Bekker et al. ,2015;), little is known in Egypt. According to our knowledge, few studies have examined nurses' work patterns and decided which care of activities are done or not done by nurses in Egypt (El-sayed, 1996; Elsayed et al., 2012; Gabr, 2012). In addition, they have not investigated consequences of nurses' work patterns on nurse and patient outcomes.

The present study attempts not only to identify nurses' work patterns, but also to clarify how the available nurses could better use their time, and describe consequences of nurses' work patterns on nurse and patient outcomes. The aims of the current study were to identify nurses' work patterns and measure times spent in performing four activities (direct and indirect nursing care, personal activities and non-nursing care). It also aimed to identify nursing duties left undone; describe the level of nursing job outcomes (stress related job, job tension, conflict, turnover and nursing satisfaction) and patient

satisfaction with nursing care. Additionally, it purposed to examine the relationship between non-nursing duties and nursing duties left undone; and their relation to nursing job outcomes and patient satisfaction with nursing care.

MATERIALS AND METHODS:

Study Setting: included 11 critical care and toxicology care units within the Alexandria University Hospitals.

Study design: A cross-sectional descriptive correlation study

Sample size: Study sample included:

(A) All nursing personnel in the critical care and toxicology care units concerned with patient care in three different shifts (morning, evening and night), excluding nurses holding managerial positions. They amounted to 305 nurses.   Only 287 nurses were willing to participate in the study and agreed to sign the study informed consent. They completed 861 self-report work sampling forms covering day's workflow (morning, evening and night) for 12 weeks.

(B) Frequency of performing each nurse's work category was set as the following: assuming an average activity time   of 95 %, and α of 0.05 and absolute precision of 9%, a minimum frequency of performing each activity in each shift was 22 times.

(C) All alert and conscious patients admitted to these units within 3 months and willing to participate in the study.   The patients gave informed consent before participation. They amounted to 178 patients. Patients under age of 18, illiterate, or unconscious patients were excluded.

Data collection: Data were collected by a self-reported work sampling technique, and self – administered questionnaire including nursing job outcomes questionnaire and a patient satisfaction questionnaire.   The study tool consisted of four sections:

(I)   Demographic data: contained demographic characteristics of critical care and toxicology nurses as age, level of education in their units,   job title and the number of years worked as a nurse,

(II)   The self-reported work sampling technique forms of nurses' work patterns:

In this study, the researchers developed Self-report forms of   nurses' work patterns, including nursing duties, non-nursing duties and nursing duties left undone based on literature review (Kiekkas   et al. ,2005; McCann   et al. ,2007 ; Al-Kandari and Thomas ,2009; Jacob and Rekha,2010; Gabr and Mohamed, 2012; Gholizadehc et al. ,2014;   Bekker et al. ,2015; Perry and Potter, 2017).   The self-reported work sample form was designed to measure the amount of time spent and frequency of performing nursing and non-nursing tasks among nurses and identify nursing duties left undone inside their units.

The content validity of the study form was established by 7 critical care nursing experts willing to participate in the process, with at least 10 years of experience in their specialty.

The researcher asked 7 experts to review. The experts were asked to rate whether the duties were: **(a)**   5 = definitely nursing activities were performed by the nurse; **(b)** 4 = definitely nursing

activities, but may be delegated to other staff; **(c)** 3= unsure; **(d)** 2= not nursing activities; should not be performed by the nurse; **(e)** 1= definitely not a nursing activity but can be performed by the nurse. The researchers also asked the experts to add duties, which they considered nursing and non-nursing. Experts' comments were received and used to revise and modify the list of nursing duties and non-nursing duties.

The results from experts' panels were used to develop a final self-report form. It   contained 134 nurse's activities   and   three main categories: 1) direct   nursing care activities   included 17 sub- categories and 70 activities; 2)   indirect   nursing   care activities   comprised   6 sub-categories and; and   21 activities;   3) non nursing care activities   involved three sub-categories and   37 activities;   and personal activities enclosed 6 activities. Rater reliability was assessed using Content Validity Indexes for each item separately (I-CVI) and for the entire scale (S-CVI). Both the average inter-item percentage should be 80 %   or exceed to achieve rater reliability (Polit et al, 2007).

A. *Developed self-report forms of nurses' work patterns*:   It contained 134 activities that may be performed in the critical care and toxicology care units and frequency of performing each task during a shift. Self-report work sample forms were distributed to nurses who were willing to participate in the study during different shifts on a regular working day.   Concerning nursing duties, the nurses were asked to record and report the time spent by minutes to perform each duty in each shift (morning, evening and night)   and record the frequency of doing each duty during the current shift.   Frequency was set at 22 times per shift.

Regarding non-nursing duties, Each nurse was asked to indicate whether she had performed non-nursing duties or not in each shift and if yes, the nurses were required to tick their current activity each time (frequency)they were performed, and record time spent by minutes to perform it.   Frequency was also set at 22 times. The self-report forms were collected at the end of each shift.   Time spent on each nurses' work category and frequency were multiplied to set the total time spent in each nursing category in each shift. Each category was ranked on its occurrence on nurses' workday by time percentage. Then, the percentage of time   in each shift was   scored to estimate the prevalent   score for each category of nurses' work patterns   as the following: fair = 0 % and scored zero;   Low = <   20 % and   scored one; mild = 20-25 % and scored two; moderate = 26-60 % and scored three; and at last high = > 60 %   and scored four.

B. **Developed self-report form of nursing duties left undone:**   It is composed of a list of 30 nursing care activities and 7 main categories. Nurses were asked to determine which of the following tasks were considered necessary, but were unable to complete them, so left undone during their current shift because due to lack of time.   The nurses rated their response on a five-point Likert scale ranging from 1 (never) to 5 (always). In addition, there was a provision to add any other task that was not included in the list and which the nurse was unable to complete. Composite scores of nursing care left undone were derived from the aggregated average sum of nursing care activities left undone.

(III)   **Section C: Nursing job outcomes questionnaires enclosed 59 items :**

1. **Nurses' job satisfaction**: nurses' job satisfaction scale (Hackman and Oldham, 1980) was used to assess job satisfaction among nurses. It consisted of 19 items and two main aspects: (a) general satisfaction (5 items) and specific satisfaction (14 items) covering pay (2 items), security (2 items), social (3 items), supervisor (3 items), as well as growth (4 items). The nurses were asked to describe each of their satisfaction aspects by using a Likert Scale (1= dissatisfied, 5 = strongly satisfied). The reliability coefficient for job satisfaction questionnaire was at 0.97 and reported as 0.87 for general satisfaction and 0.95 for specific satisfaction

2. **Nurses' stress-related work**: The Stress in General (SIG) scale (Smith et al, 1992; Stanton, 2001) was used to measure the nurses' level of stress at work and was composed of 15 items and had two sub-scales: pressure at work (seven items) that relates to time pressure; and work-related threat (eight items) that relates to threatening and negative qualities in the work experience. The nurses rated their responses on 1–5 scale, with "1" indicating no stress and "5" indicating the maximal level of stress. Thus, the alpha reliability of the whole scale was found to be 0.974 and reported as 0.96 for job pressure and 0.82 for work threat.

3. **Nurses' job tense**: Job-related tension (Lyons, 1971) was investigated by the Tension Index and contained nine items. They were used for addressing the frequency of nurses' experience and feeling with tension during performing their activities by nine work-related factors. Nurses rated their response by using a 5-point Likert scale from 1 (never) to 5 (nearly all the time). The alpha reliability was 0.860.

4. **Nurses' conflict**: Nurses' conflict scale (Rizzo et al., 1970) was developed and measured the nurses' perceptions about the clarity of their role. It consisted of 13 items covering: (i) incompatibility between the defined role behavior with one's internal standards, capabilities, time and resources; (ii) role overload; and (iii) mismatch between one's expectations and demands from organization and colleagues. Nurses' responses were rated from 1= Incompatibility and 5 = maximum compatibility. The alpha reliability score for the scale was 0.756.

5. **Nurses' intent to leave***: Nurses' intent to leave scale (Khatri et al., 2001) was used to measure nurses' intention to quit their job and included three items. The three total items were presented to the nurses as a series of statements, of which they were asked to indicate the extent to which they agree/disagree along a five-point Likert response scale (1 = strongly disagree, 5 = strongly agree). The alpha reliability score for the scale was 0.897.

(IV)   **Section D:**
- **Patients' characteristics,** including sex, age and diagnosis.
- **Patients' satisfaction questionnaire**: The Newcastle Satisfaction with Nursing Scale (NSNS) was used to assess patients' satisfaction with nursing care and comprised 19 items. For these items, patients rated their response by 5 point Likert scale from 1 = not at all satisfied and 5 = completely satisfied. The NSNS was found to be valid and reliable in previous Arabic studies (Alasad J and Ahmad, 2013; Alasad, 2015). The 1-item scale on overall patient satisfaction served as a stand-alone scale and was used to check the accuracy of patients'

response in the total score of the 19-item scale. The Cronbach's alpha coefficient for NSNS of patients was 0.95.

Pilot study: Pilot study was carried out to assess the nurses' ability to utilize and answer the study tools and to measure the test-retest reliability of the self-report sampling technique and self-administered questionnaire.   The study tools were undertaken with 30 nurses, 20 patients within the critical care and toxicology care units for ensuring appropriateness, completeness, and clarity of tools.   Test-retest reliability of   self reporting technique was 0.81, while the test-retest reliability of the self-administered questionnaire including nursing job outcomes questionnaire and a patient satisfaction questionnaire was 0.87 and 0.76 respectively.

Ethical considerations: Permission to collect data was obtained from Dean of Faculty of Medicine, Alexandria University.   The researchers explained essential information and the purpose of the study to all nurses and patients who were involved in the study. All the study data were handled in anonymity and confidentiality manner.

Statistical analysis: Data were analyzed by using SPSS version 18. Descriptive statistics were used to (a) describe the percentage of personal characteristics of nurses and patients; (b) calculate the average percentage of time spent on each activity and prevalence of nurses' work patterns; and (c) estimate mean scores of nursing job and patient outcomes questionnaires.   The mean scores were categorized into four levels: low = < 3; Moderate = 3–3.5; and finally high level = > 3.5. The prevalence of performing non-nursing tasks correlated with the level of nurses' outcome and patients' satisfaction.   In addition, the relationships between nursing duties left undone and nursing job and patient outcomes were also tested. The Spearman correlation coefficient was used to establish whether a relationship existed.   The reliability analyses of measures were examined by the following: (i) the test-retest was tested using Pearson correlations and (ii) A Cronbach's alpha for each measure was determined to confirm internal consistency of questionnaires.

RESULTS:

Table (1) shows personal characteristics of nurses and patients in critical care and toxicology care units. As seen in the table, a total of 287 nurses were included in this study with 84 bachelor degree nurses, 49 technical nurses and 154 secondary diploma nurses. 72.1 % of nurses were 20-30 years old, against 27.9% of them between 31-40 years old.   As regards nurses' experience in their career, 31.7 % of nurses had more than 10 years of experience and 43.1 % of them had less than 1 year. In critical care and toxicology care units, 37.9 % nurses had experienced less than one year and 29.3% of them had work experience of more than 10 years.

Table (1): Personal characteristics of nurses and patients in critical care and toxicology care units

Nurses	Number (No.= 287)	Percentage (%)	Patients	Number (No.= 178)	Percentage (%)
Age			**Sex**		
20-30	207	72.1	Male	101	**56.9**

31-40	80	27.9	Female	77	**43.1**
Educational level			*Age*		
Diploma	154	53.7	21- 40	46	**25.8**
Technical	49	17.0	41-60	104	**58.4**
Baccalaureate	84	29.3	> 60	28	**15.8**
Experience (Years) in nursing filed			*Medical diagnosis*		
< 1	124	43.1	Cardiac	82	**46.3**
1-10	72	25.2	Respiratory	33	**18.5**
>10	91	31.7	Nervous	9	**4.8**
Experience (years) in critical care & toxicology Units			Renal	13	**7.3**
< 1	109	37.9	Diabetes	30	**16.9**
1-10	94	32.8	Intoxication	11	**6.2**
>10	84	29.3			

The patient population during the period of the study amounted to 178 patients, about 56.9 % of them were males, and 43.1 % were females.   The age of more than half of patients was between 41 to 60 years (58.4 %), while about quarter of them aged between 21- 40 years (25.8 %).   15.8% of patients had ages more than 60 years. Finally, 46.3 % of patients' diagnosis was related to cardiac disease and only 4.8 % of patients' diagnosis was related to neurological diseases.

Table (2) presents the mean number of nurses and patients in different shifts. It is clear from the table that patient to nurse ratio was increased in the night shifts (1.9±0.9) and decreased during morning shifts (1.3 ± 0.4). In contrast, the number of nurses was increased in the morning shifts (12.2± 4.9) and decreased in the night shifts (3.3± 0.6) and evening shift (2.9± 0.5).

Table (2): Mean number of nurses and patients in different shifts

Shifts	Number of nurses Mean ±SD	No. of patients Mean ±SD	Assigned patients to a nurse Mean ±SD
Morning	12.2± 4.9	6.3± 1.0	1.3 ± 0.4
Evening	2.9± 0.5	6.2±1.3	1.7±0.6
Night	3.3± 0.6	6.1±0.9	1.9±0.9

Table (3) and figure (1and 2) illustrate mean time in percentage and prevalence of nurses' work patterns among different critical care and toxicology care units according to nurses' self-report. As shown   in the table,   there were no statistically significant differences between study units regarding percentage of

time spent on direct nursing care activities (F =1.726, p =0.181), indirect nursing care activities (F =1.891, p =0.405), non nursing tasks (F =1.291 p = 0.278) and personal activities (F = 0.355 p = 0.702). The highest mean time percentage and prevalence were reported for direct nursing care (36.64 % with moderate prevalence) followed by non- nursing care (30.48 % with moderate prevalence) and indirect nursing care (28.18% with moderate prevalence), while the last mean time percentage (4.7% with low prevalence) was recorded for personal activities.

Table (3): Mean time in percentage of nurses' work patterns among different critical care and toxicology care units according to nurses' self-reports.

Critical Care & toxicology Units	Nurses' work patterns (Mean time in percentage)			
	Direct nursing activities Mean ±SD	Indirect nursing activities Mean ±SD	Non-nursing activities Mean ±SD	Personal activities Mean ±SD
Unit (1)	37.53 ± 2.63	28.21 ± 3.02	29.87 ± 3.53	4.39±2.62
Unit (2)	37.15 ± 2.16	28.55 ± 2.92	29.01 ± 2.14	5.29±2.18
Unit (3)	36.56 ± 3.06	28.16 ± 2.30	30.15±2.16	5.13±1.87
Unit (4)	36.39 ± 3.62	28.89±3.82	29.40±3.76	5.32±1.61
Unit (5)	36.19± 2.74	28.61±3.78	30.22±3.17	4.98±1.11
Unit (6)	35.7 ± 3.08	28.41±2.72	31.32±1.61	4.57±2.21
Unit (7)	35.62 ± 3.93	27.05±3.90	32.62±0.93	4.71±1.24
Unit (8)	38.07 ± 0.94	28.38±2.74	29.01±3.26	4.54±2.78
Unit (9)	36.60 ± 1.01	27.19±3.47	31.97±1.97	4.24±2.46
Unit (10)	35.41 ± 3.64	28.31±2.36	31.92±1.25	4.36±2.18
Unit (11)	37.82 ± 2.81	28.22±3.02	29.79±2.38	4.17±2.45
Total time percent	**36.64 ± 0.97**	**28.18±2.59**	**30.48±2.91**	**4.70±1.08**
F (p-values)	F =1.726, p =0.181	F =1.891, p =0.405	F =1.291 p = 0.278	F = 0.355 p = 0.702

[*] **P < 0.05 (significant)**

Figure (1):   Time percentage of nurses' work pattern according to nurses' self-reports
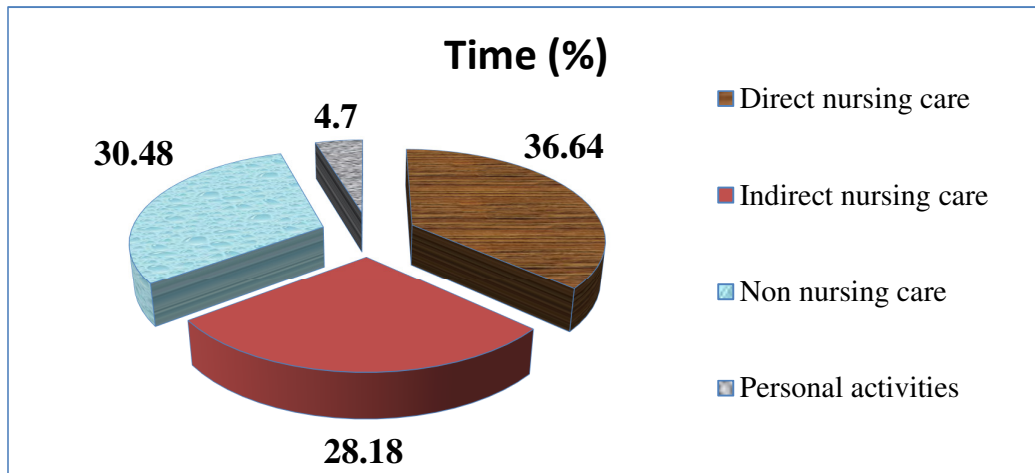
Figure (2): Prevalence of nurses' work patterns in critical care and toxicology care units
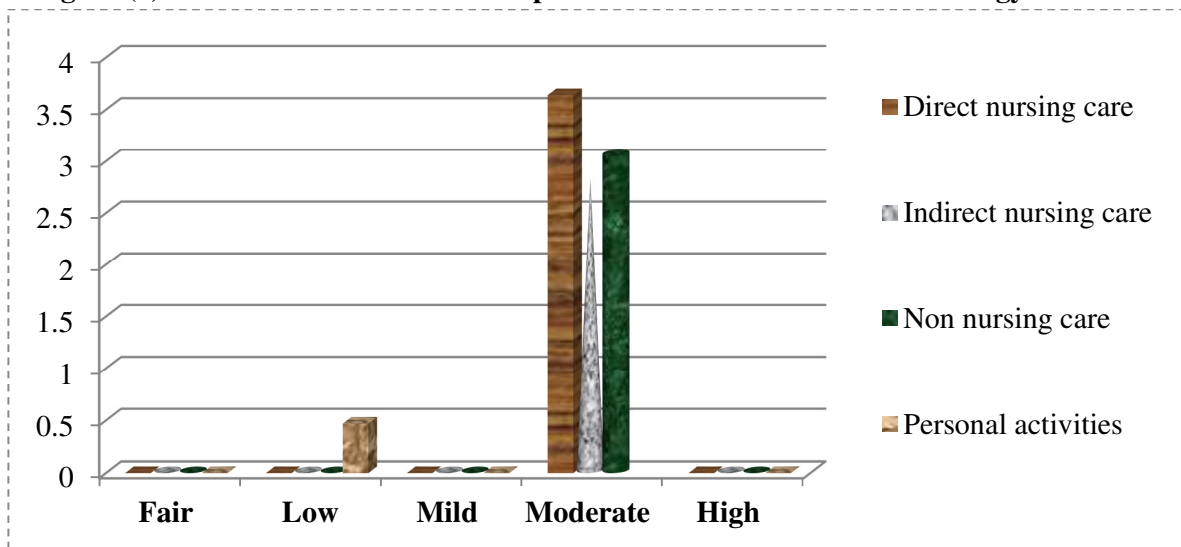
Figure (3) represents time percentage of nurses 'work patterns among different shifts according to nurses' self-reports.   It was noticed that time percentages of direct nursing care (18.24 %), indirect nursing care (13.46), and personal activities (1.91 %) were increased during night shifts while the time percentages of non-nursing duties were   increased in the morning shift (12.12 %) followed by   night shifts (10.83 %).

Figure (3): Time percentage of nurses 'work patterns among different shifts according to nurses' self-reports.
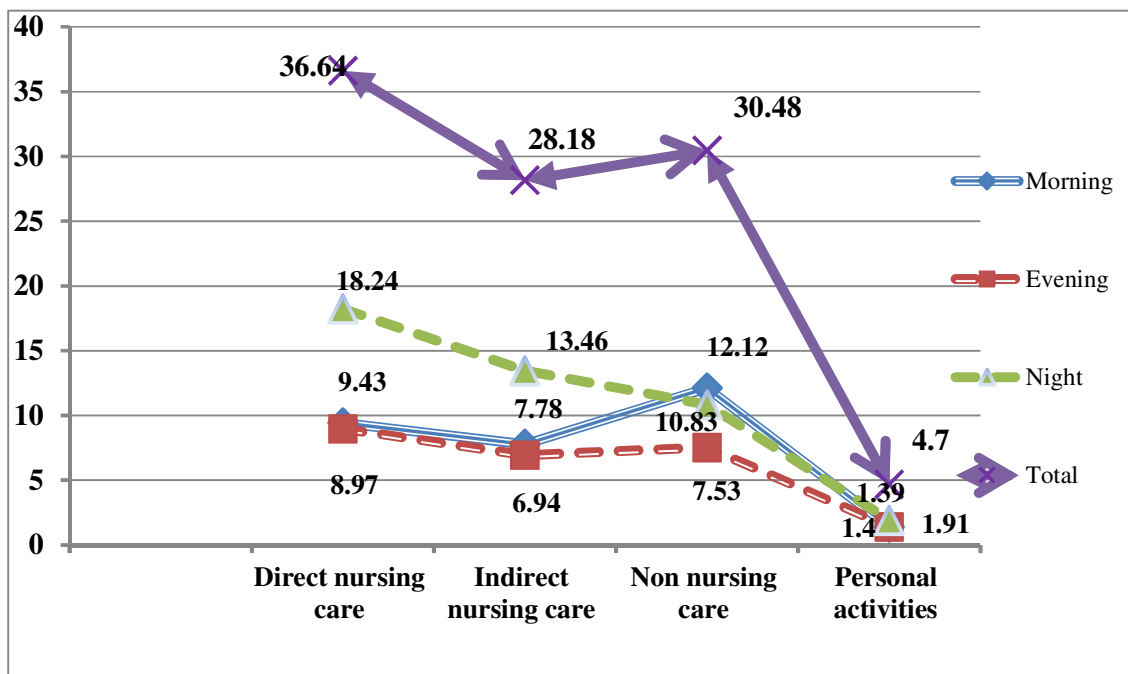
Table (4) reveals the profile of time percentage of nurses' work patterns and sub-activities. Regarding direct nursing care, the table shows that the high proportion of nurses' time was spent on administering medications (7.27%), administering IV therapy (4.56%); performing routine nursing care (3.43%); suction (2.60 %) and performing certain nursing procedures such as urinary catheter insertion and nasogastric intubation (2.43%). At the same time, the low proportion of nurses' time was spent on assessing and monitoring patients' conditions (0.97 %), guiding patients, and their families (0.81%).

Table (4): Profile of time percentage of nurses' work patterns and   sub-activities

Nursing care activities (Mean of time in percentage)	Time (%)
I. Direct nursing care activities	**36.64**
1. Administering medications: bolus IV, continuous IV, IM, SC, oral, inhalation............. etc	7.27
2. Administering IV therapy: starting, discontinuing and changing	4.56
3. Assessing & monitoring patient condition	0.97
4. Performing certain nursing procedures: vein puncture, urinary catheterization, N.G.T	2.43
5. Performing diagnostic \ treatment test: ECG, ABG, Clotting & bleeding time, blood sugar	1.23
6. Cardiopulmonary resuscitation: cardiac compression, oxygenation through Ambu bag, administering resuscitation medications through endotracheal tube	1.42
7. Feeding: through N.G.T or gastrostomy	1.38
8. Routine nursing care of tracheostomy, chest tube, ETT, gastrostomy, dressing drainage tube, Foley catheter, IV line, connecting and changing intercostal tube, monitoring central venous pressure, chest physiotherapy	3.43

9. Patient's hygiene and comfort: skin care, back rub, oral hygiene, turning and moving the patient, making occupied bed, bed bath for unconscious patient	1.88
10. Elimination: apply condom, colonic & gastric lavage, colostomy care, administering enema	1.16
11. Dressing care: change wound dressing, remove sutures & drainage tube	1.7
12. Suctioning: nasopharyngeal, endotracheal, tracheostomy	2.60
13. Oxygen therapy: mask, ETT, tracheostomy, nebulizer therapy	1.86
14. Monitoring vital signs: Temp, pulse, Bl.P, Resp.	1.53
15. Fever and heat loss control: cold and hot compresses	1.02
16. Blood and blood product transfusion: blood, plasma, platelets	1.39
17. Guiding patient and family	0.81
II. Indirect nursing care activities	**28.18**
18. Preparing medication and treatment tray	5.45
19. Helping physician in diagnostic and treatment procedure: An arterial puncture, endotracheal intubation, insertion CVP, chest tube, removal chest tube	5.29
20. Documentation: document nursing care provided, recording An Electrocardiogram, chart intake and output, chart enema result, chart ventilator data, write shift report	8.81
21. Preparing patient for discharge	1.52
22. Work with medical equipment: monitor, ventilator, pulse oximeter	3.73
23. Communicate with other health care providers: reporting laboratory results to physician, attending and participating in physician round, give & receive shift report to & from another nurse	3.28
III. Non-nursing activities	**30.48**
1. Clerical activities	14.84
1.1.Transcribing and charting	*2.74*
1.2.Assembling clinical records	*3.18*
1.3.Handling telephone call and appointments	*3.84*
1.4.Handling drugs, supplies, and equipment	*5.08*
2. Transporting activities	6.58
3. Dietary activities	0.90
4. Housekeeping activities	8.16
IV. Personal activities	**4.7**
1. Breaks for meals and drinks	2.01
2. Rest	1.75
3. Chatting with friends	0.21
4. Personal phone calls	0.23
5. Connecting with social media & websites	0.24
6. Personal work (visit or inquire about a patient in another department)	0.26

Concerning indirect nursing care, the nurses spent a high proportion of their time on documentation and charting of nursing care (8.81%), preparing medication and treatment trays (5.45%) and helping in diagnostic and treatment procedures (5.29%), while they spent low proportion of their time on preparing patients for discharge (1.52 %).

As regards non-nursing tasks, the nurses spent the high proportion of their time on clerical activities (14.84%), housekeeping (8.16%) and transporting activities (6.58%), while they spent less time on dietary activities (0.90 %). In relation to personal activities, the nurse spent a high proportion of time on breaks for meal and drinks (2.01%) and rest (1.75%) and spent less time in chatting with friends (0.21%), making personal phone calls (0.23%) and using social media and websites (0.24%).

Table (5) shows mean scores of nurses reporting nursing care left undone in critical care and toxicology care units. It was evident that nurses rated the highest care left undone to be inadequate documentation and charting (4.29±0.543), preparing the patient for discharge (3.87± 0.497), pain management (3.75±0.844) and care of patient's hygiene and comfort (3.69±0.751). They also posted a low mean score of care left undone in performing routine nursing care (2.73±0.611), certain nursing interventions on time such as administering medications , withdrawing lab specimens ....etc (2.67±0.575) as well as starting and changing I.V Therapy (2.54±0.693). The total mean of care left undone was 3.36±0.645.

Table (5): Mean scores of nurses reporting nursing care left undone in critical care and toxicology care units.

Nursing care left undone	Nurses reporting Mean ±SD
1. Adequate documentation and charting	4.29±0.543
2. Preparing patient for discharge	3.87±0.497
3. Pain management	3.75±0.844
4. Patient' s hygiene and comfort such as skin care, back rub, oral hygiene, turning and moving the patient, making occupied bed, bed bath unconscious patient	3.69±0.751
5. Performing routine nursing care, such as chest tube, ETT, Foley catheter, IV line, monitoring CVP, chest physiotherapy, tracheostomy, connecting and changing an intercostal tube	2.73±0.611
6. Performing certain nursing interventions on time such as administering medications, taking lab specimen, lavage, enema, suctioning, measuring output, nebulizer therapy, measuring vital signs	2.67±0.575
7. Starting and changing I.V therapy	2.54±0.693
Composite scores of nursing care left undone	3.36±0.645

Table (6) presents the relation between non-nursing duties and nursing care activities left undone. The table illustrated that there was a moderately positive, statistically significant correlation between tasks left undone and their non nursing duties (r= 0.594). These non nursing duties were clerical (r= 0.462); housekeeping (r = 0.356) and transporting activities (r= 0.297), while there was a mild negative statistically significant correlation between care left undone and dietary activities (r= - 0.168).

Table (6): Relation between non-nursing duties and nursing care activities left undone.

Nursing duties left undone	Non – nursing activities				
	Non nursing activities	Clerical activities	Housekeeping activities	Transporting activities	Dietary activities
1. Starting and changing I.V therapy	.354(*)	.314(*)	.304(*)	.322(*)	-.120
2. Adequate documentation and charting	.427(*)	.392(*)	.488(*)	.299(*)	.160(*)
3. Performing routine nursing care	.490(*)	.363(*)	.432(*)	.278(*)	-.137
4. Performing certain nursing practices on time	.360(*)	.341(*)	.423(*)	.311(*)	-.156
5. Patients' hygiene and comfort	.415(*)	.367(*)	.325(*)	.291(*)	.188
6. Pain management	.302(*)	.373(*)	.243(*)	.284(*)	-.167
7. Preparing patient for discharge	.411(*)	.379(*)	.278(*)	.295(*)	-.193
Composite scores of nursing duties left undone	**.594(*)**	**.462(*)**	**.356(*)**	**.297(*)**	**-.168**

* **P < 0.05 (significant)**

Figure (4) clarifies the mean scores of nursing job and patient outcomes in critical care and toxicology units. It was noticed that nurses highly rated stress-related work (4.29) and job tension (4.32), followed by role conflict (4.15) and intent to leave (3.69), with nurses' job satisfaction (2.52) being lowest in the score. In addition, the patients fairly rated their satisfaction (2.65).

Figure (4): Mean scores of nursing job and patient outcomes in critical care and toxicology care units

90
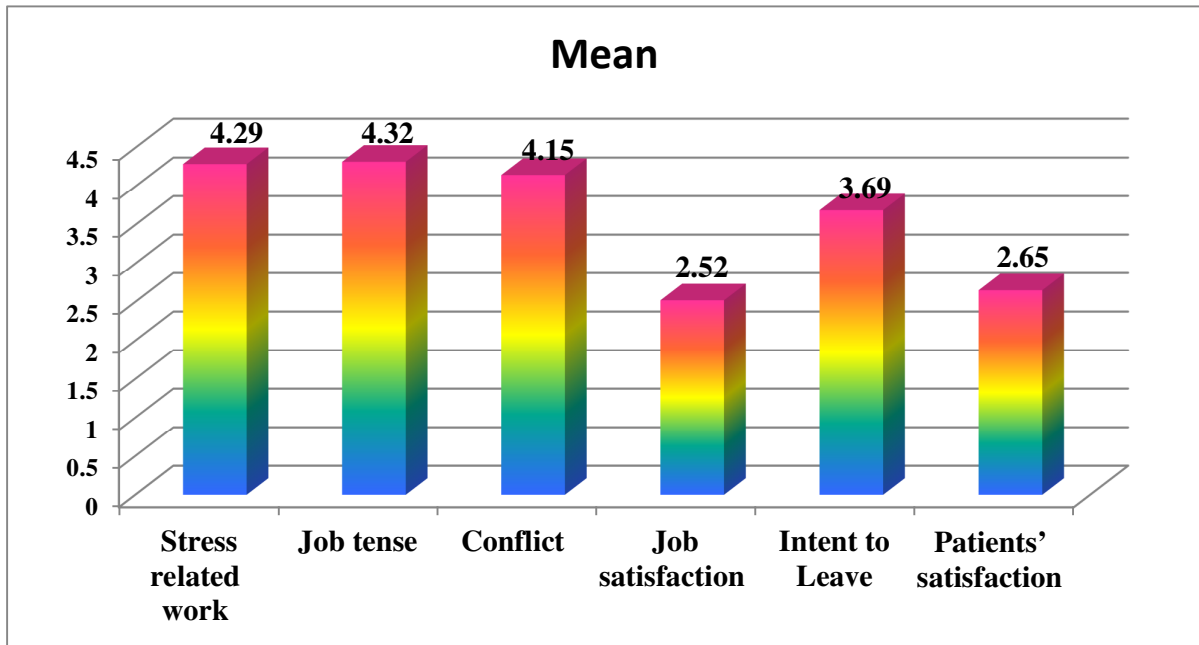
Table (7) and figure 5 represent the relationship between non-nursing duties and nursing duties left undone on one side and nursing job outcomes and patient outcomes on the other**.** As seen in the table and the figure, there was a moderately positive statistical correlation between non-nursing duties and four nursing job outcomes, namely: stress-related work (r= 0.470); job tension (r=0.435), role conflict (r=0.403) and intent to leave (r=0.345). In addition, there was a moderately negative statistical correlation between non-nursing tasks and nurses' satisfaction (r= -0.307) and patient satisfaction (r= -0.259). Furthermore, there was a moderately positive, statistically significant correlation between the care left undone and four nursing job outcomes specifically stress-related work (r= 0.380); job tension (r=0.403), role conflict   (r=0.286) and intent to leave (r = 0**.**332**)**. Besides, there was a moderately negative statistical correlation between care left undone and nurses' satisfaction (r= -0.340) and patient satisfaction (r= -0.263).

Table (7): Relationship between non-nursing duties and nursing duties left undone and nursing job outcomes and patient outcomes.

Non-nursing duties and nursing duties left undone	Nursing Job outcomes					Patient satisfaction
	Job satisfaction	**Stress-related job**	**Job tension**	**Conflict**	**Intent to leave**	
- Non nursing duties	**-. 307**(**)	**.470**(*)	**.435**(**)	**.403**(**)	**.345**(**)	**-.259**(*)
1. Clerical activities	-.537(*)	.740(*)	.713(*)	.514(**)	.704(**)	-.175(**)
2. Transporting activities	-.314(**)	.467(**)	.497(**)	.474(**)	.455(*)	-.106(**)

91

3.	Dietary activities	-.321(*)	.429(*)	.354(**)	.398(*)	.378(*)	-.254(*)
4.	Housekeeping activities	-.364(*)	.574(*)	.539(*)	552(**)	.559(**)	.109(*)
-	**Nursing care left undone**	**-.340 (*)**	**.380(**)**	**.403(**)**	**.286(*)**	**.332(**)**	**-.263(*)**
1.	Starting and changing I.V therapy	-.349(**)	.478 (**)	.409(**)	.409(**).	.455(**)	- .337(**)
2.	Adequate documentation and charting	-.376(**)	.555(*)	.577(**)	.658(**)	.524(**)	-.467(**)
3.	Performing routine nursing care	-. 366(**)	.497(**)	.413(*)	.551(**)	.495(*)	-.388(*)
4.	Performing certain nursing practices on time	-.393(**)	.493(**)	.514(**)	565(**)	.472(**)	-.370(**)
5.	Patients' hygiene and comfort	-.276(*)	.527(**)	.545(**)	.543(**)	.517(**)	-.256(**)
6.	Pain management	-.252(**)	.407 (**)	.463(*)	.488(**)	.531(**)	-.206(**)
7.	Preparing patient for discharge	-.256(*)	.546(**)	.467(**)	.513(**)	.599(**)	-.235(*)

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

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

Figure (5) : Correlation diagram of consequences of nurses' work   patterns on   nurses and patient outcomes   in critical care and toxicology units.
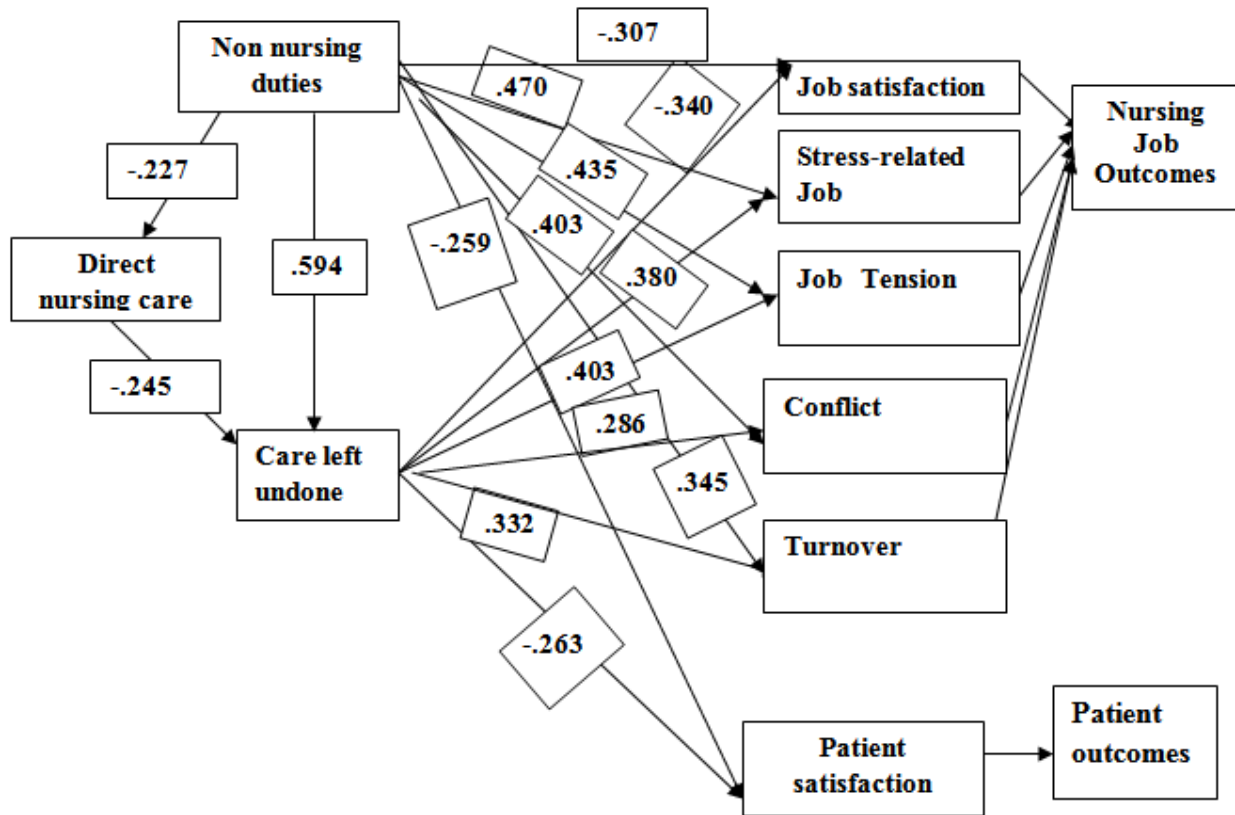
DISCUSSION:

Nurses play a great role in healthcare organizations to provide safety and improve health care outcomes (Roohi, 2015 et al).   Although most healthcare systems suffer from deficiencies in nursing staff, they are always required to effectively provide direct patient care with maximum skills, education, experience and abilities. Nurses' performance below accepted standards would result in negative consequences such as   low quality of patient care with lower satisfaction , and together with increased nurses' stress, tension and   conflict in their work , and intent to leave their job (Duffield   et al. , 2008; Hendrich et al. ,2008). Measuring nurses' performance and optimal use of their work time has the first priority in health care systems across the world for maximizing the efficiency of nursing care (Hendrich et al., 2008). Therefore, the aim of the present study was to throw the light on nurses' work patterns and their consequences on nurses and patient outcomes in critical care and toxicology care units.

Findings of the present study showed no statistically significant difference between the study units regarding four categories of nurses' work patterns (**Table 3**). Based on self-reporting, nurses spent 95.3% of their time in three main categories, namely direct nursing care (36.64 %); indirect nursing care (28.18 %) and non-nursing care (30.48 %) (**Table 3 and Figure1**). These findings were close to those found in two studies in UK (Harrison and Nixon, 2002) and in Australia (Westbrook et al., 2011). The present study

also highlighted that nurses spent less time in performing direct patient care activities (that required their knowledge and skills), compared to the rest of activities (**Figure 1**).   They diverted most of their time to both non-nursing care and indirect nursing care, leaving less time to direct contact with patients (**Figure 2**).   These are similar to those reported in studies across the world from 1986 to 2012 (Harper ,1986; Hendrickson   et al. ,1990; Prescott et al. ,1991;   McKenna,1995; Blegan et al. ,1998; Elsayed et al. , 2012).

As regards percentage of nurses' time spent in direct nursing activities, these results are also comparable to that found in several studies in other countries as Australia (37%) (Westbrook et al. ,2011), Greece (35.2%)(Blegan et al. ,1998)   and Brazil (35%)(Garcia and Fugulin,2010) .   At the same time, the percentage of nurses' time spent in direct patient care in the present study was greater than other studies in Canada (30.03%) (McGillis and O'Brien-Pallas L, 2000), Egypt (29.83 %) (Gabr and Mohamed 2012), USA (29.83%) (Hendrich et el., 2008), and Iran (19.3 %) (Poor et al., 2016)   and lesser than other researches in other countries such as the Sweden (38%) (Furaker, 2009), USA (40.52%) (Gholizadehc et al., 2014), North America (41%) (Norrie, 1997), George (46.46 %) (Rouhi et al., 2009).

The current study revealed that the high percentage of nurses' time in direct nursing care was devoted to administering medications and IV therapy, routine care of critical patients and suctioning and only a small proportion of this time was dedicated to monitoring and assessing the patient's condition and to guiding family (**Table 4**). This was consistent to a study in Egypt in 2012 (Elsayed et al., 2012) and in agreement with two studies in the USA (Hendrickson et al., 1990; Shi and Singh, 2004).

The results of the present study found that the nurses' time spent around 28.18% of their time on indirect nursing care (**Table 3 and Figure 1**). The   area of indirect nursing activities involved documenting nursing care provided   (8.81%), preparing treatment and medication tray (5.45%)   and helping patients in diagnostic, treatment procedure (5.29 %), working with medical equipment (3.73%), communicating with other health care providers (3.28%) and preparing patients for discharge (1.52%) (**Table 4**). The results of the present study were very close to the studies of Harrison and Nixon study in 2002 (29.31%) and Westbrook et al in 2011 (30%). The findings of this study were greater than the time spent on indirect care in other studies by Garcia and Fugulin (12%) in 2010, Gabr and Mohamed in 2011 (24.56%),   Gholizdeh et al. in 2014 (24.09%) and lower than the time spent on indirect care in the studies conducted by Rouhi et al. in 2009 (53.54%) and Mphil et al. in 2012 (32%).

According to the findings of the study, nurses in critical care and toxicology care units spent little time on their personal activities (4.7%) including   personal breaks and rest, calling and receiving personal phone calls**,** using social media and communicating with other staff   (**Table 3 and 4 and Figure 1**).   Although the time spent on personal activities was recorded to be very high in the study of Garcia and Fugulin in 2010 (18%), it was very low in the present study. This was not surprising among nurses working in critical care and toxicology care units who give their efforts and time to meet patients' needs. Nurses in the present study concentrated their effort to achieve a high degree quality of patient care even regardless their personal needs in different shifts. This could be explained by what Nauert et al. (1988) had said "When nurses are busy, they completed their assigned tasks instead of eating and having breaks".

The nurses also consumed much of their work time in performing non-nursing duties (30.48 %) (**Table 3 and Figure1**). The results of the present study found that nurses devoted a large proportion of their time to clerical activities (14.84%), housekeeping tasks (8.16%) and transport tasks (6.58 %). Dietary activity (0.90%) represented the least non-nursing activity on which the nurses spent a small proportion of their time **(Table 4)**. This may be attributed to the fact that nurses spend the highest frequency of time accompanying patients to the operating room, or X-ray department, bringing medication from a pharmacy and distributing or collecting request forms to different departments. The results of the present study contrast, those found in several studies in Latter Day Saints Hospital in USA (8%)(Bradshaw et al ,1989), USA Hospitals (10 %) (Hendrickson et al, 1990), ICU in North of America hospital (7%) (Norrie, 1997) and [São] Paulo's University Hospital in Brazil (12 %) (Garcia and Fugulin, 2010). This study was in agreement to a study in Mansoura University Hospital in Egypt in 2012, where it was found that non-nursing care activities compose the greatest proportion of time spent by nurses (Gabr and Mohamed, 2010).

This discrepancy between this study and other studies in the percentage of nurses' time spent on each nurses' work category may have occurred as a result of certain reasons that significantly have their impact on nurses' work patterns. These reasons were different nursing staff systems (assignment, number, type, and mix in each shift), workload, and nurse to patient ratio (**Table 1 and 2**), aspect of nursing care activities (**Table 4**), nature of work, design and size of critical care units, the patient's diagnosis (**Table 1 and 2**), bed turnover and length of stay.

The profiles of all three shifts (morning, evening and night) show that different features in terms of the total amount of time spent in four categories of activity (direct nursing care; indirect; non-nursing; and personal activities). Variations in the time spent on different activities were noticed among different shifts with double time spent on direct, indirect and personal activities at night shift (**Figure 3**). On the night shift, the amount of time spent in direct and indirect patient care was higher than on either morning or evening shifts (**Figure 3**), and this may have occurred as a result of working time of night shift (12 hours) being double the working time of morning 6 hours) and evening shift (6 hours). Care for unstable patients and nursing activities reach their peak during the night shift. Nurses may experience the impact of shift workload and fatigue, which may be additional factors contributing to increasing time spent in night activities (Hughes, 1999; Dorrian, 2006). This was confirmed by two studies by Byrness (1982) and Hassan et al. (1994) which reported that the highest utilization of nursing time in productive activities was reported during the night shift.

Regarding non-nursing duties, the present study found that the profile was different from direct, indirect and personal activities. The nurses during the night shift spent about 10.83% of their time undertaking non-nursing activities while in the morning shift, the figure increased to 12.12 % (**Figure 3).** Mahmoud (2002) stated that non nursing workload reached its peak during morning shifts. This may be due to the admission of new cases and the absence of supporting staff that would help the nurse with their non-nursing activities. These differences between shifts in this study can be attributed to patients being discharged during the morning shift, increasing physician rounds and filling out requests, leaving beds to be cleaned and prepared by nurses, increasing clerical duties, transferring and discharge, transportation

of the patient from or to the unit for certain medical interventions. Additionally, the percentage of time spent in non-nursing activities was increased in the night shift as non nursing tasks in the night shift should be performed before the morning shift. This study was contrasted with Greece study (Kiekkas et al., 2005), while the findings of these studies were confirmed by the study of Harrison and Nixon (2002).

The study also revealed that there were moderate positive relationships between non-nursing tasks and care left undone (**Table 6 and Figure 5**). This study proved that nurses were making important decisions about which essential care to perform and which to omit based on the possible immediate negative consequences for patients' conditions if care left undone. Crucial nursing care duties such as administering medications; withdrawing lab specimens; suctioning, monitoring CVP; chest physiotherapy; vital signs; starting and changing IV therapy (**Table 5**) had a lower incidence to omit among nurses in the study units.   At the same time, the activities that were time consuming with fewer priorities   to patient care were most often left undone among nurses in the study units as documenting nursing care, educating patients and their families while preparing the patient for discharge and providing patient's hygiene and comfort (**Table 5**).   Bowers et al. (2001) published that nurses working under the pressure of inadequate time and frequent interruptions, try to catch up time by minimizing the time spent on required tasks and redefine work responsibilities to complete the tasks they are accountable for, which often interfere with providing high quality care.

Although the findings of the study were similar to patterns of nursing care left undone across the world, they were not identical to other studies (Felgen, 2003; Hegney, 2003; Horwitz and McCall, 2004; Abdallah, 2005; Al-Kandari and Thomas, 2009; Tschannen et al., 2010; Kalisch et al., 2011; Ausserhofer et al., 2014; Bekker et al., 2015) (**Table 5**). The study showed that the nurses were more likely to report care being left undone when they were working in shifts with a high workload. These results may be explained by the fact that the system of assigning nurses to nursing activities in the study units was the case method (**Table 2**). Each nurse had the total responsibility for the care of her patients, which meant that all patients' personal, environmental and service needs were the responsibility of the nurse. Tonges (2005) proposed that case assignment was arranged in a way that the nurse can care for the same patient from admission to discharge from the unit.   In the present study, nurses mentioned that the number of activities left undone was also greater when critically ill patients received multiple medications and high frequencies of routine nursing care and practices.   In addition, the nurses reported that they left some care undone when they were working in a worse organizational environment and lacking work pattern (high workload, rotating shifts, long hours and lack of arranging the work hours' schedules including weekends and vacations) to support nurses during the performance of their job. These findings were also found in other studies in different countries from 2003 to 2015 (Felgen, 2003; Hegney, 2003; Horwitz and McCall, 2004; Abdallah, 2005; Al-Kandari and Thomas, 2009; Tschannen et al., 2010; Kalisch et al., 2011; Ausserhofer et al., 2014; Bekker et al., 2015).

Moreover, care is more likely to be left undone in study units where nurses perform non-nursing tasks and indirect nursing practice. As found in other studies from 2001 to 2015, this could be another reason that the nurses were unable to complete some of the nursing activities (Nuikka et al., 2001; Al-Kandari and Thomas, 2009, Aiken et al., 2011; Bekker et al., 2015). Nurses spent a portion of their

time in indirect and non nursing care (**Table 3 and 4 and Figure 1**). According to Elsayed et al (2012), the indirect and non nursing care activities consume a high portion of nurses' time. Relieving nurses from these activities would permit nurses to spend more time in direct care of patients and to raise the quality of care rendered and patient's satisfaction. Therefore, it should be urgently considered that professional nurses perform activities related to their skills, educational level and expertise (Scott et al., 2011; Bekker et al., 2015).

The findings of the present study proved that there were three non-nursing tasks correlated positively with nursing tasks left undone (clerical, transporting and housekeeping activities) while dietary activity of non nursing task correlated negatively with certain nursing tasks left undone (**Table 6 and Figure 5**). It can be explained by assigning clerical, transporting and housekeeping tasks to nurses, considering these tasks as part of nurses' job. On the other hand, there were nutritional employees who were responsible for writing the request of dietary and retrieving food trays thus carrying the dietary activities. The results of this study were found matching to other studies as the study of Van Tonder (1988), Aiken et al. 2001. This study was in contrast with the study of Bekker et al. (2015); it found that two non-nursing tasks as arranging discharge referrals and transporting patients in hospital correlated negatively with certain nursing tasks left undone.

Nurses in the study units also attributed care left undone to nurses' job and work factors. These factors were absence of policies, procedures and protocol, shortage of nursing staff and supplies, a lack of or poorly functioning equipment, lack of career development opportunities, inadequate supervision and guidance, and dissatisfaction with work hours' pattern. These factors also prevented professional nurses from completing their nursing tasks and were considered as obstacles that hindered nurses' work. Similar findings were also reported by several other studies in Egypt from 2002 to 2014 (Abo El-Maged et al., 2002; Mabrouk, 2006; Aly, 2009; Elsayed and Sleem , 2011; Al-Youssef et al., 2013), two Arabic studies in Kuwait in 1998 (Al-Kandri ,1998) and in Jordan in 2002 (Al- Momani, 2002) and two studies in other countries as Canada in 2004 (O'Brien-Pallas, 2004) and South Africa in 2015 (Bekker et al. , 2015).

Finally, non-nursing duties resulting in nursing care left undone might also have negative consequences on nurses and patient outcomes, including reduced job satisfaction, increased stress-related job, job tension, role conflict, intention to leave their job and   patients' dissatisfaction (**Table 7, Figure 4 and 5**). In this study, nurses felt frustrated, dissatisfied and tense with lack of social prestige/respect, in addition to being guilty of leaving some of the care undone. More to the point, nurses provided non-nursing tasks that were considered to be stressful and low-status work. Consequently, this would lead to problems in professional relationships manifested in interrupting and conflict relationship between nurses and their peers, supervisors, and physicians. This would also lead to lack of nurses' willingness to remain in their job and lack of patient trusts in nurses' care.

These findings of the current study were supported by other studies in different countries from 2008 to 2013 (Schubert et al,2008;   Sochalski, 2001; Tschannen   et al. ,2010 ; Kalisch et al., 2011; Kalisch et al., 2012; Gabr and Mohamed, 2012; Aiken et al. ; 2013; Schubert et al., Ausserhofer   et al., 2013). This

study was also in line with the study in a teaching hospital in Australia which found that the satisfaction of nursing staff, stress at work, job tension and role conflict were associated with the nurses' role in their work (Med et al ,2010). However, this study was consistent with a study in El – Shatby Maternity University Hospital in Egypt reporting that nurses experienced a higher level of stress and low level of job satisfaction in their work (El Dahshan and Hafez, 2014).

CONCLUSION:

This study highlights categories of nurses' work patterns that help nurses to increase their awareness about their practice role. Nurses provided care to critically ill patients with no significant differences between the studied units. Only 36.64 % of nurses' time spent on direct care activities while nurses spent the greatest proportion of their time on indirect nursing care and non-nursing care activities. Consequently, they performed extra work causing high workload and hindering the completion of their nursing tasks. The study also found a positive correlation between care left undone and non-nursing care. The nurses in the study unit felt dissatisfied with more stress, tension, and conflict with their job and role, not only because they performed non-nursing tasks, but also when they left nursing tasks undone. When the nurses gave the high volume of their time to non-nursing care and indirect nursing care, this indirectly affected the quality of care provided, patient satisfaction and their intent to remain to in their career. Therefore, diverting most of nurses' time to direct nursing care activities plays a significant role and has positive value on nursing job and patient outcomes.

RECOMMENDATIONS:

Efforts should be provided to improve nursing work environments and optimize the use of nurses' time and energy. On the other hand, managers should play a definite role in reducing non-nursing duties for enhancing nursing job and patient outcomes. They should adopt new management strategies such as:

1. A standardized nursing care plan to organize nursing care activities, increase the time allocated to direct clinical care and utilize nurses' time effectively.

2. Promote the design of nursing jobs that allows nurses to perform tasks appropriate to their level of expertise.

3. Define tasks that nurses perform below their scope of nurses' practice and delegate them to support staff. Thus relieving nurses and letting them perform their nursing tasks thoroughly and spend less time on non-nursing duties.

4. Improve the work environment to focus on patient care.

5. Provide training programs for defining professional nurse roles and responsibilities and recognizing tasks that can be delegated to support staff.

6. Nurses must be involved in implementing and evaluating change in nursing role.

7. Measures should be taken to overcome the problem of shortage in nursing staff, especially in the night shifts to decrease workload.

8. Standardized education for all support roles that are clearly defined will ensure they can operate at maximum capacity.

9. Use secretarial staff to spare nurses' time spent on daily and routine paperwork.

10. Use electronic patient records, computerized data entry and digital equipment for saving nurses' time, reducing errors, and enhancing communication.

FURTHER RESEARCH: Further studies are recommended to explore the relationships between performing non nursing duties and care left undone and nursing sensitive indicators that show the quality of patient's care in different wards and critical care units.

REFERENCES:

1. Abdallah LM (2005). Ever care nurse practitioner practice activities: Similarities and differences across five sites. Journal of American Academy of Nurse Practitioners 17:355–62.

2. Abo El-Maged N, El-Shemy, Gaber E, El-Maghraby M (2002). Relationship between work setting and the occurrence of medication errors among nurses of Assiut University Hospital. Assuit Med J 26 (3): 55.

3. Aiken LH, Clarke SP, Sloanne DM, Sochalski JA, Busse R, Clarke H, Giovannetti P, Hunt J, Rafferty AM , Shamian J (2011).   Nurses' reports on hospital care in five countries. Health Affairs 20: 43–53.

4. Aiken LH, Sermeus W, Van den Heede K (2012). Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. BMJ 344:1-14.

5. Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH (2002). Effect of Hospital Nurse Staffing on Mortality and Nurse Burnout and Job Dissatisfaction. JAMA 288 (16): 4-30.

6. Alasad J , Tabar NB , Eid AbuRuz ME (2015). Patient Satisfaction with Nursing Care: Measuring Outcomes in an International Setting. Journal of nursing administration 45 (11):   563-68.

7. Alasad J, Ahmad M (2013). Patients' satisfaction with nursing care in Jordan. Int J Health Care Qual Assur 16:279-85.

8. Al-Kandari F, Thomas D (2009). Factors contributing to nursing task incompletion as perceived by nurses working in Kuwait general hospitals. Journal of Clinical Nursing 18: 3430–40.

9. Al-Kandari F, Ogundeyin W (1998). Patients' and nurses' perceptions of the quality of nursing care in Kuwait, Journal of Advanced Nursing   27(5): 914-21.

10. Al-Momani M (2002). Quality of nursing care provided in the neonatal intensive care unit of Princess Badi Teaching Hospital, Jordan Doctor thesis of High Institute of Public Health, Alexandria University.

11. Aly N (2009). Drug administration errors and their determinates in Intensive Care Units of El-Shatby Pediatric University Hospital in Alexandria. PhD of Public Health sciences (Hospital Administration), High Institute of Public Health, Alexandria University.

12. Al-Youssef AS, Mohamed KL, Mohamed SN (2013). Nurses' Experiences toward Perception of Medication Administration Errors Reporting, Journal of Nursing and Health Science 4(1): 56-70.

13. Ampt A, Westbrook J, Creswick N, Mallock N (2007). A comparison of self-reported and observational work sampling techniques for measuring time in nursing tasks. J Health Serv Res Policy 12 (1):   18-24.

14. Ausserhofer D, Zander B, Busse R,   Schubert M, Geest SD,   Rafferty AM,   Ball J,   Scott A, Kinnunen J,   Heinen M, Sjetne IS, Moreno-Casbas T,   Kózka M,   Lindqvist R, Diomidous M, Bruyneel L, Sermeus W, Aiken LH, Schwendimann R (2014). Prevalence, patterns and predictors of nursing care left undone in European hospitals: results from the multicountry cross-sectional RN4CAST study. BMJ Qual Saf 23:126–35.

15. Ausserhofer D, Schubert M, Desmedt M (2013). The association of patient safety climate and nurse-related organizational factors with selected patient outcomes: a cross-sectional survey. Int J Nurs Study 50:240–52.

16. Ball JE, Murrells T, Rafferty AM, Morrow E, Griffiths(2014) . Care left undone' during nursing shifts: associations with workload and perceived quality of care. BMJ Qual Saf 23:116–25.

17. Bekker M, Coetzee S, Klopper HC, Fansa M, Prscina SE(2015). Non-nursing tasks, nursing tasks left undone and job satisfaction among professional nurses in South African hospitals. Journal of Nursing Management 23: 1115–25.

18. Blegan MA, Goode CJ, Reed L. (1998). Nurse staffing and patient outcomes. Nursing Research 47: 43-50.

19. Booth ZR (2002). The nursing shortage: a worldwide problem. Revista Latino-Americana de Enfermagem 10 (3):392-400.

20. Bowers BJ, Lauring C, Jacobson N (2001). How nurses manage time and work in long-term care. Journal of Advanced Nursing 33: 484–491.

21. Bradshaw KE, Sittig DF, Gardner M, Pryor TA (1989), Budd M. Computer based data entry for nurses in the ICU. MD Computing 5: 274–280.

22. Brillhart B, Sills FB (1994). Analysis of the roles and responsibilities of rehabilitation nursing staff. Rehabilitation Nursing 19: 145-50.

23. Byrness MA (1982). Non nursing functions: the nurses state their case. Amer J Nurs 82(7):1089- 093.

24. Davis A (1982). Classifying rehabilitation patients. Nursing management 14(2): 47-51.

25. Dorrian J (2006). A pilot study of the safety implications of Australian nurses' sleep and work hours. Chronobiol Int 23(6):1149–63.

26. Duffield C, Gardner G, Catling-Paull C (2008). Nursing work and the use of nursing time. Journal of Clinical Nursing 17:3269–274.

27. El Dahshan ME, Hafez SK (2014). Effect of Job Related Stressors on Nurses' Job Satisfaction in El - Shatby Maternity University Hospital, Alexandria, Egypt. The Egyptian Journal of Community Medicine 32 (2) : 1-20.

28. EL Sayed KA, Sleem WF (2011). Nurse – physician collaboration: A comparative study of the attitudes of nurses and physicians at Mansoura University Hospital. Life Science Journal 8(2): 140-6.

29. El-sayed NM (1996). Development Of Cost Allocation System For Nursing Care At Alexandria Main University Hospital unpublished Dissertation Doctorate, Alexandria University, Faculty Of Nursing, pp 48-85.

30. Elsayed WA, Sleem WF, Elsayed NM (2012). Nursing Workload and the Cost of Nursing Care at Mansoura Emergency Hospital. Journal of American Science 8(2): 152-59.

31. Felgen JA (2003). Caring: core value, currency, and commodity [horizontal ellipsis] is it time to get tough about 'soft'? Patient's point of view. Nursing Administration Quarterly 27: 208 -14.

32. Furaker C (2009). Nurses' everyday activities in hospital care. J Nurs Manag 17:269-77.

33. Gabr H, Mohamed N (2012). Job characteristics model to redesign nursing care delivery system in general surgical units. Academic Research International 2(1): 199-211.

34. Garcia AE, Fugulin FT (2010). Nurses' work time distribution at the emergency service. Rev Esc Enferm USP 44(4):1027-33.

35. Gholizadehc M, Janatia A, Kabiria N, Nadimia B, Abria S (2014). How Do Nurses Spend Their Time in The Hospital? J Clin Res Gov. 2 :27-33.

36. Gurses AP (2005) . Performance Obstacles and Facilitators, Workload, Quality of Working Life, and Quality and Safety of Care among Intensive Care Nurses. PhD Dissertation, University of Wisconsin–Madison, p. 164.

37. Hackman JR, Oldham GR (1980). Work Redesign. Philippines: Addison- Wesley.

38. Harper L (1986).   All mixed up. Nursing Times 26:28-31.

39. Harrison L, Nixon G (2002). Nursing activity in general intensive care. Journal of Clinical Nursing 11: 158–67.

40. Hassan FH, Abed SA, Adam SM (1994). Evaluating nursing productivity in Ain Shams University Specialized Hospital, Scient J Of Al-Azhar Med. Faculty(girls) 15(2):455-62.

41. Hegney D, Plank A, Parker V (2003) . Nursing workloads: the results of a study of Queensland Nurses. Journal of Nursing Management 11: 307–314.

42. Hendrich A, Chow M, Skierczynski B, Lu Z (2008). A 36-hospital time and motion study: how do medical-surgical nurses spend their time?   Permanent J. 12(3):25-34.

43. Hendrickson G, Doddato TM, Kovner CT (1990). How do nurses use their time? Journal of Nursing Administration 20 (3):31–7.

44. Horwitz IB, McCall BP (2004). The impact of shift work on the risk and severity of injuries for hospital employees: an analysis using Oregon workers compensation data. Occupational Medicine 54:556–63.

45. Hughes M (1999). Nursing workload: an unquantifiable entity. J Nurs Manag 7:317–22.

46. Ismaiel MH, Alice Edward Reizian AE, Hamouda G (2013). Factors Affecting Nurses' Career Development. Journal of American Science 9(5): 163-72.

47. Jacob A, Rekha R (2010). Clinical nursing procedures: The art of nursing practice. 2nd ed. New Delhi: Jaypee Brothers.

48. Joanne R (2007). Using the Quality-Caring Model to Organize Patient Care Delivery, JONA. 37(12): 546-51.

49. Kalisch B, Tschannen D, Lee H (2011). Does missed nursing care predict job satisfaction? J Health Manag 56:117–31.

50. Kalisch BJ, Tschannen D, Lee KH (2012). Missed nursing care, staffing, and patient falls. J Nurs Care Qua 27:6–12.

51. Kearney A, Patricia Grainger P, Chubbs K, Joan Downey J (2016). Survey of Managers Regarding Nurses Performance of Non nursing Duties. JONA 46 (7\8) :379-84.

52. Khatri N, Fern CT, Budhwar P (2001). Explaining Employee Turnover in an Asian Context. Human Resource Management Journal 11 (1): 54-7.

53. Kiekkas P, Poulopoulou M, Papahatzi A, Androutsopoulou C, Maliouki, M, Prinou A (2005). Nursing activities and use of time in the post anesthesia care unit. Journal of PeriAnesthesia Nursing 20 (5): 311-22.

54. Lundgren S, Segesten K (2001). Nurses' use of time in a medical and surgical ward with all-RN staffing. Journal of Nursing Management 9:   13-20.

55. Lyons TF (1971). Role clarity, need for clarity, satisfaction, tension, and withdrawal. Organizational Bebaviour and Human Performance 6: 99–110.

56. Mabrouk SM (2006). Impact of Occupational Stress on Organizational Commitment among Nurses in Selected Hospitals at Shebin El-Kom. Unpublished Master Thesis. Faculty of Nursing, Menoufiya University, Egypt.

57. Mahmoud GH (2002). Costing nursing care for hospitalized medical and surgical patients at EL Mansoura University Hospital, PhD. Thesis, pp 87-93

58. McCann JA, Holmes NH, Robinson JM, Putterman A, Tescheschlog BA (2007). Best practices: Evidence – based nursing procedures.2nd ed. New York, London and Hong Kong: Lippincott Williams and Wilkins.

59. McGillis HL, O'Brien-Pallas L (2000). Redesigning Nursing Work in Long-Term Care Environments. Nursing Economic 18(2):79-87.

60. McKenna HP (1995). Nursing skill mix substitutions and quality of care: an exploration of assumptions from the research literature. Journal of Advanced Nursing 21, 452-59.

61. Med DT, MAppSci MB, Fernandez R, GradDip SJ (2010). A shared care model vs. a patient allocation model of nursing care delivery: Comparing nursing staff satisfaction and stress outcomes. International Journal of Nursing Practice 16: 148–158.

62. Mphil MA, Cert G, Chaboyer W, Mitchell M, Cert Ed G (2012). Understanding the work of intensive care nurses: A time and motion study. Australian Critical Care 25:13-22.

63. Nauert LB, Leach KM, Watson PM (1988): Finding the productivity standard in your acuity system. JONA 18(1):25-30.

64. Nayeri N (2005). Iranian Staff Nurses' Views Of Their Productivity And Human Resource Factors Improving And Impeding It: A Qualitative Study. Human Resource for Health 3(1):3-9.

65. Norrie P (1997). Nurses' time management in intensive care. Nursing in Critical Care 2 (3):121–25.

66. Nuikka M, Paunonen M, Ha¨nninen O, La¨nsimies E (2001).The nurse's workload in care situations. Journal of Advanced Nursing 33(3): 406-15.

67. O'Brien-Pallas L, Thomson D, McGillis HL (2004). Evidence- Based Standards for Measuring Nurse Staffing and Performance. Canadian Health Services Research Foundation, Ottawa.

68. Perry GA, Potter AP (2017). Clinical nursing skills and techniques. 9th ed. USA: Elsevier Mosby.

69. Polit DF, Beck CT, Owen SV (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. Res Nurs Health 30:459-67.

70. Poor HH, Zade FA, Nikbakht S, Hosseini SR, Noorian R (2016). Timing of nurses activities: human resources management. International Journal of Medical Research & Health Sciences 5 (11):596-600.

71. Prescott P, Phillips C, Ryan K, Thompson K (1991). Changing how nurses spend their time. IMAGE. Journal of Nursing Scholarship 1: 23-8.

72. Rizzo JR, House RJ, Lirtzman SI (1970). Role conflict and ambiguity in complex organization. Administrative Science Quarterly 15: 150–63.

73. Roohi G, Hosseini SA, Rahmani AH, Mollaei E, Nasiri H (2013). Distribution of Workload and Efficacy of Nursing Staff in Internal Medicine Ward in a Selected Hospital of Golestan University of Medical Sciences 9(2) :65-73.

74. Rouhi G, Hosseini SA, Asayesh H, Behnampoor N, Rahmani H (2009). Relationship between nurses spent time for care and patients satisfaction in internal ward in Gorgan 5th Azar Hospital. Journal of Payavard Salamat 3(2):65-74.

75. Schubert M, Clarke SP, Aiken LH (2012). Associations between rationing of nursing care and inpatient mortality in Swiss hospitals. Int J Qual Health Care 24:230–8.

76. Schubert M, Glass TR, Clarke SP (2008). Rationing of nursing care and its relationship to patient outcomes: the Swiss extension of the International Hospital Outcomes Study. Int J Qual Health Care 20:227–37

77. Scott A, Matthews A, Kirwan M, Lehwaldt D, Morris R. & Staines A (2012). Report of the Irish RN4CAST Study 2009–2011: a nursing workforce under strain. Available at: http:// doras.dcu.ie/19344/1/RN4CAST_FINAL_report_18_April_2013_ DORAS.pdf, accessed 15 August 2017.

78. Shi L, Singh D (2004) .Delivering health care in America: A systems approach. 3rd ed. Boston: Jones& Barrlett publishers.

79. Smith PC, Balzer WK, Ironson G, Paul KB , Hayes B , Moore-Hirschl S , Parra LF (1992) . Development and validation of the stress in general (SIG) scale. 7th Annual Society for Industrial and Organizational Psychology Convention; Montreal, Canada.

80. Sochalski J (2001). Quality of Care, Nurse Staffing, and Patient Outcomes. Policy, Politics & Nursing Practice. 2(1): 9-18.

81. Stanton JM, Balzer WK, Smith PC, Parra LF, Ironson G (2001). A general measure of work stress: The Stress in General scale. Educational and Psychological Measurement 61: 866–88.

82. Tonges M (2005). What specific nursing activities make a staff nurse experience higher levels of task identity, autonomy, and feedback from work? Nurse Leader 3: 12–15.

83. Tschannen D, Kalisch BJ, Lee KH (2010). Missed nursing care: the impact on intention to leave and turnover. Can J Nurs Res.42:22–39.

84. Van Tonder S (1988) (Abstract). Nie-verplegingstake en die geregistreerde verpleegkundige. Curationis 11 (1), 6–11.

85. Westbrook JI, Duffield Ch, LiL, Creswick NJ (2011). How much time do nurses have for patients? A longitudinal study quantifying hospital nurses' patterns of task time distribution and interactions with health professionals. BMC Health Services Research 11(2): 319-30.

U.S. SANCTIONS ON IRAN AND ITS IMPACT ON INDIA

Bharath M R, Student, V Semester BBA, Centre for management Studies, Jain University,
meda.bharath@gmail.com

Rajiv Chinmayi N C, Student, V Semester BBA, Centre for management Studies, Jain University,
rajivchinmayi001@gmail.com.

Vilas K H, Student, V Semester BBA, Centre for management Studies, Jain University,
khvilas@gmail.com

Dr Varsha Agarwal, Assistant Professor, Centre for management Studies, Jain University,
varsha_a@cms.ac.in

Abstract

United States recently signed an executive order that will withdraw the U S from the Iran Nuclear Deal. India could experience major problems in terms of Oil imports. From various research papers there are possibilities of both negative and neutral effects on India. An economic sanction can cause major harm both directly and indirectly to a country. There is an extensive need of the study to ascertain the implications of sanction on India. Sanctions might turn bad for India's Oil trade with Iran. Objective of the study is to analyse the nature of impact on India due to U S sanctions on Iran. Research is completely on secondary data available on public platform. Analysis has been done based on the statistics available on the terms of the pre-sanction data i.e. the current scenario. By the analysis we can draw the conclusion that there will be a considerate amount of negative impact on India's Oil trade with Iran.

Keywords: Sanctions, United States, India, Iran, Oil trade, Import, Export, Deal, Impact, effect, implications.

Introduction

United States President recently signed an executive order that will withdraw the U S from the Iran nuclear deal (CNBC,2018). The presidential memo starts a 180-day countdown timer for the administration to re-impose all of the sanctions on Iran that were relaxed under the Obama-era deal. The order specifies that the sanctions should be imposed in 180 days. Sanctions on Iran buying or acquiring U.S. dollars, on Iran trading gold and other precious metals, on Iran's trade of metals, on significant sales or purchases of Iranian rials or the maintenance of significant funds or accounts outside the country using Iranian rials, on issuing Iranian debt, Iranian auto sanctions, on Iran's ports and country's shipping and shipping sectors, on buying petroleum and petrochemical products with a number of Iranian oil companies, on foreign financial institutions transacting with the Central Bank of Iran and other Iranian financial institutions, on the provision of certain financial messaging services to Iran's central bank and other Iranian financial institutions, on the provision of underwriting services, insurance, or reinsurance, and on Iran's

energy sector.

(Indian Express, 2018) quoted that India could be affected by the US sanctions on Iran. India is one of the largest importers of Oil from Iran and due to the sanctions the world Oil prices may go up and it could directly lead to the inflation. India had planned to double its import after the Iranian President's visit to India earlier this year so the sanctions might stall the government's decision.

India is developing Chahabar port to circumvent Pakistan's block on trade with Afghanistan (Hindustantimes,2018). A whopping $500 million is the amount that is planned to be invested on the Chahabar port. Due to sanctions this particular might get delayed or expensive or unviable, by (The Hindu,2018).

India has been a founding member of International North South Transport Corridor (INSTC). This is an initiative to reduce the trade time by 30% (Suhasini Haidar, The Hindu, 2018). This is a multibillion dollar project with several Asian countries participating with India being one of them. US sanctions might stop this project immediately.

(Worldbulletin, 2018) India now is a member Shanghai Cooperation organisation (SCO). SCO had planned to include Iran in the Eurasian Security Organisation, if this happens India will be portrayed as anti-American and this will run counter on other initiatives being the Indo-Pacific Quadrilateral between America, Australia and Japan. The move may rile other Indian advisories such as Saudi Arabia, UAE and Israel.

(DNA, 2018) said that this trade war could trigger manually assured economic destruction, which is not good for global growth, now on a revival mode after years of global recession. The US has already threatened to impose sanctions on India, and any stepping up of trade with Iran will make the situation worse for India. Retaliatory action by US president might be severe even after the relationship between India and US is improving over the years.

India has said that it'll continue to trade with Iran and Venezuela despite the sanction as India will only adhere to sanctions by UN and not country-wise sanctions. This doesn't make situation any better for India with the trade war becoming full blown.

Indian exporters have started making and getting payments in euros as they'll not be caught off-guard when dollar payments become virtually impossible once the sanctions are completely imposed.

Review Of Literature

According to "The impact of economic sanctions" report published by (World Finance, 2017), economic sanctions have a limited impact on the targeted country as the longer sanctions are in place, the less likely they are to be effective, as targeted states tend to adapt to their new economic circumstances instead of changing their behaviour.

Stolper-Samuelson theorem, when sanctions are imposed on imports, it favours the factor used intensively in the import- competing sector as domestic demand for domestic productions of importable increases.

As per "Economic Sanctions" by Brookings, sanctions alone are unlikely to achieve desired results if the aims are large or time is short. It even states that sanctions can on occasion achieve various foreign policy goals ranging from the modest to the fairly significant. Trying to compel others to join a sanction effort by threatening secondary sanctions against third parties unwilling to sanction the target can cause severe harm to the state imposing sanctions.

Hufbaur and schott (1985) argue that economic sanctions will not significantly help to achieve the objectives of foreign policies leading to the sanctions. They believe that the fulfilment of those objectives is likely to occur only in special cases, such as the time when the country under the sanctions or the goal of the policies is mild.

Using a General Theoretical Equilibrium model, Dollery (1993) showed that trade and financial sanctions designated have a negative effect on the welfare of a small countries. According to this study, the main burden of financial sanctions is on capital-intensive import sectors. In contrast, the main burden of trade sanctions is against labour-intensive export sectors.

Using the gravity model employed in the study by Hufbaur and Schott, Devarjan and Mottaghi (2015) investigated the effects of sanctions imposed on Iran's trade with major trading partners. According to the results, with sanctions being imposed, Iran's export revenue was decreased by 17.1 billion dollars.

Bigdeli, Gholami and Boldaji (2013) conducted a study using the gravity model and taking certain trading partner into account. They estimated the effect of economic sanctions imposed on Iran during 1973-2007. According to the results of this study, the negative impact of sanctions was 0.08 and the sanctions imposed against Iran had a small and negligible impact on bilateral trade with partners.

Hufbauer, Schott and Elliott argue that economic sanctions have only a very limited capacity to serve their intended objectives. They state that their track record is poor. To the extent that they work, the time span for the actual impact is very short.

Need For The Study

There are a numerous significant need for the study on U.S. Sanctions on Iran and its impact on India and trading partner countries. The main reason being there is no study on the implication of U.S Sanctions (on Iran) on India. There is a strong reason to study to know the state of Oil in India due to sanctions.

Statement Of Problem

Due to sanctions on Iran there will be a lot of implications on trading partners. This will be a study to find the implications of U.S sanctions on Iran and its implication on India in general. Sanctions might turn bad for India's oil trade with Iran and its strategic alliances.

Objectives Of The Study

The main objective of the study is to figure out the implications of U.S sanctions on Iran and its implications on India.

Following are objectives of the study:

1. To analyse the important aspects harming India's trade with Iran.

2. To find the implications of sanctions on Oil trade.

3. To chalk out the impact of sanctions on trading partners' relationship with Iran.

Research Methodology

This research study is basic research. Secondary data was collected from various sources. Data was collected from websites, journals, newspaper articles, magazines and books. Based on the statistics, analysis has been done.

Analysis and Interpretation

The uncertainty around this sanction resulted in crude oil surpassing the $78 per barrel-mark. With the surge in crude, stocks of oil companies in India took a knock. Sequential reduction of imports from Iran cannot be ruled out and a certain portion of oil imports would possibly flow to other countries. This will increase India's import expenditure as Iran is providing substantial discounts on crude. This will be a possible increase in logistic costs for imports of crude from other countries and mainly from U.S.

Figure 1: Oil imports from Iran as a percentage of Iran's total production
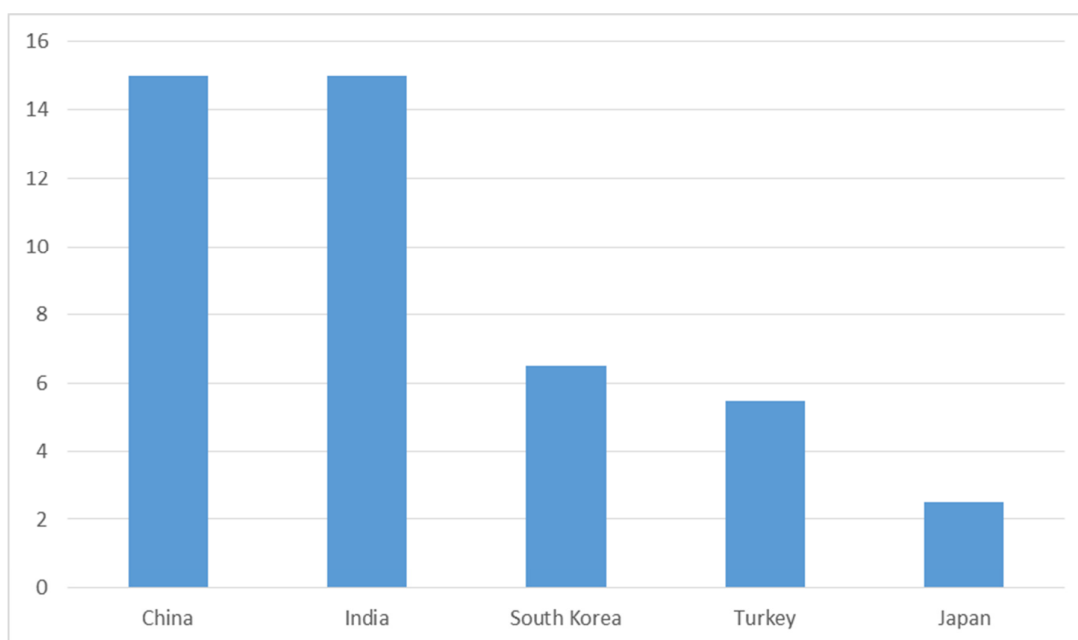
Source: BP, Moneycontrol research.

Statistically, India is one of the largest importers of Oil from Iran with China. Both the countries involved are interdependent on each other. This is because of the relationship between India and Iran over the years.

Figure 2: Oil imports from Iran as a % of total consumption
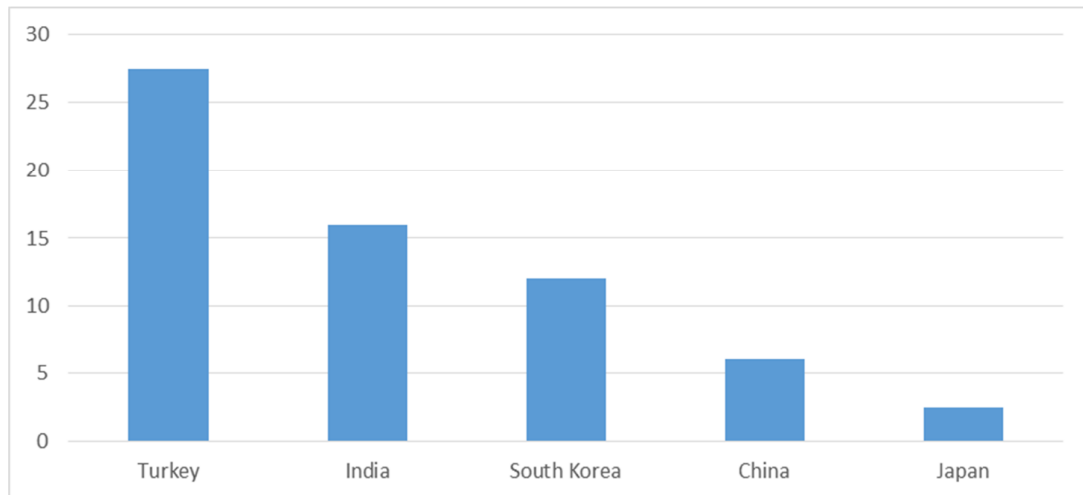
Based on the statistics India is the second largest consumer of Oil from Iran. Iran may not be fully dependant but it is extensively dependant on oil from Iran. This might be because of Iran's commitments with other nations or that India's usage of oil is massive that entire India's need is not getting exported.

India even has a vibrant Import-export relationship with Iran. Commodities including gems and jewellery, pharma products, Nuclear reactors etc. gets imported to and from Iran.

Conclusion

By the above analysis we can state that Sanctions on Iran might not cause adverse effect on India but it will do a strong harm. This situation might force India to Import Oil from other countries that might just increase the transportation cost and this directly leads to increase in the prices of Oil. Due to the increase in prices the common man of India will suffer and this will directly lead to the breakdown of Government.

Every other developmental activity in Iran will get stalled and that will affect both Iran and India financially. Trade of other commodities will be harder and that will leave a considerate impact on both the countries.

India needs to find a strategically stronger way to curb the impact due to oil and trade of other commodities.

References

https://www.thehindu.com/news/national/5-ways-india-could-be-affected-by-the-us-decision-to-withdraw-from-iran-nuclear-deal/article23820123.ece

https://www.cnbc.com/2018/05/08/here-are-iran-sanctions-returning-after-trump-leaves-nuclear-deal.html

http://www.dnaindia.com/business/report-indo-iran-trade-ties-at-a-crossroads-after-us-sanctions-2628874

https://www.worldfinance.com/special-reports/the-impact-of-economic-sanctions

https://www.degruyter.com/view/j/peps.2003.9.issue2/peps.2003.9.2.1061/peps.2003.9.2.1061.xml

https://www.mitpressjournals.org/doi/abs/10.1162/isec.22.2.90?journalCode=isec

https://www.brookings.edu/research/economic-sanctions-too-much-of-a-bad-thing/

https://pdfs.semanticscholar.org/9059/23366515b29a6ffee023752066bf464f3bd9.pdf

https://ier.ut.ac.ir/article_58273.html

https://casi.sas.upenn.edu/iit/chauhan

http://econ.au.dk/fileadmin/site_files/filer_oekonomi/Working_Papers/Economics/2016/wp16_04.pdf

http://edepot.wur.nl/343392

https://www.wto.org/english/res_e/reser_e/ersd201803_e.pdf

https://www.moneycontrol.com/news/business/stocks/us-imposing-sanctions-on-iran-what-it-could-mean-for-india-264731.html

THE IMPACT OF HUMAN RESOURCE MANAGEMENT PRACTICES

ON EMPLOYEES LOYALTY IN MALAYSIA

Taahir, A.B., Ng, Y.S., *Mohd Remie, M.J.
UCSI University, Kuala Lumpur, Malaysia

ABSTRACT

The purpose of this study is to examine the impact that human resource management (HRM) practices have on the organizational loyalty of employees in the Malaysian context. To achieve this objective, the researchers have conducted this study on companies listed on Bursa Malaysia Exchange (Kuala Lumpur Stock Exchange) since most of these companies already have an established human resource department. 432 questionnaires were collected and the data was statistically analyzed using the SPSS software. A Pearson's Correlation test revealed that human resource management practices are significantly and positively correlated with the organizational loyalty of employees in Malaysia. The implications of this research could be used by employers in Malaysia in order to increase the organizational loyalty of their employees through the effective implementation of these human resource management practices.

RESEARCH BACKGROUND & PROBLEM

Success in today's competitive world depends less on the benefits related to technology and economies of scale but is acquired more from human resources and the increasing involvement of human resource management practices (Quresh et al., 2010). Many organizations now acknowledge that employee retention as well as employee commitment represent a source of strategic and competitive advantage (Walker, 2001). Human resource management (HRM) refers to the practices and policies that affects employees' attitudes, behavior and performance (De Cieri et al., 2008). Human resource management practices includes screening, recruiting, training, rewarding and also appraising. (Dessler, 2007). According to Danish and Usman (2010), employees are considered as one of the most vital assets of a company as they contribute to its success and growth. HRM professionals embrace the idea that employees are essential to the success of the organizations, and as such, they view employees as assets. Therefore, the key element to the survival and success of a company is the availability of the right employees in the right place and at the right time (Oladipo, 2011).

In today's world, a loyal workforce is difficult to come by. Organizational loyalty is defined as promoting the organization to outsiders, remaining loyal to the company even under adverse conditions as well as defending and protecting the organization against outside threats (Organ et al., 2006). According to Vance

(2006), employees who are committed to their organizations and engaged in their work provide their organizations with competitive advantages such as lower employee turnover and higher productivity. The significance of loyalty in the workplace has been acknowledged all around the world because the performance of any business is highly dependent on the loyalty of its personnel. An organization will tend to have a better performance if its employees are more loyal (Mohsan et al., 2011). Managers find it hard to retain employees and this is a cause for concern. A high turnover rate can be an indication that an employee is not loyal towards their firm and Maloney (2013) claimed that a high employee turnover is a sign of employee disloyalty. Understanding the ways to foster employee loyalty can lead to a reduction in the number of employee turnover within a company and boost the sustainability of the firm during difficult times (Aityan and Gupta, 2012). The organizational loyalty of employees not only adds value to a company but it is also cost-effective. When employees are loyal, they will work with commitment and be diligent towards their job. This will lead to an increase in their productivity in the workplace. Moreover, loyal employees are less likely to leave their companies, thereby reducing the cost associated with the recruitment and selection of new employees (Salleh et al., 2017).

Staff retention issues have continuously been affecting organizations in Malaysia. According to the "Employee Intentions Report in Malaysia" published in 2015 by the professional recruitment consultancy firm, Michael Page, staff retention is a chief concern for employers in Malaysia as 44% of professionals intend to leave their current job in the next 12 months, with an additional 40% of professionals stating that they only see themselves in the same job for the next one to three years. Furthermore, according to a press release by "Aon Hewitt Malaysia" in November 2016, the annual voluntary turnover rates exceeded 10% in all major Asia-Pacific countries except for Japan and South-Korea. India had the highest voluntary turnover rate at 13.6%, followed closely by Malaysia at 13.0%, Singapore at 11.7% and China at 10.8%. Malaysia had a 13.0% turnover rate in 2016, the second highest in all of the Asia-Pacific markets which is cause for concern for Malaysian organizations.

Additionally, according to another press release by "Aon Hewitt Malaysia" in November 2017, the annual voluntary turnover rates exceeded 10% in all major Asia-Pacific countries except for Japan, South-Korea and Taiwan. Malaysia had an employee turnover rate of 12.8% followed by Singapore at 12.7%, China at 12.5% and India at 12.1%. Compared to 2016, Malaysia's turnover rate decreased by 0.2%, from 13.0% in 2016 to 12.8% in 2017. However, the fact that Malaysia's employee turnover rate is still in the double digits is not reassuring. This shows that employee loyalty is not widespread in organizations in Malaysia, as explained by the high turnover rates above. Furthermore, the above employee turnover trends are worrying and alarming as it may distract organizations in Malaysia from their main objective and their valuable resources in terms of money and time will be wasted in staffing processes. Moreover, these statistics indicate that since the turnover rate of employees in Malaysia is so high, Malaysian employees do not display a strong sense of commitment and loyalty towards the organizations in which they work. Thus, the aim of this research is to investigate the impact that human resource management (HRM) practices have on the organizational loyalty of employees in Malaysia.

Objectives of the Study

1. To determine the impact that recruitment and selection has on the organizational loyalty of employees in Malaysia.

2. To examine the impact that training and development has on the organizational loyalty of employees in Malaysia.

3. To assess the impact that performance appraisal has on the organizational loyalty of employees in Malaysia.

4. To explore the impact that compensation and rewards and has on the organizational loyalty of employees in Malaysia.

Significance of the Study

The results of the study will offer new insights on how human resource management practices affects employees' organizational loyalty and would benefit and assist companies in Malaysia to reshape their human resource policies accordingly. Moreover, the result of this study would act as a guidance tool for companies in Malaysia as it will provide firms with the information of to what extent does HRM practices affects the organizational loyalty of their workforce. Consequently, the companies will then be able to create a more effective HRM practices strategy in order to enhance the organizational loyalty of their employees.

LITERATURE REVIEW

Human Resource Management (HRM) Practices

The views of Frederick Taylor, the father of scientific management, on human resource practices – recruitment and selection, training and development, performance appraisal and compensation and rewards – are still highly influential and valid (Schwartz, 1999). Frederick Taylor believed that human resource management comprised of the recruitment and selection of the right personnel for the right positions, providing appropriate training and development, developing an accurate performance appraisal system and instituting a fair compensation system. According to Edgar and Geare (2005), these four criteria mentioned above are essential elements in developing a successful HRM system.

Recruitment and Selection

Recruitment is one of the crucial functions of HRM as it helps managers to attract and select the best candidates which results in an improvement of a company's performance. Nowadays, with the rise of technology, the internet plays a large role in people's life. Therefore, it is no surprise that the internet has led to changes in recruitment practices too. The trend of using online recruitment is typical for medium and small firms as well as for big organizations as it helps in creating a wide pool of qualified applicants swiftly. According to a research conducted recently, the recruitment sources that employers use include web sites (87%), internet job sites (82%) and job fairs (55%). (Bogatova, 2017). Past literature has depicted the importance of recruiting employees who are committed to a firm's values and goals (Katou,

2008). In today's complex and diverse world, retaining employees is a better and cheaper alternative compared to recruiting new workers and in order to achieve this, an organization should treat its personnel as partners as this will help to motivate them in achieving an organizations' goals in creative ways. Ferris et al. (2002) found that a company's effectiveness is affected by the effectiveness of its recruitment practices. Similarly, several other researchers agree that an effective recruitment and selection will subsequently lead to the high performance of a firm and increase its competitive advantage (Pfeffer, 1994). Moreover, according to a news article published by "MyStarJob" in 2014, Malaysian candidates are not satisfied with the recruitment process of Malaysian organizations. Only 39% of Malaysian job seekers are satisfied with the current job hiring process, according to the management consulting group, Kelly Services. In addition, the results of the survey revealed that Malaysian candidates had the lowest satisfaction with hiring processes compared to any other region in Southeast Asia. In contrast, 59% of jobseekers in Thailand said they were satisfied, followed by 50% in Singapore, and 45% in Indonesia. This low level of satisfaction can lead to a low level of loyalty by employees. Consequently, the companies may suffer from high turnover rates since their recruitment and selection process was not done appropriately.

H1: Recruitment and selection has a significant and positive relationship on the organizational loyalty of employees in Malaysia.

Training and Development

The goal of training is to improve the performance and behavior of an employee. Given that the range of skills and tasks needed nowadays are complex, the development of a comprehensive training program is crucial for organizations. Training increases an employee' capabilities which is paramount in ameliorating the performance of an organization (Millar and Stevens, 2012). Moreover, Watson and D'Annunzio-Green (1996) stated that well-designed training programs make an essential contribution as it increases employee commitment and satisfaction. Additionally, according to Montgomery (2006), training and development programs can increase employee retention when they meet the needs of the employees. Meeting employee needs through well-designed training programs occur when the information provided is perceived as applicable, useful and desirable by the employees. Thus, a proper training and development program helps create an urge among employees to stay in the organization for a longer period. When employees of an organization are trained and developed properly, they will feel a higher sense of commitment and loyalty towards their organization. This will therefore increase the loyalty that employees have towards the organization.

H2: Training and development has a significant and positive relationship on the organizational loyalty of employees in Malaysia.

Performance Appraisal

An appraisal consists of an unbiased assessment of a worker's performance combined with a series of actions taken to enhance the performance of the employee (Osman et al., 2011). While performance appraisal is a vital task that superiors must carry out, supervisors admit that it is not easy to carry the task out adequately. That is because it can be quite tricky to judge a worker's performance accurately and in a constructive way. Managing the performance of a workforce is an essential part of an organization and reflects how well the organization manages its employees (Meyer and Kirsten, 2005). It is worth noting that inaccurate performance appraisals can lead to several problems such as low morale and decreased employee productivity. In addition, according to a previous study by Clarke (2015), elevated satisfaction levels on performance management is negatively correlated with the turnover rate of a company. The study found that if employees are satisfied with the way in which the performance evaluation is performed, this will lead to a decrease in turnover rate. Consequently, this shows that a well-designed performance appraisal system can increase the satisfaction of an employee, reduce employee turnover and as such, this will help to increase an employee's organizational loyalty.

H3: Performance appraisal has a significant and positive relationship on the organizational loyalty of employees in Malaysia.

Compensation and Rewards

Reward represents anything that the workforce may value and that the management is willing to offer in return for their contributions (Chiang and Birtch, 2008). Rewards does not mean pay and employee benefits only. It also includes non-financial rewards such as recognition and increased job responsibility. Additionally, remuneration and recognition given to a company's workforce will also influence their willingness to stay in an organization and it is worth noting that a well-designed reward system can be a source of work satisfaction, high performance and loyalty among employees in an organization (Parker and Wright, 2000). Moreover, Tu et al. (2016) found that a rise in pay had a substantial impact on workforce turnover rate and that the impact is even more significant on high performers. High-performing employees who are offered substantial pay increases will have a lower tendency to quit their firm. This will help reduce the turnover rate of an organizations and as such, if employees are rewarded adequately, they will feel a strong sense of loyalty towards their organization. Furthermore, according to Hasibuan (2013), compensation helps to increase the employee loyalty and interest to the company. This claim is corroborated by Anantadjaya et al. (2015) who stated that employee loyalty is indeed affected by compensation. In addition, Manurung (2017) also claimed a proper compensation and reward system will make the employee loyal to the company and increase their contribution and productivity. Thus, the explanation above shows that the compensation and rewards is closely related to the creation of employee's loyalty. In crux, the fairer and just an employee is compensated and rewarded, the higher will be his/her organizational loyalty to the company.

H4: Compensation and rewards has a significant and positive relationship on the organizational loyalty of employees in Malaysia.

Organizational loyalty of employees

According to Organ et al. (2006), organizational loyalty is defined as promoting the organization to outsiders and remaining committed to the company even under adverse conditions. According to Keiningham and Aksoy (2009), the long term success of any organization depends heavily on the loyalty and the quality of its employees. Being loyal to a company is a notion that organizations are clearly aware of, if not envious of this elusive attribute. When employee loyalty exists in a company, it will help sustain the organization long enough for these companies to achieve the objectives that they have set for themselves. This is because a loyal workforce provide long-term stability to their firms as they remain committed to ensure that they work assiduously towards goal attainment. Past literature such as El Saghier et al. (2015) revealed that employee loyalty can be increased through the successful accomplishment of HRM Practices. Their study found training and development, performance appraisal, compensation and selection all significantly help determine employee loyalty. Thus, El Saghier et al. (2015) concluded that HR Practices show positive and significant effects on employee loyalty. This claim has been corroborated by Uzair et al. (2017) who proved that HRM Practices does indeed have a positive relationship with job satisfaction as well as employee loyalty and commitment. Uzair et al. (2017) discovered that employees recognize the importance of performance appraisal, compensation, selection and training and development when giving their opinion on their loyalty towards their companies. Their findings showed that a company's workforce is concerned with all these aspects as depicted by the close relationship between their independent variable (human resource practices) and dependent variables (employee loyalty and commitment). Hence, Uzair et al. (2017) concluded that performance appraisal, compensation, selection and training and development all significantly help in determining an employee's loyalty and commitment.

Conceptual Framework
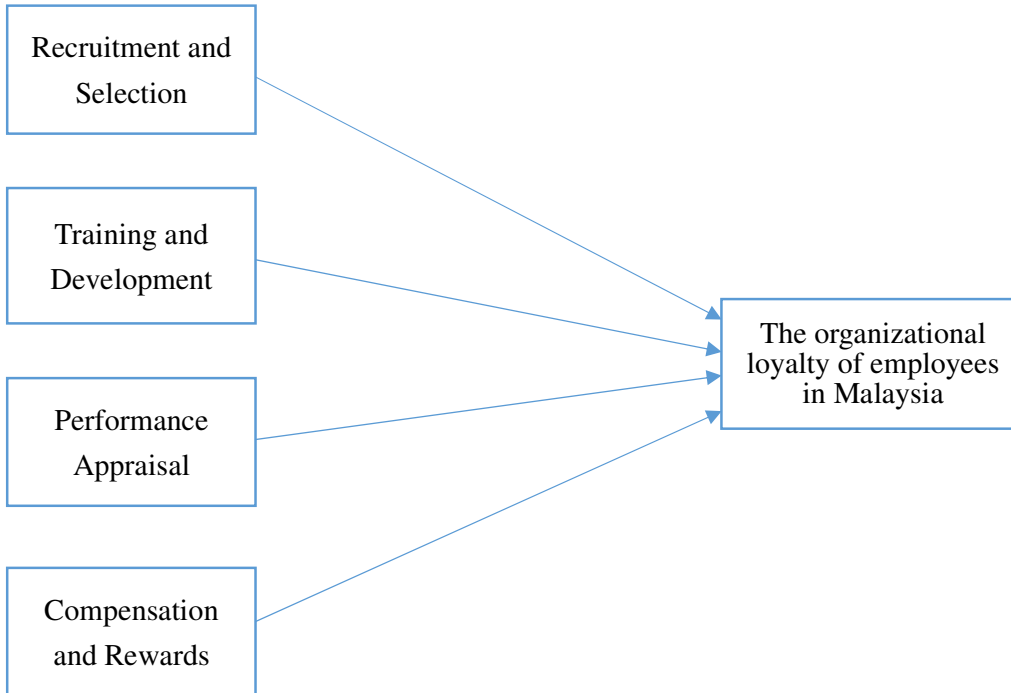
Figure 1: Conceptual Framework of the Study

METHODOLOGY

The population of this study is defined as all employees working in organizations in Malaysia which are listed and licensed as operational on Bursa Malaysia's main market (Kuala Lumpur Stock Exchange). The authors chose organizations listed on Bursa Malaysia Exchange as the population of study because the companies are mostly large organizations that already have a human resource management system in place as well as a dedicated human resource department. The findings of this study will benefit these companies the most. Moreover, the companies listed on Bursa Malaysia Exchange are from different industries. For example, the telecommunication industry (Maxis, Digi), food and beverage industry (Nestlé, Dutch Lady) and finance industry (Maybank, CIMB Bank). Therefore, the findings of our study will not be geared towards one industry only. Instead, the findings will be well-rounded. The researchers used questionnaires to gather the primary data, which was done by distributing them to the respondents online by using google form links. There are two main parts of the questionnaire, part A and part B. Part A contains 6 items about the respondents' profile and demographic information whereas part B contains 25 items comprising of 5 items for each variables which are recruitment and selection, training and development, performance appraisal, compensation and rewards and the organizational loyalty of

employees. The part B of the questionnaire consists of items that use the Likert Scale with 5-points where 1 represents "strongly disagree" and 5 represents "strongly agree".

Before distributing the questionnaires to the actual sample, the researchers carried out a pilot test whereby 30 questionnaires were distributed randomly to employees in the Cheras area. The respondents had to fill an additional section in the pilot testing named "Pilot Study Evaluation Form" where they had to give their feedback on whether the instructions and questions were understandable and clear and whether they have any suggestions on how the researchers can improve this questionnaire. Then, based on the comments of the 30 respondents, the researchers made some minor changes to the items in the questionnaire so as to make it simpler in terms of language in an attempt to minimize confusion among respondents. After the pilot study had been conducted, the researchers started the actual data distribution and collection process. The researchers sent the updated questionnaires via an email link to 400 random public listed companies on the Bursa Malaysia Exchange website. The researchers requested the companies to distribute the questionnaire link to at least 3 random employees in their organization and have them fill up the questionnaire.

The data distribution and collection lasted a period of 3 weeks. Responses that are incomplete are considered invalid and rejected. After the researchers eliminated the invalid questionnaires, a total of 432 questionnaires were usable for this study. This number exceeded the minimum sample requirement of 384 needed for this study. Next, all of the data that was collected was converted into information and then, a demographic analysis was conducted. Moreover, Cronbach's Alpha was also be used to test for the reliability of the data and Pearson's Correlation method was used to test for the correlation between the independent variables and the dependent variable which will be shown in the next section of this research paper.

DATA ANALYSIS AND DISCUSSION

Respondents' Demographic Analysis

Among the 432 responses collected, 198 (45.8%) were male and 234 (54.2%) were female. In terms of ethnicity, the majority of respondents were Malays with 205 (47.5%) responses, followed by 185 (42.8%) Chinese respondents and 42 (9.7%) Indian respondents. Next, the highest number of respondents is from the age group of "26-35 years" with 201 (46.5%) responses, followed by the "36-45 years" category which consist of 114 (26.4%) respondents, then 65 (15%) from the age group of "25 years and below". 40 (9.3%) of the respondents were from age group of "46-55 years". Lastly, only 12 (2.8%) of the respondents were from age group of "56 years and above". In addition, more than half of the respondents' highest education level was a Bachelor's degree 239 (55.3%). Next, 132 (30.6%) of the respondent's highest education level was a Master's degree. This was followed by 42 (9.7%) respondents who had a Diploma and 19 (4.4%) respondents who had a PhD. Furthermore, the majority of the respondents 172

(39.8%) received a salary ranging from RM3000 to RM3999 followed by 118 (27.3%) respondents who receive a monthly income of between RM2000-RM2999. The third group of respondents 78 (18.1%) receives a monthly income of RM4000-4999. This was followed by 60 (13.9%) respondents who receives RM5000 and above monthly. Lastly, only 4 (0.9%) respondents received RM1000-RM1999 as income monthly. Moreover, the majority of the respondents have worked exactly 2 years to less than 3 years at their current organization 117 (27.1%). This was followed by 112 (26%) respondents that have worked for exactly 1 year to less than 2 years at their current company. Next, 96 (22.2%) respondents have worked exactly 3 years to less than 5 years at their current organization. The fourth category of the respondents 55 (12.7%) have worked less than 1 year at their current company and lastly only 52 (12%) respondents have worked 5 years and above at their current organization.

Table 1: Summary of the respondents' demographic information

Demographic		Frequency (n)	Percentage (%)
Gender	Male	198	45.8%
	Female	234	54.2%
Ethnicity	Malay	205	47.5%
	Chinese	185	42.8%
	Indian	42	9.7%
Age Group	25 years and below	65	15%
	26-35 years	201	46.5%
	36-45 years	114	26.4%
	46-55 years	40	9.3%
	56 years and above	12	2.8%
Education Level	Diploma	42	9.7%
	Bachelor's Degree	239	55.3%
	Master's Degree	132	30.6%
	PhD	19	4.4%
Monthly Income	RM1000 - RM1999	4	0.9%
	RM2000 - RM2999	118	27.3%
	RM3000 - RM3999	172	39.8%
	RM4000 - 4999	78	18.1%
	RM5000 and above	60	13.9%
Length Of Work at	Less than 1 year	55	12.7%

Current Organization	Exactly 1 year to less than 2 years	112	26%
	Exactly 2 years to less than 3 years	117	27.1%
	Exactly 3 years to less than 5 years	96	22.2%
	5 years and above	52	12%

Reliability Analysis

Cronbach's Alpha coefficient is used in this research to test for reliability of the data. In order for the scales to be reliable and accepted, Nunnally (1978) recommends a minimum level of 0.7 for the Cronbach's alpha value. For items that have a Cronbach's Alpha value of below 0.7, they are considered unreliable and therefore, cannot be accepted as stated by the rule of thumb of George and Mallery (2003). As shown in Table 2, the variables in this study have a Cronbach's Alpha value ranging from 0.721 to 0.918, which exceeds the minimum requirement proposed by the previous researchers such as Nunnally (1978). The dependent variable "Organizational Loyalty of Employees in Malaysia" has the highest Cronbach's Alpha value of 0.918 followed by the independent variable "Training and Development" with a Cronbach's Alpha value of 0.902. Both of these variables have a value of more than 0.9, which are considered excellent. In addition, the independent variables "Compensation and Rewards" and "Performance Appraisal" have a Cronbach's Alpha value of 0.883 and 0.819 respectively which are considered good. Lastly, the independent variable "Recruitment and Selection" has a Cronbach's Alpha value of 0.721 which is considered acceptable. These results are summarized in the table below.

Table 2: Summary of the Reliability Test (Cronbach's Alpha)

Variables	N of Items	Cronbach's Alpha	Results
Recruitment and Selection	5	0.721	Reliable
Training and Development	5	0.902	Reliable
Performance Appraisal	5	0.819	Reliable
Compensation and Rewards	5	0.883	Reliable
Organizational Loyalty of Employees in Malaysia	5	0.918	Reliable

Hypothesis Testing and Discussion

To test the hypotheses, a Pearson's Correlation test was used. This test determines the degree to which two variables are associated. Values that are close to 1 indicates a strong relationship whereas values that are close 0 shows a weak correlation between the variables (Vignaswaran, 2008). The first hypothesis (H1) of the study was that "Recruitment and selection has a positive and significant relationship on the organizational loyalty of employees in Malaysia." The findings revealed that H1 is accepted. The values depicted in the table 3 shows that the Pearson Correlation Coefficient is 0.570 and it is significant at 0.000. This represents a significant level of relationship between "Recruitment and Selection" and "Organizational Loyalty of Employees in Malaysia". The relationship strength between "Recruitment and Selection" and "Organizational Loyalty of Employees in Malaysia" is positive and the level of relationship strength is moderate since the Pearson Correlation Coefficient value falls between 0.40 and 0.59. The researchers' findings is reinforced with the findings of previous researchers such as El Saghier et al. (2015) who found that there is indeed a positive and significant relationship between the independent variable "Employees Selection" and the dependent variable "Employee Loyalty". As reported by El Saghier et al. (2015), "Employees Selection" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.5. Furthermore, the researchers' findings has also has been corroborated by Uzair et al. (2017) who found that there is a positive and significant relationship between the independent variable "Recruitment and Selection" and the dependent variable "Employee Loyalty". As reported by Uzair et al. (2017), "Recruitment and Selection" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.433.

The second hypothesis (H2) of the study was that "Training and Development has a positive and significant relationship on the organizational loyalty of employees in Malaysia". The findings revealed that H2 is accepted. The values depicted in the table 3 shows that the Pearson Correlation Coefficient is 0.672 and it is significant at 0.000. This represents a significant level of relationship between "Training and Development" and "Organizational Loyalty of Employees in Malaysia". The relationship strength between "Training and Development" and "Organizational Loyalty of Employees in Malaysia" is positive and the level of relationship strength is strong since the Pearson Correlation Coefficient value falls between 0.60 and 0.79. The researchers' findings is reinforced with the findings of previous researchers such as El Saghier et al. (2015) who found that there is indeed a positive relationship between the independent variable "Employees Training" and the dependent variable "Employee Loyalty". As reported by El Saghier et al. (2015), "Employees Training" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.5. This showed that there is a significant relationship between "Employees Training" and "Employee Loyalty". Furthermore, the researchers' findings has also has been corroborated by Uzair et al. (2017) who found that there is a positive relationship between the independent variable "Training" and the dependent variable "Employee Loyalty". As reported by Uzair et al. (2017), "Training" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.468.

The third hypothesis (H3) of the study was that "Performance Appraisal has a positive and significant

relationship on the organizational loyalty of employees in Malaysia." The findings revealed that H3 is accepted. The values depicted in the table 3 shows that the Pearson Correlation Coefficient is 0.737 and it is significant at 0.000. This represents a significant level of relationship between "Performance Appraisal" and "Organizational Loyalty of Employees in Malaysia". The relationship strength between "Performance Appraisal" and "Organizational Loyalty of Employees in Malaysia" is positive and the level of relationship strength is strong since the Pearson Correlation Coefficient value falls between 0.60 and 0.79. The researchers' findings is reinforced with the findings of previous researchers such as El Saghier et al. (2015) who found that there is indeed a positive relationship between the independent variable "Performance Appraisal" and the dependent variable "Employee Loyalty". As reported by El Saghier et al. (2015), "Performance Appraisal" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.5. This showed that there is a significant relationship between "Performance Appraisal" and "Employee Loyalty". Furthermore, the researchers' findings has also has been corroborated by Uzair et al. (2017) who found that there is a positive relationship between the independent variable "Performance Appraisal" and the dependent variable "Employee Loyalty". As reported by Uzair et al. (2017), "Performance Appraisal" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.438.

The fourth hypothesis (H4) of the study was that "Compensation and Rewards has a positive and significant relationship on the organizational loyalty of employees in Malaysia." The findings revealed that H4 is accepted. The values depicted in the table 3 shows that the Pearson Correlation Coefficient is 0.826 and it is significant at 0.000. This represents a significant level of relationship between "Compensation and Rewards" and "Organizational Loyalty of Employees in Malaysia". The relationship strength between "Compensation and Rewards" and "Organizational Loyalty of Employees in Malaysia" is positive and the level of relationship strength is very strong since the Pearson Correlation Coefficient value falls between 0.80 and 1.00. The researchers' findings is reinforced with the findings of previous researchers such as El Saghier et al. (2015) who found that there is indeed a positive relationship between the independent variable "Compensation" and the dependent variable "Employee Loyalty". As reported by El Saghier et al. (2015), "Compensation" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.5. This showed that there is a significant relationship between "Compensation" and "Employee Loyalty". Furthermore, the researchers' findings has also has been corroborated by Uzair et al. (2017) who found that there is a positive relationship between the independent variable "Compensation" and the dependent variable "Employee Loyalty". As reported by Uzair et al. (2017), "Compensation" is moderately correlated with "Employee Loyalty" and has a Pearson Correlation Coefficient (r) of 0.456.

Table 3: Summary of the Pearson's Correlation Test

Hypotheses	Results			Conclusion
	P-Value	Strength (r)	Direction	
H1: Recruitment and selection has a positive and significant relationship on the organizational loyalty of employees in Malaysia.	0.000	0.570	Positive	Accepted
H2: Training and development has a positive and significant relationship on the organizational loyalty of employees in Malaysia.	0.000	0.672	Positive	Accepted
H3: Performance appraisal has a positive and significant relationship on the organizational loyalty of employees in Malaysia.	0.000	0.737	Positive	Accepted
H4: Compensation and rewards has a positive and significant relationship on the organizational loyalty of employees in Malaysia.	0.000	0.826	Positive	Accepted

CONCLUSION AND RECOMMENDATIONS

The aim of this research is to analyze the impact that human resource management (HRM) practices have on the organizational loyalty of employees in Malaysia. The findings revealed that all four independent variables – recruitment and selection, training and development, performance appraisal and compensation and rewards – have a positive and significant relationship on the dependent variable "organizational loyalty of employees in Malaysia". This fact has been demonstrated with a Pearson's Correlation test and the results are shown in table 3. The implications of this study is that the findings and results of this research will benefit and assist companies in Malaysia by acting as a guidance tool so that organizations in Malaysia can reshape their human resource management practices accordingly in order to increase their employees' loyalty. Consequently, companies in Malaysia will be able to reduce the turnover rate of their employees which will save the organizations from having to spend additional costs on recruitment and staffing of new employees. Concerning recommendations, future researchers could widen the population sample and location to gain a better coverage. A wider geographic coverage such as South-East Asia as opposed to only one country and a bigger population sample could help researchers in yielding more comprehensive results. Moreover, while conducting research on this topic, future researchers can extend the period of data distribution and collection to at least two months in order to maximize the number of replies from respondents. This would help future researchers get a larger quantity of responses and

consequently, a more in-depth data analysis can be conducted. Furthermore, future researchers can include other independent variables while conducting research on the same topic. Researchers can use independent variables such as employee participation (Quresh et al., 2010), job security (Aleem et al., 2012) and career planning (El Saghier et al., 2015) when considering human resource management practices as the independent variable so as to know the extent to which these factors affect the organizational loyalty of employees. Therefore, by considering these variables, future researchers will be able to develop a more enhanced and extensive research that could lead to more outcomes and results and on this topic.

Reference List:

1. Aityan, S.K. and Gupta, T.P.K. (2012), "Challenges of employee loyalty in corporate America", Business and Economics Journal, Vol. 3, BEJ-55, pp. 1-13.

2. Anantadjaya, S. P., Nawangwulan, I. M., Setio, Y. B., and Koswara, C. K. (2015). Does The Image of Indonesian Contemporary Artist Matter? A Theoritical Review on Personal Diversity, Brand Image, Market Acceptance & Market Opportunity. Independent Journal of Management & Production, 6(2), 378-422.

3. Aon Hewitt Malaysia Press Release. (2016). Retrieved from https://apac.aonhewitt.com/home/about/media-room/press-releases/october-november-2016

4. Aon Hewitt Malaysia Press Release. (2017). Retrieved from https://apac.aonhewitt.com/home/about/media-room/press-releases/november-2017

5. Bogatova, M. (2017). Improving Recruitment, Selection and Retention of Employees: Case of Dpointgroup Ltd. South-Eastern Finland University of Applied Sciences.

6. Chiang, F. F. T. and Birtch, T. A., 2008. Achieving task and extra-task-related behaviors: a case of gender and position differences in the perceived role of rewards in the hotel industry. International Journal of Hospitality Management, 27, pp. 491-503.

7. Clarke, M. (2015), Dual careers: The new norm for gen Y professionals? Career Development International, 20(6), 562-582.

8. Danish, R.Q. and Usman, A. (2010), "Impact of reward and recognition on job satisfaction and motivation: an empirical study from Pakistan", International Journal of Business and Management, Vol. 5 No. 2, pp. 159-167.

9. De Cieri, H., Kramar, R., Noe, R.A., Hollenbeck, J., Gerhart, B. and Wright, P. (2008), Human Resource Management in Australia. Strategy/People/Performance, 3rd ed., McGraw-Hill Irwin, Sydney.

10. Dessler, G. (2007), Human Resource Management, 11th ed., Prentice-Hall, Englewood Cliffs, NJ.

11. Edgar, F. and Geare, A. (2005), "HRM practices and employee attitudes: different measures – different results", Personnel Review, Vol. 34 No. 5, pp. 534-549.

12. El Saghier, N., Wahba, L., & Abdel Aziz, R. (2015). The Effect of Human Resources Management Practices on Employees' Loyalty. Internal Journal of Humanities Social Sciences and Education, 2(4), 66-75.

13. Ferris, G.R., Berkson, H.M. and Harris, M.M. (2002), "The recruitment interview process: persuasion and organization reputation promotion in competitive labor markets", Human Resource Management Review, Vol. 12 No. 3, pp. 359-375.

14. George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon.

15. Hasibuan, S. P. (2013). Manajemen Sumber Daya Manusia. Jakarta: PT. Remaja Rosdakarya.

16. Katou, A. (2008), "Measuring the impact of HRM on organisational performance", Journal of Industrial Engineering and Management, Vol. 1 No. 2, pp. 119-142.

17. Keiningham, T. L., & Aksoy, L. (2009). Why loyalty matters: The groundbreaking approach to rediscovering happiness, meaning, and lasting fulfillment in your life and work.

18. Malaysian candidates not satisfied with recruitment process. (2014, November 26). Retrieved from http://mystarjob.com/articles/story.aspx?file=/2014/11/26/mystarjob_news/20141126182358&sec=mystarjob_news

19. Maloney, T. (2013). Build Loyalty To Reduce Employee Turnover. The Manager (May 2013).

20. Manurung, S. P. (2017). The Effect of Direct and Indirect Compensation to Employee's Loyalty: Case Study at Directorate of Human Resources in Pt Pos Indonesia. Journal of Indonesian Applied Economics, 7(1), 84-102

21. Meyer, M. and Kirsten, M. (2005), Introduction to Human Resource Management, New Africa Books (Pvt) Ltd, Claremont, CA.

22. Millar, P. and Stevens, J. (2012), "Management training and national sport organization managers: examining the impact of training on individual and organizational performances", Sport Management Review, Vol. 15 No. 3, pp. 288-303.

23. Mohsan, F., Nawaz, M., Khan, M., Shaukat, Z. and Aslam, N. (2011), "Are employee motivation, commitment, and job involvement inter-related: evidence from banking sector of Pakistan", International Journal of Business and Social Science, Vol. 2 No. 17, pp. 226-233.

24. Montgomery, J.D. (2006), The relationship between training and retention in a volunteer organization. PhD Dissertation, Auburn, Alabama: Auburn University. Pg72-77

25. Nunnally, J.C. (1978). Psychometric Theory, McGraw-Hill, New York, NY.

26. Oladipo, J. A., & Abdalkader, D. S. (2011). Strategic Human Resource Management and Organizational organizational commitment. Human Relations, 40(7), 445-70.

27. Organ, D.W., Podsakoff, P.M. and MacKenzie, S.B. (2006), Organizational Citizenship Behavior: Its Nature, Antecedents, and Consequences, Sage, Beverly Hills, CA.

28. Osman, I., Berbary, L., Sidani, Y., Al-Ayoubi, B. and Emrouznejad, A. (2011), "Data envelopment analysis model for the appraisal and relative performance evaluation of nurses at an intensive care unit", Journal of Medical Systems, Vol. 35 No. 5, pp. 1039-1062.

29. Page, M. (2015). Employee Intentions Report in Malaysia 2015. Retrieved from https://www.michaelpage.com.my/sites/michaelpage.com.my/files/2015_Malaysia_Employee_Intentions_Report_Final.pdf

30. Parker, O. and Wright, L. (2000), "Pay and employee commitment: the missing link", Ivey Business Journal, Vol. 65 No. 1, pp. 70-79.

31. Pfeffer, J. (1994). Competitive Advantage Through people. Harvard Business School Press, Boston.

32. Quresh, T. M., Akbar, A., Khan, M., Sheikh, R. A., & Hijazi, S. (2010). Do human resource management practices have an impact on financial performance of banks?

33. Salleh, L., Samah, B., & Anwar, M. (2017). Leader Attributes and Effect on Loyalty Among Malaysian Generation Y Public Administrators. Malaysian Institute of Management, 52(1).

34. Schwartz, S.H. (1999), "A theory of cultural values and some implications for work", Applied Psychology: An International Review, Vol. 48 No. 1, pp. 23-47.

35. Tu, Y., Lu, X., Yu, Y. (2016), Supervisors' ethical leadership and employee job satisfaction: Asocial cognitive perspective. Journal of Happiness Studies J Happiness Studies, 1-17.

36. Uzair, M., Razzaq, W., & Sarfraz, M., Nisar, Q. A. (2017). Impact of HR Practices on Employee loyalty and commitment: Mediating role of Job satisfaction. International Journal of Management Excellence, 9(2), 1067

37. Vance, R. (2006), Employee Engagement and Commitment. A Guide to Understanding, Measuring and Increasing Engagement in your Organization, SHRM Foundation, Virginia.

38. Walker, J. (2001). Control and the Psychology of Health, Open University Press, Philadelphia.

39. Watson, S. and D'Annunzio-Green, N. (1996), "Implementing cultural change through human resources: the elusive organization alchemy?", International Journal of Contemporary Hospitality Management, Vol. 8 No. 2, pp. 25-30.

INTERNSHIP PROGRAM EFFECTIVENESS: A JOB OPPORTUNITY

Chan, J.M., Yeap, J.M., Taahir, A.B., *Mohd Remie, M.J.
UCSI University, Kuala Lumpur, Malaysia

ABSTRACT

Internship is increasingly become an essential component of undergraduate program in higher education. It provides students with many benefits such as enhancing valuable working experience, increasing job performance, strengthening their interpersonal skills as well as establishing a professional network in order to assist them to have a higher chance in getting job upon graduation. This main purpose of this study was conducted to examine the relationship between internship factors with university graduates' job opportunity. In order to answer the research questions, a quantitative research method was chosen and online survey has been carried out. Person Product Moment Correlation has been conducted to explain the relationship between dependent and independent variables in this research. The results of this study imply that the four factors; working experience, performance, interpersonal skills and social network has a significant relationship with job opportunity. This indicates that students who emphasized and equipped with this four variables could increase their chances of getting job after complete their education.

Keywords: Internship, Job Opportunity, Working Experience, Performance, Interpersonal Skills, Social Network

RESEARCH BACKGROUND & PROBLEM

Internship represents a method of on-job training for students. From the perspective of students, they might get an overview of the working environment after they start their working career. On the other hand, from the perspective of companies, they may see this as an opportunity to look for talents which may help in growing their companies. According to National Association of Colleges and Employers Survey, there are 63.1% of college graduates with paid internship, 37% of college graduates with unpaid internship, while 35.2% of college graduates with no internship experience have received their job offers (Rebecca, 2013). This shows that college graduates with internship experience would have more opportunity to get a job offer compared to those with no internship experience. Most of the universities are now encouraging students to have internship in a company before graduate and some of the universities set it as a part of their studies before the students complete their programs. According to Lisa Katz (2014), there are some benefits to work internship in a company. For example, when company assign the interns with real work assignments, the interns may learn from practically instead of theory from book. Moreover, the best significant benefit from internship would likely be offering a "full-time-job-access" from the company as they already have an insight on the intern's ability. So, the company may save cost to prevent a failed hire of employee (Aimee, 2016). The internship program can helps students make connections between theories and practices that will provide them with new insights in education. However, there are some

problems such as short internship period, low allowance and internship less valuable may exist and might be the obstacles for interns.

Short Internship Period

Most of the companies require a minimum three months of internship period. In the study conducted by Muhamad, Yahya, Shahimi and Mahzan (2009), they reported that the internship duration of ten to twelve weeks were insufficient for interns to learn and gain the required knowledge. Most of the interns preferred to have six to nine months of internship period instead of three months (Mihail, 2006). This indicated that majority of interns believe that they can gain more working experience and knowledge in a longer internship period. A case study by Prof. Anand Narasimha (2013), reported that longer duration internship enhance employability, by creating industries readiness and are more meaningful for both interns and companies. Besides, intern's skill development process can be accelerated and employers will have more time to evaluate the interns as prospective employees (Mihail, 2006). A longer internship period can assist interns to build up relationship with the employees.

Low Allowance

In year 2014, there is a growing number of interns looking to sue companies for an unpaid internship. In fact, unpaid internships are unlawful in Europe countries including the UK and the US (Tucker, 2014). However, there is no legislation stated that unpaid internships to be unlawful in Malaysia (Chai, 2014). Recent year, most of the universities offer a comprehensive paid internship program in variety of fields, but the range of intern salaries paid by those companies are insufficient for subsistence (Chai, 2014). Based on 210 survey reports submitted to Glassdoor from intern employees in Kuala Lumpur areas, the average intern salaries in Kuala Lumpur, Petaling Jaya, Damansara, and Cyberjaya were around RM800 – RM1,000 while average intern wages in Shah Alam, Seri Kembangan and Bandar Baru Sri Petaling were only around RM300 – RM600 (Glassdoor, 2016). Most of the well-known companies are located in the business centre of Kuala Lumpur, even in most conservative estimate, it is not surprising that the monthly cost of living would exceed RM 800 – RM 1000 (Chai, 2014). Moreover, in a survey conducted by the European Youth Forum, they have found that only 25% of all interns were able to maintain their living with the compensation they get, and a staggering 65% of the interns still relied on the financial support from parents to survive throughout the internship (Chai, 2014).

Internship Less Valuable

Normally, interns hope to receive monetary rewards and be treated as a regular employee. However, employers are not willing to treat interns as regular employees and thus usually assign duties that are more suitable for college students (Hall *et al.*, 1995). Since intern is the bottom level of employee totem pole, some interns may only doing menial tasks all day long such as making photocopies, answering phone calls and perhaps preparing coffee (Guerrero, 2013). Thus, interns felt they were only low-cost workers and distorted their work values (Chen *et al*., 2011). Sometimes, interns do not appreciate the value of internship program because their work are not appreciated by the company. The short internship period, low allowance and internship less valuable that we described in the text could affect the intern

working experience, performance, interpersonal skills and social network while they are seeking job opportunity once they are graduated from university. Thus, in this study, we would like to investigate the relationship between all these factors with job opportunity and hopefully can provide a new insight into the current internship scheme to better improve the interns' internship experience, while in the same time, bring a maximum benefit to the company that offer the internship programme to the interns.

Research Objectives

1. To investigate the relationship between intern working experience and job opportunity.
2. To identify the relationship between intern performance and job opportunity.
3. To determine the relationship between intern interpersonal skills and job opportunity.
4. To explore the relationship between intern social network and job opportunity.

Significance of study

The main purpose of this research is to provide a better understanding on the factors such as individual working experience, performance, interpersonal skills and social network during internship programs on graduates' future job opportunity. Besides, this research is also helpful to all the students towards exploring the benefits of internship program, where it is not only serve as an education enhancement but also may increase their job opportunity when they finished their undergraduate program. Internship program provide a good platform for students to have a real life working experience. Moreover, it also serve as a platform for students to gain working experience, skills and knowledge during the internship. Through this research, we hope it may change the attitudes or perspective of students toward internship program.

LITERATURE REVIEW

Job Opportunity

Job opportunity can be interpreted as a chance for employment or promotion or simply said as a chance to get a job. In most of the countries, students will try to search for summer jobs during the long summer vacation while students who enrolled in higher education would try to apply for internships (Forrest Recruitment, 2016). In the study of Bratberg and Nilsen (1998, pp.1-29), they found that doing internships seems to shorten the period of job searching after graduation as compare to person at the same educational level who have not undergone the internship. This indicated students who doing internship have a greater opportunity in getting a job upon graduation. Nevertheless, unemployment among the fresh graduates has become an issue in the society. According to The Department of Statistic Malaysia published in 2016, the average unemployment rate in Malaysia was 3.25 percent from 1998 until 2015, whereas the highest rate has reached 4.50 percent in March 1999 and the recorded lowest rate was 2.70 percent in August 2012. However, the unemployment rate in recent year has slightly decrease from 3.3 percent in 2014 to 3.1 percent in 2015. Although the rate only show a small reduction, the unemployment issue is still an issue in the society and it will still cause some anxieties in the fresh graduates when looking for job after their graduation.

Internship

According to Lam and Ching (2007), internship is a bridge between academic learning process and the reality of working environment. According to Beggs, Ross, and Goodwin (2008), internship program provide learning opportunities for students to experience the professional practice and activities in the real working environment. Moreover, it serves as a platform for student to associate their academic knowledge into real life job application. Most public and private universities in Malaysia required undergraduates to participate in internship program in order to help them obtain practical working experiences, to apply the theoretical knowledge they have learned in university and prepare for their future careers. Generally, most of the universities and colleges has a fix certain amount of credit hours for internship in student's study progression (Michael, 2002).

Interns Working Experience

Working experience can be defined as the experience that a person obtains while working in a particular type of job. Lerner (1988) stated that internship can assist students to obtain working experience in a particular areas of career and eventually increase their potential to have a successful career in the future. Collin and Tynjala (2003) noted that working experience that gained through the internship program will give a credible means for softening the reality shock of transitioning from the world of academics to the working world. On the other hand, a bad internship experience could cause students to change their work value and ultimately the career path (Fox, 2001 as cited in Chen *et al*., 2011). In addition, the study of Rigsby, Addy, Herring, and Polledo (2013) on the usefulness of internship experience to job opportunities among 96 interns in three of the Big 4 accounting firms has concluded that internship experience is useful for students in getting job offers because employing firms highly value internship experiences, which enhance the job opportunities among students with internship as compare to non-interns. This indicated that internship experience is crucial for students in securing future career opportunities. A longer period of internship enables students to gain more working experience. However, only good and valuable internship experiences are beneficial to students and assist them to be successful in their careers.

H1: There is a significant relationship between intern working experience and job opportunity.

Interns Performance

Performance can be defined as the act of completing a task given by the employer with standards of accuracy, completeness and speed (Web Finance Inc, 2016). However, interns' performance could be important factors as good performance may lead to high productivity which helps to increase the reputation of the organization (Wu, 2014). According Steve Cohen's research, students who participate in internship could have earned experience with professional written communication such as abstract, paper and also proposal. Moreover, internship could enhance student's presentation skills by learning and experience presentation during conference at workplace (Steve, 2014). This could help a lot for students as most of their study specifically on completing assignment and preparing presentation. With better assignment and presentation score, it may help to boost up student's academic grades in order to get a

better job opportunity. In addition, good grade of performance appraisal during internship could be an advantage on their interview and even a plus point for their favourite job. Therefore, the performance of interns could affect their job opportunity greatly.

H2: There is a significant relationship between intern performance and job opportunity.

Interns Interpersonal Skill

Interpersonal skills can be defined as the ability of a person to communicate cooperatively in groups, either verbal or non-verbal. (Gardner, 1983 as cited in Suhaimi, Marzuki and Mustaffa, 2014). In today's job market, having technical skills is insufficient, thus, employees have to show their abilities and interpersonal skills to fit with the organizational culture. Employers often seek to hire people with strong interpersonal skills because they want employee who can work well in a team and able to communicate effectively with colleagues and customers. Internship is one of the ways that students can develop their interpersonal skills. Internships allow students to build interpersonal skills that are beneficial in the employment interview (Taylor, 1988). In addition, internships can show potential employers how students communicate with co-workers, supervisors and customers. In the study of Beard and Morton (1999) regarding the effects of internship predictors on successful field experience has suggested that interpersonal skill is one of the six important predictors of internship success. As a result, students who valued by employers and being treated fairly during internship would improve their interpersonal skills which eventually lead them toward a subsequent job opportunities and successful in future careers.

H3: There is a significant relationship between intern interpersonal skills and job opportunity.

Interns Social Network

Social network could be defined as an action of people with whom they interact on a regular basis which may influence our beliefs, decision and also behaviours (Matthew, 2010). With the opportunity of having internship in some organization, it provides a great prospect for the interns to have a higher chance to obtain the job opportunity in the organization when the interns have good relationship with the colleagues and superior. Social network become a necessary factors in our life, it could help us to go through the obstacles easily. For example, in the workplace, there will be a lot of things that we need to learn and do, with the help of social networking, we could get tutorial lesson from seniors which will lead us to handle the job in an easier way with less chance of error. Internship could be one of the platforms which allow the interns to expand their social network. After they expand their social network, it will greatly improve their job opportunity in their future career path.

H4: There is a significant relationship between intern social network and job opportunity.

Conceptual Framework
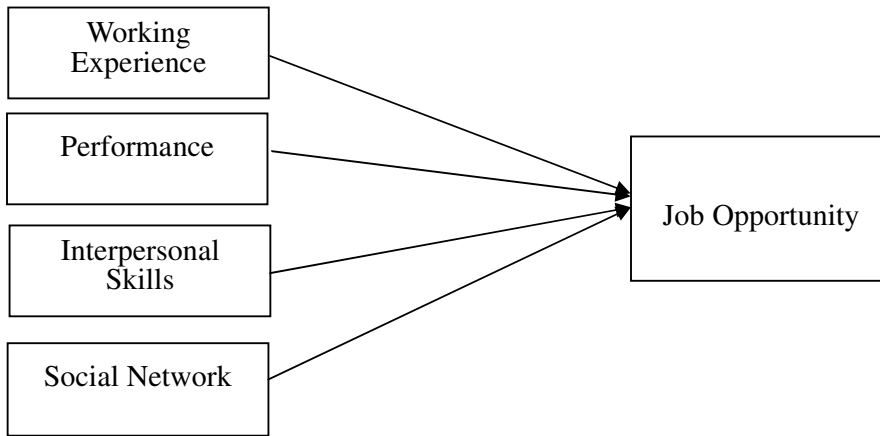
Figure 1: The Conceptual Framework

METHODOLOGY

This study focuses on the relationship between internship programs (interns' working experience, performance, interpersonal skills and social network) towards fresh graduates' job opportunity. The sampling frame of this study consisted of fresh graduates from both public and private universities in Klang Valley. By referring to the target population, a total of 1000 survey questionnaires was distributed to the population while 276 questionnaires from respondent were received and usable. This research was conducted by using online survey which is a self-administered questionnaire posted on a web site (Sirakaya-Turk, 2011). Google forms were used to develop the questionnaire. Survey through online platform can help to maximize the questionnaire coverage, easily to reach to the target respondents, and increase instant feedback delivery. Respondents can answer the questionnaire at their convenience time and location. A wide geographical area can be achieved through web survey. Furthermore, questionnaire distribution through online is able to validate the research samples have experienced in using internet. This study employed purposive judgmental methodology to conform target respondents to some criteria setting. Hence, a series of screening test will be conducted to the target respondents before online questionnaires were delivered to them. The questionnaire adapted in this study has been divided into Section A and B for statistical analysis. Section A is related to demographic background of respondents such as gender, age, ethnicity, educational level, and duration of internship which is measured by ordinal and nominal scales. Dependent and independent variables which are (I) Job opportunity, (II) Internship program, (III) Working experience, (IV) Performance, (V) Interpersonal skills, and (VI) Social network in Section B will be measured by likert-scales with five-point scale (1-strongly disagree to 5- strongly agree), which designed to examine how strongly subjects agree or disagree with the statements. These questions are asked to fulfil objectives and measurement for each variable. Pilot test is a pre-test for the questionnaire in a smaller number of respondents before the real data to be collected (Creswell, 2009).

The purposes of this pilot test are to identify the validity and reliability of the questionnaire and to determine the potential problems incurred. Thus, 50 respondents will be chosen randomly from the target population to carry out the pilot test and the feedbacks regarding to the overall questionnaire design will be collected. Hence, improvement for the questionnaires were made before distributing the questionnaires to the concrete target sample. Data analysis is a process of investigating raw data and draw conclusion of the information to make better decision (Rouse, 2008). In this research, data analysis will be conducted using IBM SPSS version 20. There are several data analysis method will be used in this research included pie chart, descriptive analysis, normality test, reliability analysis, and Pearson correlation coefficient.

DATA ANALYSIS AND DISCUSSION

Pilot testing
A total of 50 respondents from target population were selected to participate in this pilot test. The respondents who had involved in the pilot test are excluded from participating in the actual survey conducted after this.

Descriptive Analysis
In the research, there are only 276 respondents collected for data analysis due to the time constraint. The descriptive analysis encompassed gender, age, ethnicity, educational level, total internship program respondents had gone through with and total internship period.

Demographic Background of Respondents
Among the 276 respondents, 180 of them were female (65.22%). The number of female is almost double the number of male which is only 96 (65.22%). This indicated most of the respondents in this survey are female more than male. From the aspect of age, there are two separate age groups of respondents, which are 22-23 years old, and 24 years old and above. Most of the respondents in this survey fall in the group of age from 22-23 with an amount of 185 respondents (67.03%), and group of age 24 years old and above with an amount of 91 respondents (32.97%). This shows that most of the fresh graduates' age was between 22-23 years old. The majority number of respondents are Chinese ethic group which is 213 (77.17%), followed by Malay ethic group which is 35 (12.68%) and finally the lease number of respondents was Indian ethnic group which is only 28 (10.14%). From the aspect of educational level, majority of the respondents are Bachelor's Degree holder with an amount of 250 (90.6%) from the total number of 276 respondents in this survey. There are 23 respondents are diploma holder (8.3%) and only 3 respondents are master holders (1.1%). Moreover, the majority of the respondents which comprises of 124 (44.93%) have gone through with 1 time of internship program whereas 98 respondents (35.51%) had 2 times of internship experiences followed by 54 respondents (19.57%) had gone through with 3 times of internship program. Furthermore, most of the respondents had 2 to 3 months of internship experience which comprises of 166 (60.14%), followed by 75 respondents (27.17%) had 6 months or above internship experience, there are 35 respondents (11.59%) had gone through with 4 to 5 months of internship program and only 3 respondents (1.09%) gone through 1 month or less internship program.

Normality Test

There are two ways of assessing the normality test which are by assessing numerically and graphically (Testing for Normality using SPSS Statistics, 2013). In this research, descriptive statistics for all independent variables and dependent variable are generated, which concern on the skewness and kurtosis value of the summation scores of each variable. Skewness test is to measure the symmetry and the lack of symmetry (Measures of Skewness and Kurtosis, n.d.). The distribution or data set is symmetric when it looks the same to the left or right from the centre point. Kurtosis test is defined as a parameter that describes the shape of a random variable's probability distribution (Measures of Skewness and Kurtosis, n.d.).

Items (summation score)	Skewness		Kurtosis	
	Statistic	Stand. Error	Statistic	Stand. Error
Working experience	-0.623	0.147	0.216	0.292
Performance	-0.359	0.147	-0.255	0.292
Interpersonal skills	-0.739	0.147	0.439	0.292
Social network	-0.520	0.147	-0.085	0.292
Job opportunity	-0.406	0.147	-0.288	0.292

Table 4.1: Normality Test Results

Table 4.1 showed the results of Skewness and Kurtosis's statistic and standard error on variables. For independent variables, the summation score of working experience has a skewness value of -0.623 and kurtosis value of 0.216. For summation score of performance, shows that the skewness value of -0.359 and kurtosis value -0.255. The summation score of interpersonal skills has a skewness value of -0.739 and kurtosis value of 0.439. The skewness and kurtosis value for the summation score of social network is -0.520 and -0.085 respectively. For dependent variable, the summation score of job opportunity which has the skewness values of -0.406 and kurtosis value of -0.288. All the variables have the standard error of 0.147 for Skewness and 0.292 for Kurtosis. Both skewness and kurtosis values are used to test the normality of data distributed. The data is considered as close to normal if its skewness and kurtosis have values within the range of -2 and +2 cut-off point set by George and Mallery (2010). Since both values obtained in all the independent and dependent variables are within the range of -2 and +2, therefore the distribution of the mean is regarded as normally distributed.

Reliability test

Reliability test was carried out to measure the internal consistency of a set of items by using Cronbach's Alpha. Internal consistency represented how closely related a set of items are in a survey instrument whereas Crobach's Alpha is a reliability coefficient that signified how well a set

of items are positively correlated to each other. The closer the value of Cronbach's Alpha is to 1.0, the higher the reliability of internal consistency (Sekaran & Bougie, 2013).

Variables	Cronbach's Alpha (α)	No. of Items	Mean	Variance	Standard Deviation
Working experience	0.880	6	4.094	0.382	0.618
Performance	0.887	6	4.007	0.401	0.633
Interpersonal skills	0.897	6	4.042	0.425	0.652
Social network	0.915	6	3.796	0.506	0.711
Job opportunity	0.758	4	3.438	0.620	0.787

Table 4.2: Reliability Scale Statistic for Four Independent Variables and a Dependent Variable

Table 4.2 showed the results of Cronbach's Alpha of each independent and dependent variable tested from the actual sample. For independent variables, working experience obtained Cronbach's Alpha of 0.880, performance obtained Cronbach's Alpha of 0.887, interpersonal skills obtained Cronbach's Alpha of 0.897and social network obtained Cronbach's Alpha of 0.915. For dependent variable, job opportunity obtained Cronbach's Alpha of 0.758. The results showed that all the variables used in the questionnaire recorded a Cronbach's Alpha value greater than 0.70 ($\alpha > 0.70$), represented the questionnaire had internal consistency. Hence, the reliability test supported the appropriateness of the instrument used in this research.

Pearson Product Moment Correlation

Pearson Product Moment Correlation was used to determine the relationships between independent variables and dependent variables (Sekaran & Bougie, 2013). The relationship between working experience (WE), performance (P), interpersonal skills (IS) social network (SN) and job opportunity (JO) was investigated by using Pearson product-moment correlation coefficients. Preliminary analyses were performed to ensure no violation of the assumptions of normality and linearity. In table 4.3 showed the result of correlation analysis.

Variables	WE	P	IS	SN	JO
WE		0.837**	0.712**	0.558**	0.502**
P			0.837**	0.557**	0.425**
IS				0.522**	0.350**
SN					0.438**
JO					

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

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

Table 4.3: Correlation Coefficient between Selected Independent Variables and Job Opportunity

H$_0$1: There is no significant relationship between intern working experience and job opportunity.
Ha1: There is a significant relationship between intern working experience and job opportunity.

As depicted in Table 4.3, there is a significant relationship between working experience and job opportunity (r = 0.502, p < 0.05). Therefore, null hypothesis (Ho1) is rejected and alternative hypothesis (Ha1) is accepted. The strength of the relationship is positive and moderate. The positive correlation coefficient of 0.502 indicates that working experience increase, the job opportunity also increases. The research support the research's findings of Mihail (2006), Martin and Wilkerson (2006) and Rigsby, Addy, Herring, and Polledo (2013) who concluded that working experience impacts university graduates' job opportunity.

H$_0$2: There is no significant relationship between intern performance and job opportunity.
Ha2: There is a significant relationship between intern performance and job opportunity.

As depicted in Table 4.3, there is a significant relationship between working experience and job opportunity (r = 0.425, p < 0.05). Therefore, null hypothesis (Ho2) is rejected and alternative hypothesis (Ha2) is accepted. The strength of the relationship is positive and moderate. The positive correlation coefficient of 0.425 indicates that performance increase, the job opportunity also increases. The research support the research's findings of Steve (2014) who concluded that performance impacts university graduates' job opportunity.

H$_0$3: There is no significant relationship between intern interpersonal skills and job opportunity.
Ha3: There is a significant relationship between intern interpersonal skills and job opportunity.

As depicted in Table 4.3, there is a significant relationship between working experience and job opportunity (r = 0.350, p < 0.05). Therefore, null hypothesis (Ho3) is rejected and alternative hypothesis (Ha3) is accepted. The strength of the relationship is positive and weak. The positive correlation coefficient of 0.350 indicates that interpersonal skills increase, the job opportunity also increases. The research support the research's findings of Taylor (1988) who concluded that interpersonal skills impact university graduates' job opportunity.

H$_0$4: There is no significant relationship between intern social network and job opportunity.
Ha4: There is a significant relationship between intern social network and job opportunity.

As depicted in Table 4.3, there is a significant relationship between working experience and job opportunity (r = 0.438, p < 0.05). Therefore, null hypothesis (Ho4) is rejected and alternative hypothesis (Ha4) is accepted. The strength of the relationship is positive and moderate. The positive correlation coefficient of 0.438 indicates that social network increase, the job opportunity also increases. The research support the research's findings of Andrew (2016) who concluded that social network impacts university graduates' job opportunity.

Conclusion

In brief, an overview results has been illustrated in this chapter. The further discussion will be explain details in the following chapter, includes the discussion on the result findings, highlights the implication of the study, justify the limitation of study and suggest recommendation for future research.

CONCLUSION, LIMITATION AND RECOMMENDATIONS

The research study is concluded to examine the internship program effectiveness which provide an advantage for university graduates future job opportunity. From the literature review, previous studies revealed that independent variables such as internship experience, CGPA, personality, interpersonal skills, performance affect the job opportunity. In this study, intern working experience, performance, interpersonal skills and social network had been chosen to focus on. This study was designed to examine the fresh graduates from both public and private universities in Klang Valley. There are a total of four hypotheses that had been developed to examine their significant relationships. In justifying the relationship between all the independent variables and dependent variable, Pearson Product Moment Correlation showed that all the independent variables have significant relationships with the dependent variable. Hence, it can be concluded that working experience, performance, interpersonal skills and social network affect the job opportunity among the graduates.

Implication of Study

This research paper has conducted a study on the internship factors that will affect university graduates' job opportunity. These factors are intern's working experience, performance, interpersonal skills and social network. All this four factors have been proven that it would affect university graduates' job opportunity. Almost all of the respondents recognize that there is a positive relationship between internship factor and job opportunity. Based on the result, it shows that internship may influence or benefit university graduates' job opportunity. Hence, the findings from this research paper provide implications for all the university students who are doing their internship program. Internship program not only affect the student academic result, it also influence the students' job opportunity after graduate from university. By identifying the most important factors that influence university graduates' job opportunity, this research paper will be serve as a guideline to help the students in improving their performance during internship in order to get job opportunities after they graduate effectively. In conclusion, this research paper studied on the relationship of intern's working experience, performance, interpersonal skills and social network towards university graduates' job opportunity. Through this research, the students can

clearly identify the internship factors to improve their performance during internship in order to achieve success in their future career.

Limitation of Study

The first limitation is the target population and sample size. In this study, the sample size of 276 respondents might not reflect all the interns in Klang Valley. However, the sample size of the respondents may affect the accuracy of the research. This study only focuses on students who have internship experience where minorities of them are able to complete the survey and others who don't have internship experience will ignored the survey. The second limitation is possible existence of other variables. This study only examined the relationship between intern working experience, performance, interpersonal skills, social network and job opportunity. There is also a possibility that there are other factors affecting university graduates' job opportunity that were not measured in this study. The following limitation is respondents are restricted from giving their own views. This study is designed using quantitative research. Therefore, respondents can only provide feedback by answering the questions range from strongly disagree to strongly agree (1-5). This has restricted respondent from giving their own answers and feedback regarding the question asked in the questionnaire.

Recommendation for Future Research

In this research, there are only 276 respondents where most of the interns did not respond to the online survey. Future researcher may increase the sample size by involving more respondents in the wider geographic area such as distributing questionnaire outside Klang Valley. In facts, increase of sample size in the future study could determine the internship factors affecting university graduates' job opportunity and generate more efficient and accurate data. Furthermore, this study has a limitation of examining only the relationship between intern working experience, performance, interpersonal skills, social network and job opportunity. Therefore, future study should involve other internship factors to understand more about the benefits of internship that might affect university graduate's job opportunity. Lastly, this study is designed using quantitative research which restricts respondents from giving their own views towards internship and job opportunity. Hence, a qualitative research can be conducted in the future research in order to allow the respondents to provide their own views, opinions and feedback towards the study.

Conclusion

In conclusion, this research study provide a better understanding about an internship program effectiveness which provide an advantage for university graduates job opportunity. The research shows that the four independent variables which are working experience, performance, interpersonal skills and social network play a crucial role in affecting the job opportunity. As such, students who have not gone through internship before or required to go through internship in their current educational level such as diploma, degree or master level need to be emphasized and equipped with this four variables; to enhance their working experience, improve their job performance, strengthen their interpersonal skills and develop a professional network during their internship so that it can be an advantage for them to increase their job

opportunity after they complete their education as well as benefit them throughout their career in the future. If students do not conscious of the importance and valuable of internship, they would not emphasize on this four variables, thus, they may have a lower chance to get a full-time job offer after graduate as compare to students who have a better understanding on the importance of internship program. Apart from this, researchers wish that this research study will offer a useful insights for further studies on internship program effectiveness and job opportunity. Nevertheless, the future studies are still important and necessary in order to verify and assess the applicability of the findings across different geographical areas in Malaysia such Terengganu, Pahang, Sabah and Sarawak and different nations.

REFERENCES

1. Aimee, W. (2016). Experience Inc by Symplicity. Retrieved from Interns For Hire: The Best Benefit Can Be A Permanent Job:

    https://www.experience.com/alumnus/article?channel_id=internships&source_page=additional_articles&article_id=article_1126286322633#

2. Andrew, C. (2016). Why Employee Referrals Matter More Than You Think. Talent Management.

3. Beard, F., & Morton, L. (1999). Effects of Internship Predictors on Successful Field Experience. Journalism & Mass Communication Educator, 53(4), 42-53.

4. Beggs, B., Ross, C. M., & Goodwin, B. (2008). A Comparison of Student and Practitioner Perspectives of the Travel and Tourism Internship. Journal of Hospitality, Leisure, Sport, and Tourism Education, 7(1), 31-39.

5. Bratberg, E., & Nilsen, O. A. (1998). The Transition from School to Work: Search Time and Job Duration. IZA, DP(27), 1-25.

6. Chai, J. (2014, August 21). theantdaily. Retrieved from Interns shouldn't have to work for free:

    http://www.theantdaily.com/Main/Interns-shouldn-t-have-to-work-for-free

7. Chen, C.-T., Hu, J.-L., Wang, C.-C., & Chen, C.-F. (2011). A Study of the Effects of Internship Experiences on the Behavioural Intentions of College Students Majoring in Leisure Managment in Taiwan. Journal of Hospitality, Leisure, Sport & Tourism Education, 10(2), 62-73.

8. Collin, K., & Tynjala, P. (2003). Integrating theory and practice? Employees' and students' experiences of learning at work. Journal of Workplace Learning, 15(7/8), 338-344.

9. Creswell, J. W. (2009). Research Design Qualitative, Quantitative, and Mixed Methods Approaches Third Edition. SAGE Publications, Inc.

10. Department of Statistics Malaysia. (2015, March 25). Retrieved from Labour Market in Malaysia, January 2015:

    https://www.statistics.gov.my/index.php?r=column/cthemeByCat&cat=124&bul_id=OUxuTVc0SWFUUGkvSmU5NGJzZVZndz09&menu_id=U3VPMldoYUxzVzFaYmNkWXZteGduZz09

11. Dizik, A. (2007, June 19). Networking for Interns. Retrieved from bloomberg:

    http://www.bloomberg.com/news/articles/2007-06-18/networking-for-internsbusinessweek-business-news-stock-market-and-financial-advice

12. Forrest Recruitment. (2016). Retrieved February 29, 2016, from Do you have a job that the average person doesn't even know exists?: http://www.forrest-recruitment.co.uk/do-you-have-a-job-that-the-average-person-doesnt-even-know-exists/

13. Fox, T. (2001). A Sense of Place. Caterer & Hotelkeeper, 189(4160), 30.

14. Gardner, H. (2011). Frames of Mind: The Theory of Multiple Intelligences. Basic Books.

15. George, D., & Mallery, P. (2010). SPSS for Windows Step by Step: A Simple Study Guide and Reference, 17.0 Update (10 ed.). Allyn & Bacon, Inc.

16. Glassdoor. (2016, January 10). Retrieved from Intern Salaries in Kuala Lumpur, Malaysia: https://www.glassdoor.com/Salaries/kuala-lumpur-intern-salary-SRCH_IL.0,12_IM1100_KO13,19_IP3.htm

17. Guerrero, A. (2013, September 11). 4 Signs Your Fall Internship is a Waste of Time. Retrieved from US.News: http://money.usnews.com/money/careers/articles/2013/09/11/4-signs-your-fall-internship-is-a-waste-of-time

18. Hall, M., Stiles, G., Kuzma, J., & Elliott, K. (1995). A Comparison of Student and Employer Expectations with Regard to Business Internships. Marketing Education Review, 5(3).

19. Lam, T., & Ching, L. (2007, June). An Exploratory Study of an Internship Program: The Case of Hong Kong Students. International Journal of Hospitality Management, 26(2), 336–351.

20. Lerner, M. (1988). Commentary: Internship assist college programs. Community College Journalist, 16, 21.

21. Martin, D. R., & Wilkerson, J. E. (2006). An Examination of the Impact of Accounting Internships on Student Attitudes and Perceptions. THE ACCOUNTING EDUCATORS' JOURNAL, 129-138.

22. Matthew. (2010). An Overview of Social Networks and Economic. Stanford Education.

23. Measures of Skewness and Kurtosis. (n.d.). Retrieved from NIST Sematech: http://www.itl.nist.gov/div898/handbook/eda/section3/eda35b.htm

24. Michael, T. (2002). Starting and Maintaining A Quality Internship Program. Technology Council of Central Pennsylvania.

25. Mihail, D. M. (2006). Internships at Greek universities: an exploratory study. Journal of Workplace Learning, 18, 28-41.

26. Muhamad, R., Yahya, Y., Shahimi, S., & Mahzan, N. (2009). Undergraduate Internship Attachment in Accounting: The Interns Perspective. International Education Studies, 2(4), 49-55.

27. Narasimha, P. A. (2013). IFIM's Industry Internship Program (IIP): Creating a Unique Industry Internship Model in Management Education. IFIM Business , 1-17.

28. Rebecca, G. (2013, June 19). The Wire. Retrieved from The Uselessness of Unpaid Internships: http://www.thewire.com/business/2013/06/uselessness-unpaid-internships/66390/

29. Rigsby, J. T., Addy, N., Herring, C., & Polledo, D. (2013). An Examination of Internships and Job Opportunities. The Journal of Applied Business Research, 29(4), 1131-1144.

30. Rouse, M. (2008, January). Search Data Management. Retrieved from Tech Target: http://searchdatamanagement.techtarget.com/definition/data-analytics

31. Sekaran, U., & Bougie, R. (2013). Research Methods for Business (6 ed.). John Wiley & Sons Ltd.

32. Sirakaya-Turk, E. (2011). Research Methods for Leisure, Recreation and Tourism. Wallingford: CABI.

33. Steve, C. (2014). Some Thoughts on the Importance of Internships as Part of an Undergraduate Program. American Statistical Association.

34. Suhaimi, A. W., Marzuki, N. A., & Mustaffa, C. S. (2014). The Relationship between Emotional Intelligence and Interpersonal Communication Skills in Disaster Management Context: A Proposed Framework. Procedia - Social and Behavioral Sciences, 155(6), 110-114.

35. Taylor, M. S. (1988). Effects of College Internships on Individual Participants. Journal of Applied Psychology, 73(3), 393-401.

36. Testing for Normality using SPSS Statistics. (2013). Retrieved from Statistics.Laerd.com: https://statistics.laerd.com/spss-tutorials/testing-for-normality-using-spss-statistics.php

37. Tucker, L. (2014, January 16). topuniversities. Retrieved from Unpaid Internships Still a Problem for Students in 2014: http://www.topuniversities.com/student-info/university-news/unpaid-internships-still-problem-students-2014

38. Web Finance Inc. (2016). Retrieved from Business Dictionary: http://www.businessdictionary.com/definition/performance.html

39. Wu, D. (2014, February 6). Fast Enterprise Apps Lead to Productivity Improvements. Retrieved from Riverbed Technology: http://www.riverbed.com/blogs/Fast-Enterprise-Apps-Lead-to-Productivity-Improvements.html

THE PRIVATE COST OF UNIVERSITY EDUCATION FOR THE UNDERGRADUATE STUDENTS IN SRI LANKA; FACTORS INFLUENCE TO THE COST PATTERN

S.Gobinath[1], K.Tharshan[1], W.R.H.Dheerasekara[1] ,R.Vivek

[1] Sri Lanka Institute of Information Technology, New Kandy Road, Malabe, Sri Lanka.

Abstract

The research analysed the elements that impact the private cost of Bachelor's program for students in Sri Lankan University in 2016/2017 scholarly session. The point was to determine the private cost of Bachelor's program for students and additionally the elements affecting it and their level of effect on private cost. The ex-post-facto design was considered for the study. The population comprised of all private and state tertiary establishments offering Bachelor's program in Sri Lanka. The sample was 642 respondents drawn, utilizing the purposive and corresponding stratified random sampling procedures. The research questions were analysed descriptive statistics, while the hypotheses were analysed using the Chi-square test for independent samples statistics at 0.05 level of significance. It was found that 15 out of 21 cost categories had significant different between field of study, 10 out of 21 cost category had significant difference between gender, 12 out of 21 cost category had significant difference between the length of the program and 10 out of 21 cost category had significant difference between socio-economic group (income level). The study revealed that factors such as field of study, gender, length of the program and socio-economic class, influence private cost. The research additionally revealed that the field of study influences the private cost than other independent variables. Consequently, it was suggested among others that provide hostel facilities at adequate cost, offer efficient communication systems for free of charge to enhance their private cost trouble.

Key words: Higher education, cost of high education, field of study, gender, length of program, socio-economic group private/public University

1. Introduction

According to the Sri Lankan context, over the past years the Adult literacy rate reached the peak. According to government statistic reports, in 2015 it reached 92.61% (CBSL, 2015), therefore the need of university educations increased. In Sri Lanka, there are 15 state Universities, where students who qualify to higher education level is 6-8%, among more than 250,000 students who sit in advance level examination (Ministry of High Education, 2017). In recent years the qualifying rate for University is increasing (National Human Resources Development Council of Sri Lanka, 2015) (Appendix-01). From that point of view, the need of the private sector increased. Initially, there was huge opposition arising

from public or students who studied in the government sector. For example, in 1972 Ragama private medical college was started and in later people especially political parties raised against private sector (K.Kumarashinge, 2008). Because of that 1989 government took the ownership of the NCMC management, which still continues. Presently there are 43 Universities in Sri Lanka, which are recognized by university grant commission. It gives more academic choices for the student who have passed the GCE A/L examination.

On the other hand, there are other choices also available to decide the future other than tertiary education, for example employment, entrepreneur and investing in other sources like shares, bonds and assets which also generate income for them (Ronald.G, 1994).

So, there is a huge issue which is being faced by students, whether to enrol in tertiary education or not, based on the cost and benefit.

Therefore this study tries to mainly focus on the private cost for the students following university education and how the cost of the education vary based on the factors such as gender,the field of study, social economic groups, the length of   the degree program and the location of the student's residence.

Issues arise when most of the students only consider the tuition fees of the private university as a cost and make their decision to enrol, and think that there is no cost when they enrol in the state universities (Stephen.W, et al., 2012). But, when considering the cost of the University educations for undergraduates, there is two major cost identified; classified as academic cost and non-academic (Patrick.A & Roseline.O, 2016). Hans.D, 2009 and Patrick.A & Roseline.O, 2016 say there are other expenses also need to be considered to the private university education and state university students need to pay academic (other than course fees and registeration fees) and non-acadamic fees, because where students come from middle or lower economic level families.

Therefore this study tries to mainly focus on the private cost for the students following university education and how the cost of the eduction vary based on the factors such as gender,the field of study, social economic groups, the length of the degree program and the location of the student's residence.

1.2 Objectives

To Explore the cost of higher education at undergraduate level in the Sri Lankan context.

1.2.1 Sub-Objectives

01) Analyse whether there is a significant difference in the private direct cost of study between fields of study.

02) Analyse whether there is a significant difference in the private direct cost of study between genders.

03) Analyse whether there is a significant difference in the private direct cost of study between the socio-economic groups.

04) Analyse whether there is a significant difference in the private direct cost of study between lengths of the degree program.

05) Analyse whether there is a significant difference in the private direct cost of study between location of the students

1.3 Hypothesis

According to the research, it requires the testing of five hypotheses to test our results based on research objectives at 5% of a significant level. Those are;

H1a: There is a significant difference in private direct cost between the field of study.

H1b: There is a significant difference in private direct cost between genders.

H1c: There is a significant difference in private direct cost between years of the program.

H1d: There is a significant difference in private direct cost between socio-economic classes.

H1e: There is a significant difference in private direct cost between the location of the student.

1.4 Significance of the study

Students who are willing to enrol in a degree program, have only very limited data, mainly the course fees. They lack the data about other academic and non- academic costs which are necessary to make a decision about their tertiary education. In addition, most of those who plan to follow university studies do not do the financial feasibility calculation to determine the return on their investment.

02. Literature Review

Patrick and Roseline (2016) are analysed in their research about the factors that influence the private cost of teacher education in public tertiary institutions in South-South Nigeria in 2014/2015 academic session. The aim was to determine the actual private unit cost of teacher education as well as the factors influencing it and their level of impact on private cost. Silva & Kithsiri, (2016) has indicated factors

influencing the choice of degree offering institutes among the Logistics Management Students in Sri Lanka. This past research paper's main objective is to analyze the factors influencing the choice of degree offering institutes among the logistics management student in Sri Lanka.

Olakulehin (2011) has examined the comparative private costs of distance and conventional university students in Nigeria in the study. The study of Olakulehin (2011) sought to establish which of the two modes of education demands a higher or lesser private investment from students in participating in higher education, findings reveal that significant private costs learners generally incur both at the pre-entry as well as during the course of their studies for higher education in Nigeria generally.

Tilak (1985) has focused three major objectives in his study, such as: first, to present a conceptual and analytical framework for a comprehensive analysis of costs of education; second, to examine the nature of data available to the practitioners and researchers in the area of costs/financing of education, and third to present an empirical analysis of costs of education in India. Moreover, Bassey and Stella (2013) investigated the private cost of full-time.

programs at public universities in Lagos State by gender and field of study and examines the difference between the average private cost of educating the male and female students at the university level of education in their study. Factors influencing current costs of secondary education in the Oya State of Nigeria. Whereas, the study of Rémi (1982) stated that objectivity on the analysis of the current cost of secondary education with a view to finding or improving the control of costs through better allocation and management of resources at the school level.

Salami (2013) has conducted a study in private cost and the general objective of this study was to determine the cost of acquiring a four-year degree at Delta State University, Asaba. This study sought to determine the cost of acquiring a degree from the faculty of management sciences and agriculture, at Delta State University, Asaba Campus. Further, Chitra and Lodha (2013) conducted the study with the objective as to conduct cost analysis and to compute the private and social cost of various technical and professional courses offered by the J.N.V. University Jodphur. The present study being used past research papers study. And analysing the factors that influence private cost of undergraduate's students in Sri Lanka in 2011 to 2016 academic session and this study calculating private direct cost for field of study.

Alecke (2013) investigated the effects of tuition fees on the university enrolment and location decision of high school graduates in Germany. And paper is investigated the effects of tuition fees at German universities on the enrolment and migration behaviour of first-year students. This paper also considered gender effects it was important.

information to judge about the pros and cons of tuition fees in the higher education system in German. This paper had some evidence that tuition fees do not have a common overall effect but instead affect certain groups of students who have the favourable choice to enrol at a fee-raising or non-raising university without moving far.

Kainuwa and Mohammad (2013) conducted a Study to measure how socio-economic status and educational background of the parents affects the education of their children; examine the role of parents‟ socio-economic status and their educational background on the Educational process of their children. Children's education is significantly affected by the socio-economic status and educational background of their parents. Further, Ron, Harry and Lerman (2009) found that the college education strongly affects whether Americans can do the climb up the income ladder. Data covering the last four decades show that adults who have degrees from two-year or four-year colleges have far higher family incomes than do adults who have only a high school degree or are high school dropouts.

Dunnett (2012) has analysed impact of the fee increases on student's choice of university by measuring the utility associated with various attributes of the university course. In particular, the research aims to explore the impact of the change in funding on those students who have been under-represented in higher education in the past. In this paper mainly focused as a cost on the following criteria: course reputation, university reputation, whether the institution is industry focused, whether the university is local to the student, entry qualifications and price levels (tuition fees). According to this paper used conjoint analysis to measure the relative importance of the above attributes on the choice of university courses for different groups of students. It explored how different subgroups evaluate the impact (the changes in utility) that results from changing the levels of above attributes.

For estimate used statistical technique to regression parameters. Based on different groups in this study characteristic gender as a result of that female students compared to male students and the study found that girls seem to derive more utility from teaching-focused institutions and much less from industry-focused institutions and there are also differences in the patterns of utility derived from course and university reputation and fees. And differences between social classes. Based on that mainly lower-income families and families where there was no pattern of participation in higher education were capture. According to social class was determined by parents' occupation using standard social grade definitions and refer to higher and middle professional occupations (Patrick.A & Roseline.O, 2016). And result of that students from lower socio-economic groups compared to higher socio-economic groups the study found there was some evidence of differences in utility related to university reputation and a preference for local by lower socio-economic groups (Stephen.W, et al., 2012).

2. Method

The main objective of the research is to identify the cost incurred by the students who read their degrees of Business Management, Information Technology and Engineering in Sri Lankan private Universities and government Universities determine the cost of variables. Researchers mainly consider the difference in direct private cost based on gender, the field of study, the length of the degree program, socio-economic groups and the residence location of the student. To measure these variables, the study expects to use the indicators such as cost behaviour and cost pattern of that Information Technology, Business Management and Engineering degree programs.

The present study attempted to identify how cost varies among those variables. To accomplish the objective of the study, descriptive survey method was adopted as a similar study was done by Watetu, (2015), Borland & Jeffery, (2002) and Salami, (2013). Most of the other researchers successfully completed and recommended the same method for the related study. A Survey was carried out to collect data regarding the private direct cost of the university education in Srilanka.

3.1 Population

This study concentrates on Management, Information Technology and Engineering streams. So, the total population for this study 7,301 (Information Technology 2125 students, 3689 Business students and 1487 Engineering students) students which include government as well as the private University students who graduated or completed their degree in 2016/2017.

Stream	State University	Private University	Total
Management	2,679	1,010	3,689
Information Technology	429	1,696	2,125
Engineering	1,195	292	1,487
Other	8,301	3964	12,265
Total	12,604	6,995	19,599

3.2 Samples

The study focused on the who are graduated/completed their Bachelor degree program at state universities and at private universities in Sri Lanka. Universities in Sri Lanka students selected by stratified sampling method, because those students are sub divided in the University as stratum by field of study (Management, Engineering, and Information Technology), gender, the length of the degree program and social economic group. Overall, 10% of data collected from the population. Details of the sample as follows;

Field of study	Private University	Government University
Business Management	91	120
Engineering	109	60
Information Technology	219	45

146

Gender	Private University	Government University
Male	243	98
Female	176	127

Length of degree program	Private University	Government University
3 years	141	20
4 Years	278	205

Social economic group	Private University	Government University
Low (Below Rs. 16,162)	10	20
Middle (Rs. 16,163 to Rs. 57,499)	115	122
High (Rs. 57,500 or above)	294	83

4. Findings and analysis

Chi-square test was carried out in order to identify the association between the Independent variable and dependent variable. Since the cost of higher education status is an ordinal category variable then the following tests are carried to check the association between the cost of the higher education and other independent variables. The SPSS package was used to carry out the test. Below table-01 define the cost categories which used for the Chi-square test;

Academic Cost	**Description**
Cost for course fees	Cost of course fee, registration cost and other administration related cost
Cost for stationery	This cost includes the study material such as Books, Exercise books, Pen, Pencil, Tippex, Bag Etc
Cost related to library & membership	Library membership cost for the student, subscription and penalty payments includes in this cost category.
Cost for project and assignment	Field visit, photo copy/ print out, Internet and other cost which occurs specifically for the assignments.
Cost for laptop and desktop	The Laptop or desktop which buy for the purpose of the higher education by student.
Cost for photocopies	Notes and tutes etc.
Cost for tool and instruments	The cost category includes the cost for mathematical instrument box, folder, pen drive and calculator.
Cost for repeat	The cost occurs for repeat examination during the academic program.
Non-Academic Cost	
Cost for internship	Cost of travelling, material used for internships, if you go out of city for intern, please indica cost of accommodation and other cost you specifically spend for internship
Cost for Transportation	The cost occurs for the transportation during the academic program such as Bus fare, rent for monthly hired vehicle, fuel.
Cost for vehicle maintenance and repair	The cost occurs for the maintenance of the own vehicle.
Cost for hostel or private house	The students who boarded or rent private house they supposed to pay the rent and other charges for the house.
Cost for food and beverage	The cost occurs for food and beverage during the academic program.

Cost for medicine	The cost occurs for medicine during the academic program.
Cost for cloths and wear	The cost occurs for cloths and wear during the academic program, especially for presentation or other specific occasion e.g.: Clothing, Shoes, Belts, Jewelry etc.
Cost for communication	The cost occurs for communication during the academic program such as Mobile phones calls & Internet cost etc.
Cost for personal care	The cost occurs for personal care (hair cut & hairdressing, cosmetics etc.)
Cost for trip	The cost occurs for batch trip during the academic program.
Cost for sports	The cost refers sports equipment and transport specially for sport events etc.
Cost for events	The cost relates to cultural, dance program
Other expenses	The cost relates to donations, University event Fees and society or club subscription.

Table 7 Cost categories

The significance of the explanatory variables was tested with independent variables at 5% level.

4.1 Chi-square test for Field of study and the explanatory variable

H0: There is no significant difference between Field of study and the explanatory variable

H1: There is a significant difference between Field of study and the explanatory variable;

Expenses	Expected count	Significant value
Cost for course fees	12.60	0.000
Cost for stationery	9.12	0.000
Cost related to library & membership	9.34	0.000
Cost for project and assignment	9.99	0.000
Cost for laptop and desktop	6.08	0.000
Cost for photocopies	7.82	0.000
Cost for tool and instruments	9.34	0.000
Cost for repeat	5.43	0.006
Cost for internship	7.17	0.000
Cost for Transportation	13.25	0.273
Cost for vehicle maintenance and repair	8.69	0.442
Cost for hostel or private house	10.86	0.008
Cost for food and beverage	8.04	0.007
Cost for medicine	7.17	0.670
Cost for cloths and wear	12.60	0.003
Cost for communication	11.73	0.041
Cost for personal care and cosmetics	8.9	0.000
Cost for trip	11.51	0.000
Cost for sports	8.25	0.219
Cost for events	45.17	0.904
Other expenses	11.51	0.121

Table 8 Chi-square test result for field of study and costs

According to the Chi-square test, the above table-01 represent the result of each cost of significance with the field of study in private University. From the test results, H0 has rejected and H1 has accepted for cost for course fees, cost for stationery, cost related to library & membership, cost for project and assignment, cost for laptop and desktop, cost for photocopies, cost for tool and instruments, cost for repeat, cost for internship, cost for hostel or private house, cost for food and beverage, cost for clothes and wear, cost for communication, cost for personal care and cosmetics and cost for trip. That results there is the significant different between 15 cost categories and field of study, in another word which is associated. For cost categories of cost for transportation, the cost of vehicle maintenance and repair, the cost for medicine, cost for sports, cost for events and other expenses H0 has accepted and H1 has rejected.

4.2 Chi-square test between gender and the explanatory variable

H0: There is no significant difference between gender and the explanatory variable

H1: There is a significant difference between gender and the explanatory variable;

Costs	Expected count	Significant value
Cost for course fees	24.36	0.324
Cost for stationery	17.64	.017
Cost related to library & membership	18.06	.008
Cost for project and assignment	19.32	.539
Cost for laptop and desktop	11.76	.154
Cost for photocopies	15.12	.001
Cost for tool and instruments	18.06	.013
Cost for repeat	10.50	.037
Cost for internship	13.86	.035
Cost for Transportation	25.62	.252
Cost for vehicle maintenance and repair	16.80	.760
Cost for hostel or private house	21.00	.293
Cost for food and beverage	15.54	.055
Cost for medicine	13.86	.483
Cost for cloths and wear	24.36	.005
Cost for communication	22.68	.715
Cost for personal care and cosmetics	17.22	.000
Cost for trip	22.26	.021
Cost for sports	15.96	.001
Cost for events	87.37	0.207
Other expenses	22.26	.627

Table 9 Chi-square test result for gender and costs

Above table-03 describes significant level between gender and the cost categories. According the Chi-square test, represent the result of each cost of significance with the gender in private University. From the test results, H0 has rejected and H1 has accepted for cost for stationery, cost related to library & membership, cost for photocopies, cost for tool and instruments, cost for repeat, cost for internship, cost for cloths and wear, cost for personal care and cosmetics, cost for trip, and cost for sports. That results there is the significant different between 10 cost category and gender, in other word which are associated. For cost categories of Cost for course fees, Cost for project and assignment, Cost for laptop and desktop, Cost for Transportation, Cost for vehicle maintenance and repair, Cost for hostel or private house, Cost for medicine, Cost for communication, Cost for events and Other expenses, H0 has accepted and H1 has rejected.

4.3 Chi-square test between length of the program and the explanatory variable

H0: There is no significant difference between length of the program and the explanatory variable

H1: There is a significant difference between length of the program and the explanatory variable;

Expenses	Expected count	Significant value
Cost for course fees	19.52	.000
Cost for stationery	14.13	.007
Cost related to library & membership	14.47	.000
Cost for project and assignment	15.48	.005
Cost for laptop and desktop	9.42	.008
Cost for photocopies	12.11	.000
Cost for tool and instruments	14.47	.001
Cost for repeat	8.41	.007
Cost for internship	11.11	.000
Cost for Transportation	20.53	.016
Cost for vehicle maintenance and repair	13.46	.015
Cost for hostel or private house	16.83	.575
Cost for food and beverage	12.45	.201
Cost for medicine	11.11	.097
Cost for cloths and wear	19.52	.717
Cost for communication	18.17	.108
Cost for personal care and cosmetics	13.80	.247
Cost for trip	17.84	.000

Cost for sports	12.79	.391
Cost for events	70.00	.835
Other expenses	17.84	.154

Table 10Chi-square test result for length of the program and costs

Above table-04 describes significant level between length of the program and the cost categories. According the Chi-square test, represent the result of each cost of significance with the length of the program in private University. From the test results, H0 has rejected and H1 has accepted for cost for course fees, cost for stationery, cost related to library & membership, cost for project and assignment, cost for laptop and desktop, cost for photocopies, cost for tool and instruments, cost for repeat, cost for internship, cost for transportation, cost for vehicle maintenance and repair and cost for trip. That results there is the significant different between 12 cost categories and length of the program, in other word which are associated. For cost categories of cost for hostel or private house, cost for food and beverage, cost for medicine, cost for cloths and wear, cost for communication, cost for personal care and cosmetics, cost for sports, cost for events and cost for events H0 has accepted and H1 has rejected.

4.4 Chi-square test between socio-economic group (income level) and costs

H0: There is no significant difference between socio-economic group and the explanatory variable

H1: There is a significant difference between socio-economic group and the explanatory variable;

Expenses	Expected count	Significant value
Cost for course fees	17.30	0.000
Cost for stationery	12.53	0.070
Cost related to library & membership	12.83	0.002
Cost for project and assignment	13.72	0.052
Cost for laptop and desktop	8.35.	0.246
Cost for photocopies	10.74.	0.011
Cost for tool and instruments	12.83	0.283
Cost for repeat	7.46	0.066
Cost for internship	9.84	0.047
Cost for Transportation	18.20	0.637
Cost for vehicle maintenance and repair	11.93	0.326
Cost for hostel or private house	14.92	0.001
Cost for food and beverage	11.04	0.492
Cost for medicine	9.84	0.169
Cost for cloths and wear	17.30	0.000
Cost for communication	16.11	0.039
Cost for personal care and cosmetics	12.23	0.002
Cost for trip	15.81	0.067
Cost for sports	11.34	0.144
Cost for events	62.05	0.0196
Other expenses	15.81	0.022

Table 11:Chi-square test result for socio-economic group and costs

Above table-04 describes significant level between socio-economic groups and the cost categories. According the Chi-square test, represent the result of each cost of significance with the length of the program in private University. From the test results, H0 has rejected and H1 has accepted for cost for course fees, cost for stationery, cost related to library & membership, cost for photocopies, cost for internship, cost for hostel or private house, cost for cloths and wear, cost for communication, cost for personal care and cosmetics, cost for events and other expenses. That results there is the significant different between 10 cost category and socio-economic groups, in other word which are associated. For

cost categories of Cost for laptop and desktop, Cost for project and assignment, Cost for tool and instruments, Cost for repeat, Cost for Transportation, Cost for vehicle maintenance and repair, Cost for food and beverage, Cost for medicine and Cost for trip, H0 has accepted and H1 has rejected.

4.5 General discussion

As the result of the study, in the field of the study 15 costs out of 21 cost range had the significant relationship. Among that each field of study shows different cost ranges during the academic program. The length of the program had the significant difference between 12 costs out of 21 cost categories. Likewise, gender and the social economic group had significant differences between costs respectively 12 and 10 out of 21 cost categories (Appendix-02).

The study identified that medical cost did not have association with any of the independent variables such as field of study, gender, length of the program and socio-economic groups. Thus, it clearly stated that medical cost is not dependent with any of the independent variables. But library, photo copies and internship cost associated with every independent variable, in other word those costs have the significance different between field of study, gender, length of the program and socio-economic groups. Other costs like, stationery, course fee, tool and instruments, repeat, cloths and wear, personal care cosmetics and trip have significance differences at-least with three independent variables(appendix-02).

The reason could be for those differences the University which they selected, their economic level, their participations in the academic program such as internships, workshops, conferences and the requirement of the field, the safety purposes among the gender and duration of the program. Those reasons vary by field of study, gender, the length of the program and socio-economic group.

In study of Oyetakin (2014), Chitra.S & Lodha.S.L(2012), Enaigbe.P.A & Olubor R.O (2016), Kalia & Sapna(2011) stated there is the significant difference between the field of study and the cost categories. The current study also evident to their results according to Sri Lankan context, those studies also found the results with the similar methods and cost categories. But, Salami.G.C.S(2013), Samuel A. (2012) and Pradhan, G C(2003) found there no significant differences between the field of study and cost. Current study disagrees the conclusion of the researchers made.

A limited study was done to find significantly different between gender and costs in higher education. Salami.G.C.S (2013) concluded there is significance difference between gender and cost of high education. Even though, Ofem.I & Ahunanya.S (2013) and Pradhan, G C (2003) resulted that there is no significant difference between gender and cost of higher education.

According to the socio-economic group, every researcher measured with the family income level of the students. The current study also gives the evidence to Salami.G.C.S(2013) Pradhan, G C(2003) study and found it is the significant difference with the socio-economic group. The researchers also categorized the cost and concluded their study similar to current research. Nirgude, Ragho.K(1981) analyzed the cost

pattern among the countries like India, Japan and other South-east countries. He found that there is different among the countries because of the nature of the country and other factors affect the cost pattern. The disagreement of the other researcher reason could be that.

5.Conclusion

The study involved in identifying the significant difference between private costs for the higher education in Sri Lanka with four objectives; field of the study, gender, the length of the program and socio-economic class. The costs were divided into 21 categories to investigate in detail; Field of the study shows significant difference with 15 categories whereas gender, the length of the program and socio-economic class demonstrate 10, 12 and 10 accordingly. Hence the cost of the higher education is highly influenced by the field of study and partly influenced by other independent variables (appendix-2).

Academic related costs are completely influenced by the field of study and length of the program. Further, most of the non-academic costs are influenced by socio-economic group and field of study. Exceptionally, medicine was not influenced by any of the independent variables concerned by this study (appendix-2).

Through the study cost ranges for the students also identified, it would give sufficient knowledge for the users (appendix-3).

The study initially focused on private and state University students. Since lack of sample was experienced, study could not conclude the government students cost pattern with independent variable identified.

8. uture studies

The Government University will be considered for the study which is not achieved by current study and the difference between government and private would be analyzed in-depth.
The researcher will make the model fitting for the current study with using multinomial regression model, the method which used by the other researchers as well.

References

Akhilan, 2015. A study on comparing Graduands and SLIATE Diploma Holders. p. 126.

Alecke, B., Burgard, C. & Mitze, T., 2013. The Effect of Tuition Fees on Student Enrollment and Location Choice – Interregional Migration, Border Effects and Gender Differences. *Enrollment and Location Choice – Interregional Migration, Border Effects and Gender Differences.*

Altonji, J., 1991. The Demand for and Return to Education When Education Outcomes are Uncertain.

Andrew Dunnett, J. M. C. W. a. C. B., 2012. Choosing a University: A conjoint analysis of the impact of higher fees on students applying for university. *Choosing a University: A conjoint analysis of the impact of higher fees on students applying for university.*

Andrew.D, Jan.M & Caroline.M, 2011. Choosing a University: A conjoint analysis of the impact of higher fees on students applying for university in 2012. *Tertiary Education and Management.*

Andrew, J., 2012. Non-financial benefits of Higher Education. p. 71.

Anne.D, Phil, Michael & Tiffany.H, 2015. The private rate of return to a university degree in Australia. *Australian Council for Educational Research 2015.*

Anon., n.d. investment appraisal.

Anon., n.d. investment appraisal techniques.

Anon., n.d. IRR. *investing answers.*

Anon., n.d. *UGC Approved Degrees and Private Educational Institutes in Sri Lanka.* [Online].

Aturupane, H., 2007. The Impact of School Quality, Socio-Economic Factors and Child Health on Students' Academic Performance: Evidence from Sri Lankan Primary Schools. p. 58.

Bassey, O. I. & Stella, A., 2013. Private Cost of University Education in Nigeria :Focus on Gender and Level of Education. p. 224.

Becker.G, 1975. Human capital: A theoretical and empirical analysis with special reference to Education.. *Human capital: A theoretical and empirical analysis with special reference to Education..*

Becker.G, 1994. Human Capital Revisited 1. *Human Capital Revisited 1.*

Becker.G, 1994. Human Capital Revisited 1. *Human Capital Revisited 1.*

Björn Alecke, C. B. a. T. M., 2013. The Effect of Tuition Fees on Student Enrollment and Location Choice – Interregional Migration, Border Effects and Gender Differences. *Enrollment and Location Choice – Interregional Migration, Border Effects and Gender Differences.*

Bjorn Alecke, C. B. a. T. M., n.d. The Effect o Tution Fees on Student Enrollment and Location Choices. *The Effect o Tution Fees on Student Enrollment and Location Choices .*

BOI Srilanka, 2017. *Investsrilanka.* [Online]
Available at: http://www.investsrilanka.com/key_sector/education/education_overview

Borland & Jeffery, 2002. New Estimates of the Private Rate of Return to University Education in Australia*. *A gateway to Melbourne's research publications.*

Carolyn.B & Palena.N, 2006. *Conducting depth interviews; A guide for designing and conducting in-depth interviews for evelution input.* s.l.:Pathfinder international.

CaryS.Field, 1972. Private Returns to Investment in Higher Levels of in Kenya. p. 21.

CBSL, 2015. *http://www.cbsl.gov.lk.* [Online]
Available at:
http://www.cbsl.gov.lk/pics_n_docs/10_pub/_docs/statistics/other/Socio_Econ_Data_2015_e.pdf

Chitra.S & Lodha.S.L, 2013. Private and Social Cost of Technical and Professional Education With reference to J.N.V. University, Jodhpur (Rajasthan) India. *Developing Country Studies.*

Dao, M. T. N., 2015. What factors influence Vietnamese students' choice of university?. *International Journal of Educational Management.*

Department of Census and Statistics, 2013. *Household Income and Expenditure Survey ,* Colombo: s.n.

Dr.Rita.S, 1999. Collecting data by in-depth interviewing. *Education Line Journal.*

Enaigbe, P. &. O. R., 2016. Analysis of The Factors Influencing the Private Cost of Teacher Education in South-South Nigeria. pp. 132-143.

Falch, T., Lujala, P. & Strom, B., 2011. Geographical constraints and educational attainment. p. 86.

Filipa.S, 2014. The Effect of Tuition Fees on University Applications and Attendance: Evidence from the UK. *IZA Discussion Paper.*

G.Asuga & S.Eacott, 2015. School leadership preparation and development in Kenya: Evaluating performance impact and return on leadership development investment. *International Journal of Educational Management.*

G.C.Cainarca, 2012. The return to education and skills in Italy. *The return to education and skills in Italy.*

G., R., 2011. The Economics of Tuition and Fees in American Higher Education. *ILR Collection.*

Gavan, 2011. The Returns to Higher Education Qualifications. p. 119.

George.P, 1994. Returns to Investment in Education: A Global Update.

Gonsalves & Elvis.N.B, 2015. Cost analysis in higher education in goa. *A reservoir of Indian theses* .

Hans.D, 2009. The effects of tuition fees on the decision for higher education:Evidence from a German policy experiment. *The effects of tuition fees on the decision for higher education:Evidence from a German policy experiment.*

Harsha.A, 2012. Economic Benefits and options for financing higher education in Sri Lanka.. p. Economic Benefits and options for financing higher education in Sri Lanka..

Heckman, J. & E.Vytlacil, 2000. Estimating The Return to Education When It Varies Among Individuals. *Estimating The Return to Education When It Varies Among Individuals.*

Higher Education Minister , 2016. *Higher Education Minister wants more private universities,* s.l.: s.n.

Igot.B.O & Samuel.A, 2012. Private Cost of Bachelor's Degree Programmes by Major Fields in Nigeria. *Journal of Studies in Education.*

J.Borland, P.Dawkins & D.Johnson, 2000. Returns to Investment in Higher Education. *The Melbourne Economics of Higher Education Research.*

K.Kumarashinge, 2008. *Sunday Observer.* [Online]
Available at: http://archives.sundayobserver.lk/2008/05/04/plus01.asp

Kainuwa, Y. A. & Mohammad, N. B., 2013. Influence of Socio-Economic and Educational Background of Parents on their Children's Education in.

Kalia, S., 2010. Cost of higher education and financing practices among students in punjab: a study of professional education. *A reservoir of Indian theses.*

Karl.W & Pooyan.Y, 2009. Factors Influencing Malaysian Students' Intention to Study at a Higher Educational Institution. *E-Leader Kuala Lumpur.*

Kate.K, Belinda.C, Vivienne.B & John.S, 2003. Good practice in the conduct and reporting of survey research. *Int J Qual Health Care.*

Kevin.B, 2005. Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages,and Web Survey Services. *Journal of Computer mediated Communication.*

Lanka, C. B. o. S., 2015. *Economic and social statistics of Sri Lanka,* s.l.: s.n.

Mark Wahrenburg, M. W., 2007. Return on Investment in Higher Education – Evidence for Different Subjects, Degrees and Gender in Germany. *Return on Investment in Higher Education – Evidence for Different Subjects, Degrees and Gender in Germany .*

Martin.Mc, Sandra.Mc & Gill.W, 2012. Student Awareness of Costs and Benefits of Educational Decisions: Effects of an Information Campaign. *Student Awareness of Costs and Benefits of Educational Decisions: Effects of an Information Campaign.*

Ministry of High education, 2017. *http://www.mohe.gov.lk.* [Online]
Available at: http://www.mohe.gov.lk/index.php/en/about-ministry/overview

Mitchell.R, C., 2006. Using surveys to value public goods: the contingent valuation method. *Using surveys to value public goods: the contingent valuation method.*

National Human Resources Development Council of Sri Lanka, 2015. Statistical Bulletin on Education. *Statistical Bulletin on Education.*

Nirgude & Ragho, 1981. Comparative cost theory empricial testing of trade relations of india and japan with south east asian countries. *A reservoir of Indian theses.*

Ofem, I. B. &. A. S., 2013 June. Private Cost of University Education in Nigeria :Focus on Gender and Level of Education. p. 224.

Olakulehin, 2011. Private Cost of Eaducation : A Comparative Study of Distance and Campus - Based University Students in Nigeria.

Oyetakin.A & Adeosun.O, 2014. Analyisi of hereogeneities in the unit cost of University Education in Nigeria. *European Scientific Journal.*

Pathak & Rati.K, 2006. Cost of higher education a case study of select non technical colleges in Assam. *A reservoir of Indian theses.*

Patrick.A & Roseline.O, 2016. Analysis of The Factors Influencing the Private Cost of Teacher Education in South-South Nigeria. *An International Multi-disciplinary Journal, Ethiopia.*

Patrick, E. & Roseline, O., 2016. Analysis of The Factors Influencing the Private Cost of Teacher Education in South-South Nigeria. pp. 132-143.

PierreVerhaeghe, L. A. &. J., 2000. The influence of financial factors on participation in higher education.

Premarathne, W., Silva, M. D. & Kithsiri, V., 2016. Factors Influencing the Choice of Degree Offering Institutes Among the Logistics Management Students in Sri Lanka. *International Journal of Scientific Research and Innovative Technology.*

Psacharopoulos, 1995. The profitabiliy of investment in education. *The profitabiliy of investment in education,* p. 22.

Rémi.S, 1982. Factors influencing current costs of secondary education in the Oyo state of Nigeria. *International institue for educational planning .*

Robst, J., 2001. Cost Efficiency in Public Higher Education Institutions. *The Journal of Higher Education.*

Ron.H, Harry & Lerman, 2013. Economic Mobility. *Economic Mobility.*

Ronald.G, 1994. Choices and consequences. *Contemprary policy issues in education,* p. 135.

Ron, H., Harry & Lerman, 2009. Economic Mobility. p. 66.

Salami, 2013. Cost of University education at Delta State University,Asaba. p. 29.

Salami, C. G. E., 2013. Cost of University education at Delta State University,Asaba. *Merit research Journal.*

Scott.R, 1996. Human Capital Theory:Foundations of a Field of Inquiry. *Human Capital Theory:Foundations of a Field of Inquiry.*

Selina.Mc, Emma.C, Emer.S & Merike.D, 2012. Study on the costs of participation in higher education. *The National Office for Equity of Access to Higher Education.*

Shahar.B.S, 2008. The rate of return to investment in education:A case study of politecnic in Malasiya. *Malasiyan journal.*

Shawn.L, 2009. Factors that influence students' desire to attend higher education. *Factors that influence students' desire to attend higher education .*

Silva, P. & Kithsiri, 2016. Factors Influencing the Choice of Degree Offering Institutes Among the Logistics Management Students in Sri Lanka. *International Journal of Scientific Research and Innovative Technology.*

Simpson & Ormond, 2005. The costs and benefits of student retention for students, institutions and governments. *The Open University's repository of research publications and other research outputs.*

Statistics Department , 2015. *Statistics, Department of Census,* s.l.: s.n.

Stephe.W, Farshid.S & Jeroen.H, 2013. The decision-making and changing behavioural dynamics of potential higher education students: the impacts of increasing tuition fees in England. *Educational Studies.*

Stephen.W, Farshid.S & Jeroen.S, 2012. The decision-making and changingbehavioural dynamics of potentialhigher education students:the impactsof increasing tuition fees in England. *Educational Studies.*

Sujata.N & Tilan.M, 2012. Mapping the Higher Education Landscape in Sri Lanka. *Human Capital Research Program LIRNEasia.*

Tilak, B., 1985. Analysis Of Cost of Education India. p. 66.

Unversity grand commision Sri Lanka, 2016. *Adimission of students with foreign qualification to undergraduate courses of the Universities in Sri Lanka.* s.l.:s.n.

Vanlalchhawna, 1997. Unit cost of higher education_ a case study of colleges in Mizoram. *A reservoir of Indian theses.*

Watetu, M. P., 2015. Private rate of returan to investment in technical education; A case of manufacturing industries in Thika, Kiambu, Kenya.. *Journal of Kenya,* p. 174.

Webometrics, 2016. *http://www.webometrics.info/.* [Online]
Available at: http://www.webometrics.info/en/Asia/Sri%20Lanka

Weerakkody.K. & Dharmadasa.M., 2015. The impact of background variables for students'Performance: Case of online external degree program in Sri Lanka. *International Journal of Conceptions on Management and Social Sciences.*

Wilkins, S., Shams, F. & Huisman, J., 2012. The decision-making and changing behavioural dynamics of potential higher education students: the impacts of increasing tuition fees in England. *University of Bath Online Publication Store.*

Yaojiang.S, Linxiu.Z, Yue.M & Hongmei.Y, 2015. Dropping Out of Rural China's Secondary Schools: A Mixed-methods Analysis. *Journals.Campbridge.org.*

Yusuf.A & Mohammad.N.B, 2013. nfluence of Socio-Economic and Educational Background of Parents on their Children's Education. *Socio-Economic and Educational Background.*

IMPACT OF GLOBALIZATION ON SOCIETIES: PAKISTAN'S

EXPERIENCE

Dr. Zaeema Asrar Mohiuddin

Department of Commerce, University of Karachi

Haider Iqbal

M.Phil Scholar, Department of Commerce, University of Karachi

Abstract

After the two great wars, the global stakeholder across the nations sat together to extract a solution for coherence among nations. In the second half of the 20th century, term 'globalization', has been widely whispered, bringing countries closer in terms of trade, culture and mass exchange, development etc. The world has been evolved into a global village. This globalization or integration of countries has brought a phenomenal change in the world. This change has both negative and positive impact on economies and societies. In the positive effects on the nations, globalization make possible for the small economies to be a part of global trade stream thus make economies batter. In other words, globalization resulted into economic growth for these states through the development of capital markets. Globalization also introduced new technologies and transfer of these technologies across nations. Advancement in the telecommunication, satellites and mobiles are gifts of globalization. Standard of living has improved, a significant progress in scientific research has been observed. Better trade created more employment opportunities for the labor. It also increases productivity. Furthermore, it also exerted a pivotal impact on political and cultural domain across countries. Globalization has nourished thought process of different ideologies, religions and beliefs which resulted into global peace and harmony. From the grey aspect of the globalization, with the huge capital inflows, it has threatened the fair distribution of income. Increases gap between poor and rich class. Another pessimistic aspect of global village is the fear of losing national integrity because nations (developing and developed) are now become dependent on other nations. Producers in the developing are also frightened due to the less comparative advantage thus resulting in lower domestic production. We come to conclude after a comprehensive literature survey that the phenomenon of globalization has exerted mixed impacts of Pakistan. The span of the impact is economic, social and socio economic.

Introduction

Globalization is a methodology of association and blend amongst overall public, associations, and organizations of various countries, a technique obsessed by overall trade and services by information development. This methodology has impacts on the earth, on culture, on political structures, on monetary change and flourishing, and on human physical thriving in social requests the world over.

The improvement of various brand outlets across the globe is an instance of globalization; the way that they modify their menus to suit neighborhood tastes is an instance of globalization (generally called internationalization), a mix of globalization and limitation.

The examination looks contribution in the context of all inclusive practice and proposes imperative advances that are central for Pakistan to intensify its improvement and Poverty alleviation by globalization.

The entire system is projected on extended capability developing out of the worldwide competition. All together for the results of this system to be extensively shared the poor need to consistently hope to upgrade their aptitudes and human capital. Such an attempt needs a game plan of particular involvement by the Government. Growing power is at the center of the whole method.

Competing in this globalized world necessitates innovative foundations and methods. It entails another "culture". Particularly, the investigation necessities in order to continue to be centered are twisting up logically refined. The need to make care and assertion furthermore requires approach reinforce. The examination recognizes the various zones for Government approach reinforce. The examination recognizes particularly the need set up specific standardized savings net methodologies to get the limited in light of the way that the system by characterization produces victors and washouts and the incapacity to guarantee the washouts can manufacture the damage from the technique and also crush national sureness and provoke a setback towards taxation etc.

Globalization in Pakistan: Challenges and prospects

Globalization, and particularly financial blend, exhibits two openings and costs. More noticeable fiscal straightforwardness, outside direct wander, and trade of advances offer potential open entryways for money related improvement. Sorted out trade grants specialization between different locale, empowering them to convey as demonstrated by their own specific relative ideal conditions; it also develops the use determinations of locals by giving extended prospects to obtain items and endeavors from various countries. In this respect, recall that all inclusive trade is genuinely not a win loose game where a couple of countries are victors and others are disappointments. Regardless of what may be normal, trade profits all countries since it enhances the choices of the customer and the idea of Products? If forceful, it cuts down expenses and raises veritable wages. According to (Krugman, 1994, p. 6)12, it is furthermore beneficial to emphasize that regardless of what is routinely trusted, "countries are in no degree in money related contention with each other", or that "any of their major fiscal issues can be credited to dissatisfactions to battle on world markets". "If the European economy does well, it require not be to the disservice of the United States; definitely, if anything a viable European economy is presumably going to empower the U.S. economy by giving it greater markets and offering it results of common quality at cut down expenses" (in a similar place.). Furthermore, the verification is to a great degree strong that honest to goodness GDP improvement is associated essentially to private effectiveness advancement, not to alter of trade or to productivity in regard to contenders. "In spite of the way that world trade is greater than at some other time,

162

national desires for ordinary solaces are overwhelmingly controlled by neighborhood factors rather than by some restriction for world markets" (in a similar place.). Trade is, all things considered static while gainfulness, which is driven by specific change, is vibrant and in this way is in a general sense responsible for fiscal improvement. Thus, focusing on overall forcefulness may provoke rash decisions on nearby and moreover remote game plans.

Globalization: A wide area to extract more

Monetary globalization has furthermore offered opportunities to making countries in that it develops the traverse of their business parts for convey and pulls in remote capital, which helps change. Outside wander is useful for a trade of progressions and capacity, extends productivity. Another helpful result of globalization is more conspicuous contention among firms, which benefits buyers who approach things at continuously cut down expenses. The people who increment most from unhindered trade in both made and making countries are all the time the poorest since they can buy items at more direct expenses, and thusly have a higher desire for regular day to day existence. In this regard, unhindered business can be seen as a circuitous technique to reduce destitution. Unfortunately, so far made countries have not lifted their protective deterrents in various imperative divisions for making countries. Precisely, while "planning with the world economy is an incredible vehicle for improvement and desperation decreasing in producing nations, it would be still more momentous if the rich countries also extended the openness of their own economies" (Stern, 2000, p. 5)13. It should be seen that various portions, like materials and cultivating, which could give certified new opportunities to making countries, have not been changed. Another locale of great concern is related to authorize development rights, and the usage of antagonistic to dumping sharpens, which seem to deceive producers in making countries. Also, while the truth of the issue is that globalization passes on various open entryways in its trail, it is moreover clear that it has outlays for particular fragments of the people in nations that are organizing in the global economy.

Economic overview

From a low start, Pakistan's economy has stimulated effectively to a low-expansion high-development direction since 2000. The national bank has restricted expansion near 3% for every year as a record since 1980. More than 1,081 patent applications were documented by non-inhabitant Pakistanis in 2004 uncovering a recently discovered certainty. Agribusiness represented around 53% of GDP in 1947. While per-capita agrarian yield has developed from that point forward, it has been outpaced by the development of the non-rural parts, and the offer of horticulture has dropped to approximately one-fifth of Pakistan's economy. As of late, the nation has seen quick development in ventures, (for example, attire, materials, and concrete) and administrations, (for example, media communications, transportation, promoting, and fund).

Globalization in different sectors

Pakistan changed its economy as a noteworthy part of the fundamental change possibilities of the IMF program and World Bank advancing. Pakistan's advancement in return has not been as marvelous as that of

a part of the fast globalizes. Pakistan's admissions import conveys have not kept pace with that of whatever is left of the world.

Pakistan's association with globalization in the region of 1990 and 2002 has not been mind blowing. Pakistan's offer on the planet supply exchanges has tumbled from 0.16 to 0.15. China's offer in world supply increased from 1.80 to 5.04. Malaysia's offer in world merchandize exchanges has extended from 0.85 to 1.44

Trade Sector

Pakistan's manufacturing sector is one of the much ensured sectors amongst developing nations through a blend of high outside tax structural and quantitative limitations. The level and dispersal of duty rates have both been exorbitantly high verifiably. Changes in the ongoing years have considerably decreased the most extreme and normal levy rates, limited the dispersal and evacuated quantitative confinements to diminish the counter fare predisposition, advance focused and productive ventures and empower interest in enterprises in which Pakistan has a similar preferred standpoint. The greatest rate of levy which was 225 % 10 years back has been step by step cut down and will be additionally decreased from the present level of 30 percent to 25 percent compelling July 2002. Also, the normal levy rate has additionally declined essentially to 11 percent in 2000-01 from 51 percent 10 years back.

The on-going exchange progression additionally incorporates disposal of Para duties, deregulation of authoritative controls, and improvement and legitimization of tax structure by decreasing statutory guidelines and requests. The Government will also eliminate Trade Related Investment Measures as per the concurrence with WTO and won't present any quantitative import limitations past the standard confinements identified with security, wellbeing, open ethics, religious and social concerns. Enactment on hostile to dumping and countervailing obligations will be utilized for defending the interests of neighborhood industry against potential harm caused by sponsored sends out.

Fares of all imports are permitted with the exception of a couple of things. As of late confinements on the principle staple nourishment of the nation i.e. wheat has also been expelled. There are no sponsorships of any sort for trades. Be that as it may, the development of Pakistani fares in the 1990s has stayed slow and the nation's offer in world fares has in truth declined. The absence of broadening has brought about rising focus records amid the 1990s and in this way expanded introduction to advertise chance. Pakistan has recently started to enhance its fare base and fare markets. This will protect the nation from stuns emerging because of the value changes or generation shortage in cotton or lower request in the predominant market. Swapping scale is currently controlled by showcase powers in the Inter-bank advertise and the cash is without gliding of any mediation by the Central Bank. All present record exchanges are completely convertible and the outside trade administration has been changed. There is solid observational proof that the nations that have expanded exchange as an offer of GDP generously finished the previous 20 years and opened up to exchange have seen their monetary execution enhance essentially and lessened destitution

rates maintaining a strategic distance from any deliberate increment in imbalance. As Pakistan keeps on pursuing arrangements went for support of a market-based and aggressive swapping scale, fortifying of outside trade showcase, import progression and tax changes and fare advancement measures there is solid likelihood that Pakistan's prospects for sends out in world markets will enhance enabling it to build its piece of the pie.

Gross Domestic Product

Pakistan's experience also demonstrates that in the time of 1990s, critical exchange advancement was joined by an enduring decrease in the GDP development rate, from 6.1% in the 1980s to 4.5% in the 1990s. Correspondingly, far reaching arrangement changes and motivations to energize outside venture did not prompt any critical increment in speculation; aside from bigger interest in the private power part in the mid-1990s because of an extremely alluring motivator bundle. Truth be told, general speculation declined from around 19% of the GDP in 1989-90 to just 15% out of 1999-2000. Indeed, even on the fare front, the exchange execution has not been attractive. In spite of significant lessening in duty rates, evacuation of for all intents and purposes all non-tax boundaries and progressive debasements of the money (prompting a yearly devaluation of around 10% in the conversion standard, from Rs 24 of every 1990 to Rs. 60 for each dollar in 2000), the development in trades in the 1990s was just 4.5% for every annum, contrasted with 19% in the 1970s and 8.5% in the 1980s.

Industrial development

Starting from unhindered commerce convention, a few conclusions assert that Pakistan, under globalization, ought to disregard potential outcomes of another wave for industrialization inside and out. In spite of the fact that questionable, the claim also contends that the East Asian 'Pack of Four' days are finished, and globalization - importance stream of outside direct speculation (FDI) and receptiveness - will decide if the nation can industrialize or not.

Such contentions also prompt that Pakistan should endeavor to pull in FDI through the strategies of advancement, deregulation, and privatization. In particular, the legislature must be sliced to-estimate and be kept out of business sectors simultaneously.

Notwithstanding, on the contrary side, strong voices start from no less than two quarters, which at a specific level are commonly steady ways to deal with long haul financial advancement. Extensively, one is new organize political economy and 2nd is new development and new exchange hypothesis.

The lesson of the story is that industrialization under globalization for long run financial advancement is excessively essential a movement, making it impossible to be left to daze powers of FDI and receptiveness.

Every one of the three segments, government, business and civil society must cooperate in accomplishing national improvement goals and fortify national organizations. Every part can contribute an arrangement of

upper hands.

Textile industry

Amid the most recent two years, material industry has put vigorously in adjusting, modernization and substitution thus imported new hardware worth $ 1 billion. This will absolutely enhance the profitability, nature of items and capital proficiency yet square with consideration should be given to the preparation and up degree of abilities in material industry at all levels. The institutional framework, for example, Textile University, Textile Institutes and so forth does as of now exist in the nation yet the quality, staffing, principles of guideline, educational programs and its importance to consequent employment necessity are the issues which should be immediately settled.

Managers ought to put resources into at work preparing and compose in-house courses in essential proficiency for those are uneducated as the result from this speculation will be very significant in type of higher work profitability and higher comes back to the organizations making such ventures. Enlistment level preparing and apprenticeship are alternate apparatuses which can help update the nature of labor in material industry.

Capital flows

The particular aspect of the time of 1990s which influenced example and volume of capital streams to developing nations was the move from ODA to private capital. It is encouraged both by a developing disappointment among the benefactor nations with the viability of help and by global money related deregulation and expulsion of capital controls. In spite of the fact that, these streams have expanded the dangers to beneficiary nations in type of outer instability and furthermore highlighted the disease impact the net advantages to developing nations can be boosted under the correct approach condition. Open money related markets have been related with higher development however not to an indistinguishable degree from receptiveness to exchange. Yearly FDI streams to developing nations currently sum to around three times the estimation of authority streams. Be that as it may, the offer of Pakistan in all out private capital streams to developing nations has reduced.

Pakistan has liberalized its financial markets, presented full convertibility on current record and incomplete convertibility on capital market, is seeking after a market based adaptable conversion standard approach, and changed venture administration. Both remote direct and portfolio venture can stream in and out uninhibitedly with no confinements or earlier endorsement. Settlements and repatriation of benefits, profits and capital can be made consequently by the approved merchants.

Human Capital

Pakistan is a low wage, workers surplus economy. Notwithstanding, whereas compensation in the country is low by worldwide benchmarks they are not low in respect to close neighbors, India and especially

Bangladesh. Moreover genuine cost intensity will be dictated by profitability and recompense for contrasts in labor and capital efficiency recommends that by and large Pakistan may not incur low cost area than its neighboring countries.

ICT Sector

In developing countries, for instance, behind enthusiasm for the IT related regions and particularly in IT guideline there is another reason. The changing economics in the OECD states close by speedy inventive changes in IT and exchanges have increased enthusiasm for talented capable human resources from developing nations. India and Israel have been giving and huge pivot numbers to the United States and all other nations to the EU countries. Pakistan came in this field late and is opening to amass its exhibition.

The Government has permitted a substantial gathering of inspiring powers for the improvement of programming passages and IT-engaged organizations. Private part has broadened IT informational organizations in a general sense. The present base is close to nothing and along these lines it will take a significant extended period of time of gave outcome, try and exhibiting for making Pakistan IT an understood brand in the U.S. furthermore, to EU.

Conclusion

Globalization has exerted its solid effect on entire Pakistani society. It has changed social and financial culture and thinking about the country. Globalization helps in lessening neediness in nation. Additionally it prompts the development of agribusiness and material industry. Globalization acquires changes social and social practices in Pakistan.

Pakistan is confronting difficulties, for example, focused circumstances. Pakistan needs to contend with remote industry, thus changes are needed in industry. Exchange segment is prompt development since exchange obstructions are decreased by globalization. Manufacturing industry is developing which is less, now trades are more in manufacturing industry. Media transmission industry is turned into a major piece of economy. It also prompts manpower advancement.

Position of Pakistan's trade and budgetary reconciliation has expanded amid the nineties as it has opened its economy and looking for laissez-faire trade agreements. Notwithstanding, this level of combination is still far lower than that accomplished by comparable developing nations. Disregarding this, sends out has enrolled an expansion while imports have diminished amid this period. In past fares are for the most part base on farming area. Presumably still horticulture area is god wellspring of income age for Pakistan A move towards made merchandise in the fare container can be watched however the fare base keeps on being packed in a couple of low esteem included things, specifically material and dress items. With a specific end goal to get by in this more focused condition, the country required to rebuild its material industry on present day lines while underlining the nature of completed products. In such manner, the administration should actualize universal quality benchmarks like ISO 9000 and ISO 14000 in the generation of material items.

The correspondence innovation upheaval additionally acquires life economy of Pakistan. Presently development is quick and partaking in monetary improvement. Anyway Pakistan requires more outside direct speculation as it has distinctive segments which are required improvement.

Following are the recommendations;

Pakistan exchange is restricted to couple of nations. It ought to grow its exchange to other nations as it has numerous assets which are useful in delivering diverse items which are exchanged by other developing and created nations. Pakistan also needs to make great connection with provincial and with other created nations so more obstructions will be lessened. It additionally needs to give great law authorization. Financial specialists ought to be given insurance.

References

Sohail J. Malik(2006), Globalization and its Impact on Poverty in Pakistan. Islamabad

May 10, 2006

Lubeck, PaulBritts, Bryana(2001), Muslim Civil Society in Urban Public Spaces: Globalization, Discursive Shifts, and Social Movements, UC Santa Cruz Working Papers, 2001-09-01

Paul Krugman (1994), Competitiveness: A Dangerous Obsession. 1994, (p. 6)

Economic Survey of Pakistan (various Issues)

Ministry of Finance, Pakistan Publications

IMPACT OF NEGATIVE ONLINE CONSUMER REVIEWS ON

HOTEL BOOKING INTENTIONS

[1]Zia-ur-Rehman

Lecturer, Hailey College of Commerce, Lahore

[2]Hafiz Fawad Ali

Institute of Business Administration, University of the Punjab, Lahore

https://orcid.org/0000-0002-4316-9522.

fawadali94@hotmail.com

[3]Roha Ali

University of the Punjab, Lahore Pakistan

Rohaali67@gmail.com

[4]Muhammad Farhan Shakeel

University of the Punjab, Lahore Pakistan

[5]Saad Salem

University of the Punjab, Lahore Pakistan

[6]Sabir Ali

University of the Punjab, Lahore Pakistan

[7]Muhammad Haseeb

University of the Punjab, Lahore Pakistan

Abstract:

Online Customer Review provides product information and recommendations from customers' perspectives to the people who may have a buying intention of the product or service. This study will investigate the effects of online chats for customers/buyers on the hoteling intentions of the prospective customers. Particularly, it examines the impact of quantity and quality of online customers considering the natural cycle for processing of information. The test system is used to describe the stimulus of quantity and quality of online customer reviews specially the negative ones depending on the involvement of the customers. The largest number of customers involved in the internet make a corresponding agreement. As the number of online customers rises, large number of people tend to adapt to reviews by reviewers, depending on the quality of reviews; On the other hand, some customers involved often adapt to the opinion of reviewers regardless of the quality of online review of customers. An examination of this study using correlation techniques have been done on a subject consisting of students of business management. The proposed hypotheses have been reviewed for three-covariance analysis.

Introduction:

The importance of word-of-mouth communication (WOM) is widely accepted by a traditional marketing researchers. Numerous studies have shown that WOM communication reflects the attitude of customers with many products and services. The WOM event has been changed into various WOM communication portals like Epinions.com, Booking.com. Etc. This mode of communication is called electronic Word of mouth EWOM which has changed the behavior of people because of the growth of the internet usage. People often make decisions based on online knowledge; In addition, they tend to be trustworthy in the opinions of other customers when making decisions about such things as a movie or if they look for an investment decision [1]. The Internet market makes customers writing recommendations that affect customers who cannot go into details of product by either test purchasing or market survey. As a link to the traditional WOM, Internet review is essential to shooting the actions of customers. First of all, unlike the WOM connections, reviews for customers either positive or negative are similarly displayed on various sources in the same area of the Internet. Although several scholars have distinguished the accurate and powerful WOM content. There is no assumptions made in those subjects to the negative reviews in the electronic WoM communications. Another feature of online buyer reviews is similar to rating. In the context of online reviews, customers can easily view and measure the quantity and quality of good and bad ideas because the buyer's online review has been published in writing. Additionally, the quantity and persistence of eWOM communication enables researchers to estimate how online customer reviews are sold for sales (especially for volume, valence, and distribution). Dellarocas and Narayan have shown that equality of internet ratings can serve as a useful indication of human co-operation in order to participate in the WOM-optimization of purchases. This study considers the size but not the level (termed as quality) of eWOM communication. Unlike previous tutorial,

Researcher consider analyzing both quantity and quality under conditions where good and bad customer reviews are available. While some researchers investigated this negative EWOM connection, most EWOM studies focus on the use of EWOM's positive communication marketing and promotes reading eWOM communications. However, researcher focus on buyer reviews because accurate information is considered for further diagnostics or information for good conclusions. For example, when customers get incorrect information about the product, they can categorize the product as low quality. On the contrary, good and neutral knowledge about the most valuable product categorize the products because such information is provided with high, standard, and low quality products. Negative customer reviews may be considered useful or diagnosed with decision-making purposes and therefore has been given greater weight than good knowledge. Moreover, the decision making process focuses on message content, such as the quality of the information. In this regard, the low quality review is usually larger and the contents are irrelevant to the scope of product or services. According to the prospectus, some losses seem to be greater than the related assurance of getting the same amount as lost because the value of the job is much higher than the loss of money. In this sense, the negative WOM message can be more powerful for

customer testing and the purpose of purchasing than a good message. Customers use Internet to check information and to monitor services. Many studies have explored how advertising focuses on people, products and issues. Social and customer psychology, in particular, embraces many ways to assess how people change their decisions. In reviewing these approaches, we have found the idea of engaging in an important precedent for more information and need for processing the same.

In view of a review of information, the researcher has reviewed customers' purchase intention flexibility on the basis of quality and quantity of consumer reviews. Our investigation focuses on the following questions:

(1) Does the product attitude become more unfavorable as the proportion of negative online customer reviews increases?

(2) Does the quality of negative online customer reviews influence product attitude?

(3) Does the quality of negative online customer reviews affect high-involvement customers more than low-involvement customers?

(4) Does the effect of the proportion of negative online customer reviews vary in relation to the quality of the online customer reviews and the level of customer involvement?

Problem statement:

To examine the impact of Quality & Quantity of Negative Online Customer Reviews & involvement on Hotel Booking Intention of the students of University of the Punjab in Pakistan by examining four variables which are:-
Quality of Negative Online Reviews

Quantity of Negative Online Reviews

Involvement

Hotel Booking Intentions

In this study, the quantity and quality of customer review and involvement of consumers were assumed as independent variables wherein the consumer buying/booking intentions were taken as dependent variable. The quality of online customer reviews has been tested according to the quality of the information: namely, importance, trust, understanding and understanding . High quality online review has provided reliable product information, with emphasis on

understanding and arguments for reasons. Low quality reviews, on the other hand, provided information that was incomprehensible and unsuitable. Keep track of revised retail earnings for online customers at the same level by mixing high-quality and high quantity customer reviews. The form of support diminishes editing of things that are common in some experiments [16]. An earlier study showed that engagement depends on how individual customers are not aware of the value of various purchases.

Significance of the Study:

This study is useful for businesses and marketers because it provides insight about consumer's reaction to negative online reviews. It contributes to the following areas:

a) Increasing awareness about the factors that can affect the hotel booking intention of Punjab University students.

b) Assist hotel businesses to increase understanding of the role of negative online reviews on hotel booking intentions, which directly affects sales.

c) Give insight of consumer's reliable sources of information while looking for a hotel.

This study explore the relationship between hotel booking intentions taken as dependent variable & negative online reviews (Quality, Quantity & Involvement) as independent variables.
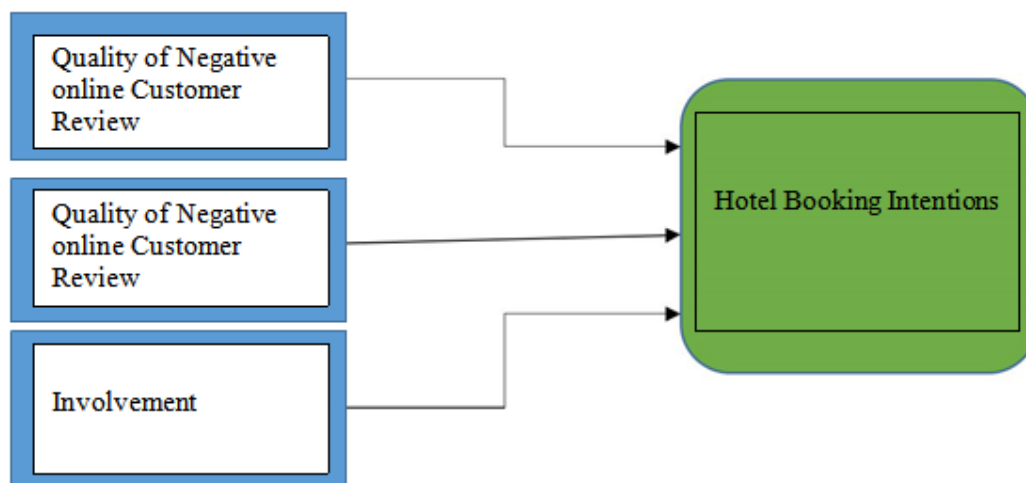
Research objectives:

The aim of this study is to look at the factors that will affect the hotel booking intention of Punjab University Studenets.

Specific objectives:

Following are the specific objectives:-

That Quality of Negative online Customer Review affects student's hotel booking intention.

That Quantity of Negative online Customer Review affects student's hotel booking intention.

That Involvement affects student's hotel booking intention.

Literature review and hypotheses:

This study is based on the evaluation method (ELM) to describe the relationship of engagement with the quantity and quality of improper reviews available online. Similar synchronization is used to describe the impact of incoming customer review. This section of this article has been adapted from previous studies and incorporates following ideas.

Hypothesis:

H1: "The number of negative consumer reviews is proportional to hotel booking intentions."

H2: With the high quality of customer reviews on the internet, the customer attitude in this product will be heavily impacted.

H3: Higher quality negative online consumer reviews influence high-involvement consumers more than low-involvement consumers.

Online customer reviews as a form of eWOM communications:

During the purchase process, customers are looking for predictions regarding value of the product and favor recommendations from different sources of information to access the same. In this regard, online customer reviews available at various online forums/websites have the potential to influence customer decision making. As an informant, online buyer reviews provide product information such as information provided by resellers. However, internet reviews are more comprehensive for customers as they contain more product information such as product features, technical specifications, and technical results related to technical standards. On the other hand, the buyer's online review describes the product characteristics in terms of the use and comparisons of the product performance in the user's opinion [15]. Internet buyer reviews also provide additional information for attribute-value traders who are not willing to comment or explain due to certain restrictions as a limitation. However, online buyer reviews have a number of different features about rating, source, volume, and accessibility. The Source of Internet Customer Review is a group of non-internet-savvy users who like to send online messages. In addition, online

buying reviews build up and can be far from the local community online. Customer reviews online are also easy to keep and the number of people commending the product can be counted easily.

Conformity effect of the proportion of negative online customer reviews:

Burnkrant and Consineau pointed out that the reviews need to be consistent with the ideas of grouping and the individual's inclinations. Customer research is now complying with a change in product outcomes, intentions, or reductions of customer behavior due to a description of the test or purchase of indicators of behavior. The concept is decorated with group features as the size of the team and the part of others already working . An example of synchronization can be seen when a customer makes a decision on the basis of other human decisions. It is because many people who make the same choice reduce the apparent risk of regret after purchasing.

The stimulation is based on the integration of information from the parties, especially when someone receives information from others as evidence of real product characteristics [11]. The company's revised review of customer reviews can use the customer attitude. Existing research conducted in harmony with it suggests that a large proportion of people have the same viewpoint. In other words, individual ideas are generally accepted by the majority of the group. These studies show that the number of ideas from others can be an important factor in the choice of the customer. In this sense, the ratings for online retail buyers can be an important factor for customers considering whether they can buy a new product because customers can see how many people have already bought a product and how many of them are satisfied with the work. In the minds of customers, the unemployment of one single customer review increases the risk of the product and reduces the product's desire. Therefore, much of the revitalization of online customers is more likely than the lower part of online retail customers to create a sense of risk.

The above discussion lead to Hypothesis 1 which is summarized as "The number of negative consumer reviews is proportional to hotel booking intentions."

Quality of negative online customer reviews:

Information Sheet (IS) defines the quality of information in honesty, monitoring, timing and understanding. The research on the quality of the debate focuses on the existing belief. Powerful, intentional and easy-to-understand messages are more complicated than weak and emotionally weak answers [8]. In addition, unlike customer-friendly information, online customer review is a customer perspective and helps payers to make purchasing decisions by providing sound, relevant, and reasonable recommendations. Important parameter for assessment of the quality of online customer review are honesty, understanding and preciseness [8]. Viewing refers to the level of congruence between the information the customer wants or needs to analyze the product and the information contained in online

buyer reviews. Honesty refers to the reliability of knowledge. Understanding defines the quality of content where knowledge cannot be understood in counseling. Finally, anxiety refers to information level. High quality customer review is not deceptive because information is suitable for product testing and it contains discretion, reliability and self-reliance. A low quality online buyer buying review, on the other hand, is unsuitable, dishonest, and is a problem with understanding of unusual thinking. Low quality model information is not very appropriate or taught about product testing, and it is difficult to understand why the reviewer does not encourage this product. With clear and clear reasons, high quality reviews are usually precise than lower quality reviews. Therefore, we assume that high quality customer reviews can cause customers more than a low online buyer review. The above discussion leads to Hypothesis 2 which elaborates that "With the high quality of customer reviews on the internet, the customer attitude in this product will be heavily impacted"

Impact of involvement:

The recent studies on customer behavior and social ethics focuses on the involvement that measures the value and type of information provided by convincing communication. This vision comes from an illustrative way of cultivating (ELM), one of the newest visual indicators to emerge in behavior over 20 years ago. This vision can help define customer feedback in an online review by focusing on the process of processing the users that follow it in responding to customer reviews. ELM describes the processes involved in changing attitudes and promoting thinking ability. Opportunities of analysis are motivated by human motivation and ability to process information. Promoting this concept reflects a person's determination and purpose to process information. The term involvement is used for reference to significance or importance of product/service in view of customer. Many authors have noted strong relationships between engaging and analyzing information. As involvement increases, people have a great motivation to understand important information. When engaging in the ground, people rely on social media issues from source motivation, sympathy, source of controversial, questionnaire images, and photo advertising.

Involvement and the quality of negative online customer reviews

An earlier study has often gained contact between the involvement and the quality of the dispute. An experienced technician (middle routes) begins to think about all or all of the information provided. In addition, when engagement is higher than smaller, people are moved to give the needed understanding to evaluate the rightfulness of the product or product. If chances of lower analysis are, however, the information is not properly evaluated; additionally, change in attitudes can be caused by a few biological processes where the information can be assessed at a minimum effect (route path). In socio-psychological, conflicting messages are thought to be very encouraging when engagement is higher than being less than. Researcher therefore suggest that the level of improper review of the Internet implies a participant buyer

more than a low-cost buyer. The above discussion leads to Hypothesis 3 which narrates that "Higher quality negative online consumer reviews influence high-involvement consumers more than low-involvement consumers."

Methodology

This study is designed to analyze the impact of online customer reviews on hoteling decisions of prospective customers in term of quality and quantity of buyer/users reviews and customer involvement. Further the analyses are conducted to evaluate the proposed hypotheses. This study used Quantitative Research approach since variables used are well defined and specific measurements scales are already developed.This study used non-contrived study setting because data was collected in natural environment i.e workplace. Keeping in view the time constraints and cost effectiveness this study used Cross sectional study. Punjab University students are the population of this study. This study used Krejcie & Morgan Formula to determine a sample size of 113**.** This study used Adaptive Questionnaire from previous studies. The respondents were evaluated on a 5-point LIKERT Scale ranging from 1. Strongly Disagree to 5. Strongly Agree.**Reliability:**

Table:1

Reliability Statistics

Cronbach's Alpha	N of Items
.833	14

The Reliability Statistics table provides the Cronbach's Alpha (.833) which is positive and alpha based on standardizing the items (.70). The results of this data are acceptable because it is more than (.70). Therefore, we can say that internal consistency reliability of the items provides good support for research literature.

Data Collection Method:

Questionnaire based survey was used in this study. Questionnaires were distributed among the respondents via WhatsApp group by sharing Google form's link. The respondents were assured that their responses would be kept confidential and only results will be published. Mixed response was observed from the students. Many enthusiastically participated in the research process and answered the questionnaire with keen interest and diligence and a few showed little interest in the research. Out of 113 questionnaires, 76 were received complete in all respect and were used for the research. It can be observed from the table below that, 70 male students' 92.1 % and 6 female students that constitute 7.9 % participated in the study who filled out the questionnaire completely. Interestingly female students seem

to be shy or reluctant in responding the research.

Gender:

Table: 2

Profession:		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	70	92.1	92.1	92.1
	Female	6	7.9	7.9	100.0
	Total	76	100.0	100.0	

Table: 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Engineering	66	86.8	86.8	86.8
	Academics	2	2.6	2.6	89.5
	Business Management	7	9.2	9.2	98.7
	Medical	1	1.3	1.3	100.0
	Total	76	100.0	100.0	

Interestingly 66 students are from engineering professions. Which shows that they travel a lot & book hotels more frequently.

Proposed Statistical Tool & Techniques:
This study applied Linear Regression & Correlations using SPSS to test the hypotheses**.**

Analysis & Results:

Descriptive Statistics:

Table: 4

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Hotel Booking Intentions	76	1.00	5.00	3.7807	.91822	-.395	.276	-.286	.545
Quantity of Negative Online Review	76	1.00	5.00	3.2863	.76343	-.118	.276	.199	.545
Quality of Negative Online Review	76	1.00	5.00	3.5022	.71603	-.559	.276	1.690	.545
Involvement	76	1.00	5.00	3.1832	.72416	-.467	.276	1.529	.545
Valid N (listwise)	76								

Table 4 provides the mean and standard deviation scores of independent variables and dependent variables adopted in this study. Overall, the mean scores for the 4 scales which consist of total fourteen items shows the positive high mean values which ranged from 1.00 to 5.00.

Pearson's Correlation:

Table: 5

Correlations

		Hotel Booking Intentions	Quantity of Negative Online Review	Quality of Negative Online Review	Involvement
Hotel Booking Intentions	Pearson Correlation	1	.573**	.656**	.283*
	Sig. (2-tailed)		.000	.000	.013
	N	76	76	76	76
Quantity of Negative Online Review	Pearson Correlation	.573**	1	.585**	.530**
	Sig. (2-tailed)	.000		.000	.000
	N	76	76	76	76
Quality of Negative Online Review	Pearson Correlation	.656**	.585**	1	.541**
	Sig. (2-tailed)	.000	.000		.000
	N	76	76	76	76
Involvement	Pearson Correlation	.283*	.530**	.541**	1
	Sig. (2-tailed)	.013	.000	.000	
	N	76	76	76	76

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

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

In Table 5 the Pearson Correlation coefficient is .573; the significance level (sig) or p is .000 and the number of participants of both variables Quantity of Negative Online Review & Hotel Booking Intention are 76. The correlation between Quantity of Negative Online Review & Hotel Booking Intention is statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no

relationship and state that there is a relationship between Quantity of Negative Online Review & Hotel Booking Intention. As the correlation is positive, showing higher the Quantity of negative online review, the more affect it has on Hotel booking intentions of customers i.e the consumers will avoid booking that specific hotel for which there are more negative online reviews & vice versa. The Pearson Correlation coefficient is .656; the significance level (sig) or p is

.000 and the number of participants of both variables (Quality of Negative Online Review & Hotel Booking Intention) are 76. The correlation between Quality of Negative Online Review & Hotel Booking Intention is statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no relationship and state that there is a relationship between Quality of Negative Online Review & Hotel Booking Intention. As the correlation is positive, which shows higher the Quality of negative online review, the more affect it has on Hotel booking intentions of customers i.e the consumers will avoid booking that specific hotel & vice versa. The high quality of Negative customer review reviews was affecting the intention more than low quality reviews The Pearson Correlation coefficient is .283; the significance level (sig) or p is .013 and the number of participants of both variables (Involvement & Hotel Booking Intention) are 76. The correlation between (Involvement & Hotel Booking Intention) statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no relationship and state that there is a relationship between Involvement & Hotel Booking Intention. As the correlation is positive, which means that higher the involvement of Hotel Owners in online reviews higher will be the impact on Hotel Booking Intention and vice versa. Since negative online reviews provide owners valuable information to rectify problems in their hotels which cause negative online reviews to minimize.

Multiple Regressions:

We have used multiple linear regressions, which is a generalization of simple linear regression where several predictor variables are allowed on a right hand side. Hotel Booking Intention is taken as response, outcome or dependent variable, whereas Quality of negative online review, Quantity of negative online review and Involvement are used as independent variables. The systematic part of our model consists of (Hotel Booking Intention) as constant term and rest are other predictor variables mentioned above are regarded as fixed (non-random or exogenous).

Table: 6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.716[a]	.513	.493	.65403

In Table 6, The Model Summary table shows that the multiple correlation coefficient (R),using Quality of negative online review, Quantity of negative online review and Involvement predictors simultaneously,

is .716 and Adjusted R2 is .513, meaning that 51% of the variance

in Hotel Booking Intention can be predicted from the combination of Quality of negative online review, Quantity of negative online review and Involvement. Note that adjusted R2 .493 is lower than unadjusted R2 (.513). This is in part related to the number of variables in the equation. Further Table 8 shows the dependence of Hotel Booking intention (dependent variable) on Quality of negative online review, Quantity of negative online review and Involvement (independent variables). R value of .716 shows the goodness of the model. Regression analysis shows that 51% change in dependent variable is due to the independent variable, while remaining 49% is the unexplained variability.

Table: 7

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.436	3	10.812	25.276	.000^b
	Residual	30.798	72	.428		
	Total	63.234	75			

a. Dependent Variable: Hotel Booking Intentions

b. Predictors: (Constant), Involvement, Quantity of Negative Online Review, Quality of Negative Online Review

In Table 7 of ANOVA table shows that F=25.276 and is statistically significant. This indicates

that the predictors combine to predict hotel Booking Intention. Also,model is considered to be good if significance value falls between 0% to 5%. In Table 7 shows the sig value of .000 which means that relationship between Independent and dependent variable is highly significant hence the model is good fit.

Table: 8

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.700	.418		1.673	.099
	Quantity of Negative Online Review	.427	.128	.355	3.324	.001
	Quality of Negative Online Review	.721	.138	.562	5.222	.000
	Involvement	-.266	.131	-.210	-2.038	.045

a. Dependent Variable: Hotel Booking Intentions

Table 8 signifies Regression coefficients i.e. Beta (β) of Quantity of Negative Online Review with Hotel

Booking Intention is .427 with significant value .001, which shows a positive and significant relationship between Quantity of Negative Online Review & Hotel Booking Intention.

Intention. Regression coefficients i.e. Beta (β) of Quality of Negative Online Review with Hotel Booking Intention is .721 with significant value .000 which shows a positive and significant relationship between Quality of Negative Online Review & Hotel Booking Intention. Regression coefficients i.e. Beta (β) of Involvement with green purchase intention is -0.266 with significant value .045, which shows a negative and significant relationship between Involvement & Hotel Booking Intention. So:

$X = α + β_1 Y_1 + β_2 Y_2 + β_3 Y_3$

Where

X= Hotel Booking Intentions

Y1= Quantity of Negative Online Review

Y2= Quality of Negative Online Review

Y3= Involvement

$X = 0.700 + .427 Y_1 + .721 Y_2 - .266 Y_3$

We see that Hotel Booking Intention is expected to increase by .427 if Quantity of Negative Online Review increases by 1. Hotel Booking Intention is expected to increase by .721 if Quality of Negative Online Review increases by 1. Hotel Booking Intention is expected to decrease by .266 if Involvement increases by 1. The standard errors of the regression coefficients are small, indicating that coefficients have been estimated precisely.

Table: 9

One-Sample Test

	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Hotel Booking Intentions	7.412	75	.000	.78070	.5709	.9905
Quality of Negative Online Review	6.115	75	.000	.50222	.3386	.6658
Involvement	2.206	75	.030	.18322	.0177	.3487
Quantity of Negative Online Review	3.269	75	.002	.28629	.1118	.4607

Table 9 shows the level at which different independent factors affecting the process of Hotel Booking Intention of Punjab University students. All of these independent variables of the current study were tested at test value of 3 in One-Sample Test.

The results showed that: T- Value of Quality of Negative Online Review is 6.115, which is positively

related to Hotel Booking Intention with significant value of .000, which shows that considered Quality of Negative Online Review as a significant independent variable important for the Hotel Booking Intention.

T- Value of Involvement is 2.206 with significant value of .030, which shows that students have declared that Involvement is an essential ingredient necessary for Hotel Booking Intention. The students have clear perspective that Hotel Booking process could not be completed without Involvement.

T- Value of Quality of Negative Online Review is 3.269 with significant value of .002, which shows that students strongly believe that Quality of Negative Online Review is one of key elements in Hotel Booking Intention. Without such an attribute, there is rare possibility of Hotel Booking Intention. Therefore, Quality of Negative Online Review becomes an essential factor responsible for Hotel Booking Intention.

T- Value of Hotel Booking Intention is 7.412 with P value of .000, which shows that the respondents have agreed with the literature that Hotel Booking intention is one of the most important factor for Hotel Booking.

Conclusion

The purpose of this study was to investigate the impact of knowledge sharing portals on the purchasing intentions of people according to the quantity and quality of online review and to provide evidence to measure the level of involvement on the dependent variables. As per above study it is evident that the negative online consumer reviews have a major impact on the consumer purchasing behaviors. The quality of these reviews may have a major impact for more involved customers wherein for less involved customers, the impact of quantity of thumbs down comments may matter more. The study results are summarized as under:- "There are four benefits from this study. First, customers are comparing with Internet reviews and their influence on the attitudes of prospective consumers as the number of Internet customers' recommendations increases. Secondly, online customer reviews have significant impact on customers' attitude more than the offline buyer's review. Third, engagement is in line with the quality of customer reviews that do not enter the internet. Lastly, this study discusses how to contact three aspects of customer reviews, the quality of online customer review, and the involvement. Under high interaction, the most consistent agreement exists between the best online buyer reviews and the actual condition of services. Under low engagement, the corresponding compatibility is not subject to the quality of negative Internet reviews. When high-tech online reviews increase, mental changes under greater quality and authentic reviews are more prominent than in case of clumsy reviews. A simple result however can be that low quality reviews can stimulate customer attitude under a high level of participation and low involvement status, wherein the high quality comments can do the same with lesser proportion of reviews."

References

[1] C. Dellarocas, The digitalization of word of mouth: promise and challenges of online feedback mechanisms, Management Science 49 (10) (2003) 1407–1424.

[2] P. Chatterjee, Online reviews – do customers use them in: ACR Proceedings, 2001, pp. 69–134.

[3] H. Chen, A.L. Houston, R.R. Sewell, B.R. Schatz, Internet browsing and searching: user evaluations of category map and concept space techniques, Journal of the American Society for Information Science 49 (7) (1998) 582–603.

[4] J. Chevalier, D. Mayzlin, The effect of word of mouth online: online book reviews, Journal of Marketing Research 43 (2006) 348–354.

[5] J.B. Cohen, E. Golden, Informational social influence and product evaluation, Journal of Applied Psychology 56 (1972) 54–59.

[6] H. Chip, Do people prefer to pass along good or bad news?: valence and relevance of news as predictors of transmission propensity, Organizational Behavior and Human Decision Processes 68 (2) (1996) 79–94.

[7] A. Greenwald, C. Leavitt, Cognitive theory and audience involve- ment, in: L. Erlbaum (Ed.), Psychological Processes and Advertising Effects, Erlbaum, NJ, 1985, pp. 221–240.

[8] R.E. Petty, S.G. Harkins, K.D. Williams, The effects of group diffusion of cognitive effort on attitudes: an information processing view, Journal of Personality and Social Psychology 38 (1980) 81–92.

[9] H. Chen, A.L. Houston, R.R. Sewell, B.R. Schatz, Internet browsing and searching: user evaluations of category map and concept space techniques, Journal of the American Society for Information Science 49 (7) (1998) 582–603.

[10] B.T. Johnson, A.H. Eagly, The effects of involvement on persuasion: a meta-analysis, Psychological Bulletin 106 (1989) 290–314.

[11] D.-N. Lascu, G. Zinkhan, Customer conformity: review and appli- cations for marketing theory and practice, Journal of Making Theory and Practice 7 (1999) 1–6.

[12] J. Park, J. Kim, Contextual navigation aids for two World Wide Web systems, International Journal of Human–Computer Interaction 6 (2) (2000) 193–217.

[13]   P. Wright, The harassed decision maker: time pressures, distractions and the use of evidence, Journal of Applied Psychology 59 (1974) 555–561.

[14]   J. Lee, D. Park & I. Han the effect of negative online consumer reviews on product attitude: An information processing vie, Electronic Commerce Research and Applications 7 (2008) 341–352

[15]   R.E. Burnkrant, A. Cousineau, Informational and normative social influence in buyer behavior, Journal of Customer Research 2 (3) (1975) 206–214.

[16]   D. Charlett, R. Garland, N. Marr, How damaging is negative word of mouth? Marketing Bulletin 6 (1995) 42–50.

[17]   D. Maheswaran, B. Sternthal, The effects of knowledge, motivation, and type of message on ad processing and product judgment, Journal of Customer Research 17 (1) (1990) 66–73.

[18]   T. Hennig-Thurau, K.P. Gwinner, G. Walsh, D.D. Gremler, Electronic word-of-mouth via customer-opinion platforms: what motivates customers to articulate themselves on the internet? Journal of Interactive Marketing 18 (1) (2004) 38–52.

WORK RELATED STRESS AND EMPLOYEE COMMITMENT AT

DELTA STATE POLYTECHNIC, OGWASHI UKU.

Hillary O. Odor (PhD Scholar), Department of Business Administration, Faculty of Management Sciences,
University of Benin, Benin City, Nigeria.

Abstract

The purpose of this study is to investigate the level of stress in Delta State Polytechnic, Ogwashi Uku as well as to establish the link between work stress and the three dimensions of employee commitment. For this purpose, structured questionnaires were randomly sampled on 120 teaching staff of the polytechnic, out of which 110 were duly completed and returned. Results from the research questionnaires were analyzed using descriptive and regression analysis. The findings reveal that work stress is negatively related to all the three types of commitment, namely, affective, normative and continuance, which is in line with the existing literature. The result of this investigation gives an implication that teaching staff with low job stress will be more committed than those with a high level of stress. This therefore, underscores the relevance of managing stress by reducing workload and role conflict and increasing lecturer's autonomy. The paper offers practical suggestions of how the school management can reduce the level of stress. This will in no small measure improve employee commitment and ultimately improve their performance at work.

Keywords: autonomy; affective commitment; continuance commitment; normative commitment; work stress; workload.

Introduction

The fast changing business environment and tough global competition has made it extremely difficult for modern organizations to function at their optimum capacity (Gul, 2015). Employee commitment is one of the most research topics in organizational behavior and it is therefore considered a sine qua non for the effective boost of the productivity of all organization members (Amstrong, 2005). In other words, organizational leaders are devising various means and strategies aimed at increasing the commitment of their employees in order to boost their performances as well as their value chain. This is based on the fact that employee commitment has become one of the keys used by organization to sustain the success of all organizational outcomes as well as a tool of competitive advantage in a highly competitive business terrain. It has also been noted that the effect of downsizing has made it imperative for the few ones that are left to remain loyal and committed to their organizations; otherwise they will be shown the way out. This point is buttressed by a report by BusinessWeek, on July 16, 2001, as cited in (Robbins, & Judge, 2009:12) which indicates that 54 percent of US employees feel overworked, 55 percent are overwhelmed by workload, 59 percent claim they do not have time for reflection, 56 percent says the time is not enough

to complete their allocated tasks, while 45 percent says their jobs require too much multi tasking. Employees have different types of attitude regarding the job they do and the attitude to a reasonable extent, affect their behaviours at work and also determine how committed they are towards their work in particular and their organization in general. Employees' commitment connotes the degree to which an employee identifies with an organization and is committed to its goals and wishes to maintain membership of that organization (Igbinowanhia, 2011).

Furthermore, Health and Safety Executive has identified stress, as one of the main reported illnesses and other researchers have also pinpointed that stress that is related to work overload and conflict between office and home is closely linked to the risk of disease and ill health (HSE, 2001). It is also because of its impacts on organizational performance that it is a growing concern for organizational leaders.

Mullins (2007) explains that stress is one of the most pressing problems facing European companies and a major cause of adverse influences on the quality of work life and employee performance. No wonder The Health and Safety Executive (HSE) posits that intense stress can lead to mental and physical ill health such as depression, nervous breakdown, and other heart related illnesses. According to Fairbrother and Warn (2003) job stress has a strong and adverse relationship with job satisfaction and organizational commitment and can cause high employee withdrawal behavior and absenteeism. In fact, Khatibi, Asadi and Hamidi (2009) reveal that job stress and organizational commitment are negatively associated.

Stress is a special area that has been receiving increased attention in such areas as occupational health and industrial/organizational psychology in the last three decades due to consumers increased requirement for service enhancement and generalized product benefit satisfaction (Swanepoel, 2001). Stress has been conceptualized by Tsui, & Ajala, (2007) as the adverse reaction people have due to too much pressure in accomplishing their tasks. In the opinion of Omolara (2008), work related stress is an adverse mental and physical reaction which occurs in an individual which make them incapable of coping with the requirement of their tasks. Stress has both physical and psychological effect of employees.

Gharib, Jamil, Ahmad, and Ghouse (2016) wrote on the impact of stress on performance of academic staff of Dhofar University. They discovered that the level of stress was between low and medium and consequently, their performances at work were high. They also discovered that workload which is a major cause of job stress is positively correlated with performance. However, role conflict as a single variable has a negative impact on performance. In the same thinking, Li, Lui, Yuan, and Ju (2017) using structural equation model were able to discover that there is a negative significant correlations between occupational stress and both affective and continuance commitment when they conducted a study on the link between university faculties' job stress and organizational commitment in China. In fact, it is believed that stress is a major cause of absenteeism, aggravated organizational accidents, high rate of employee turnover, and high medical bills by organizations (Wahab, 2010). Job stress have been discovered to adversely affect individual employees by deepening unproductive work behaviour (Chraif, 2010) less than average performances at workplace (Pitariu, Radu & Chraif, 2009) and by extension, the organization as a whole (Ahmad, & Roslan, 2016). Health and Safety Executive (HSE) reported in November, 2012 that out of the over 27 million days that was lost in 2012, 10.4 million were due to work-related stress (Newcombe, 2012). It is in view of the aforementioned that management of

organizations, including academic institutions, must find a way of minimizing stress.

Some organizations design jobs which places a much unrealistic demands on employees. Most of the demands cannot be matched with the employee's knowledge, skills and abilities. This often times places a high level of stress on the employee and may lead to job mobility, emotional burnout, poor work performance, and poor interpersonal relationship with other staff (Manshor, Rodrigue, & Chong, 2003). Work related stress has been linked to some factors such as role conflict, work over-load and lack of autonomy (Bashir & Ramay, 2010). This papers aims at establishing the relationship between organizational stress and employee commitment by looking at the work overload, role conflict and lack of autonomy as the antecedent of work related stress and the three dimensions of employee commitment: affective, continuous and normative. According to Riketta (2002), there is a modest positive relationship between organizational commitment and productivity. A recent review of 27 studies suggests that the relationship between organizational commitment and performance is very strong for new employees and it appears weaker for more experienced workers (Robbins, & Judge, 2009).

Theoretical Framework

Job Stress

According to Bashir and Ramay (2010), stress is the unfavourable reaction people have in connection to too much pressures or other type of demands placed on them both within the internal and external environment. From the foregoing, it is important to note that stress is not generally negative, because it has some positive implications when it is effectively managed. That is why Bashir and Ramay (2010) opines that stress do have some positive effect on employees of any organization up to a certain level where the employee can cope with. A little measure of stress is natural because nothing will ever get done without it (Engineering Employers Federation, 2001). This cannot be a perfect truth as most innovations were not created under stressful conditions. Furthermore, it is important at this point to distinguish clearly pressure from stress. In my opinion, there is no stress that is positive. Once it is called stress, it becomes dysfunctional. However, what is positive is moderate pressure. When pressure passes that moderate level, it becomes stress and from there, it carries its negative connotation.

Workload

Workload refers to the concentration of huge amount of tasks, on an employee (Ali, Raheem, Nawaz, & Imamuddin 2014). This happens when individuals are unable to cope with tasks allocated to them (Idris, 2011). Workload arises when individuals are expected to do more than the available resources vis a vis time, and human or mental capabilities (Ammar,2006).

Role Conflict

When role requirements of an individual are irreconcilable, it creates a conflict. It can also occur when an individual faces many contradictory job assignments. It is a serious situation, because commitment to the role requirement makes it difficult to contribute adequately to the demands of job (Seller & Damas, 2002).

Role conflict can be defined as when individuals perform different roles that conflict with one another.

Autonomy

Autonomy is the extent to which employees are allowed to use their discretion in scheduling their work processes and procedure that will facilitate the achievement of a better performance. In the aspect of lecturing, teaching staff are expected to score high on autonomy because the methods of teaching and transmission of knowledge to students are independently determined by each lecturer. However, every other roles involving administration is being governed by administrative bureaucracy. According to Management Today (2006), a relative degree of autonomy has been found to be positively linked to job satisfaction, which invariably leads to employee commitment.

The extent to which different individuals react to stress differs according to their distinct personal characteristics such as life styles, emotional stability, economic status, life events; appraisal of the stressor, socio-demographic and occupational factors (Rollinson, 2005).

Other Potential Causes of Work Stress

There are four major factors that are potential cause of job stress: Environmental factors; organizational factors, personal factors; and individual differences (Cooper, & Payne, 1978). Economic uncertainty is a situation where people become anxious as a result of a contracting or depressing economy. People express fears and anxiety for fear of losing their jobs. Political uncertainty emanate when people become anxious as a result of a potential change in political leadership. It is indeed a common phenomenon in Nigeria that most employment in public institutions as politically influenced. It becomes a matter of anxiety for employees who are loyal to a particular political leadership when there is a potential change in leadership. Technological dynamism is another potential cause of stress among employees. As technology changes, some employees are seeing themselves as becoming jobless. Technological changes are therefore a major treat to many employees and these cause the stress. This may be due to the fact that some employees may not be able to learn at the speed of technological changes. Jobs that are designed to give the employee some measure of freedom will not cause as much stress as those that are low in terms of autonomy. Furthermore, jobs that have a lot of task varieties will pose less stress than those that are score low on task varieties. Furthermore, automated working environment will pose a lesser challenge in terms of stress than those tasks that are done manually. Research has found out that working in an overcrowded environment can lead to stress and distress (Glomb, Kammeyer-Muller, & Rotundo, 2004). Furthermore, role conflict is another cause of stress because it creates too much expectation that will be difficult to meet. Role overload occurs when the employee is expected to do more than the time permits. For example, when lecturers are giving a deadline to mark and submit examination results within a time limit that appears too short to reconcile. Role ambiguity is created when employee job expectations are not clearly spelt out for him or her to understand. In other words, the employee is not very sure of what is expected of him or her. Personal factors include family pressures, economic problems and individual unique personality characteristics. In Nigeria for instance, where a lot is placed on an average Nigerian worker who has a lot of dependants. There is hardly any Nigerian worker that is not over stretching his or income on family demand or on extended family requirements. That is why research has it that most job stress symptoms actually had their origin from the individual personal characteristics. In other words, most

stress at work is not job induced; rather they originate from the individual personal requirements or demands (Nelson, & Sutton, 1990). Furthermore, marital challenges may also account for some major job stress challenges in Nigerian organizations. Single parents find it harder to cope with the challenges of bringing up their children in a more responsible way.

On individual differences, it is important to note that people are different. Even identical twins have their distinct personal individual characteristics that make each different from the other. That is why some people can thrive of a moderate level of stress while others find it extremely difficult to cope even at a very minute stress level. Social support, perception, job experience and personality have been identified as one of the moderating variable on the relationship between potential stress condition and employee reaction to it (Robbins, & Judge, 2009). The way and manner individuals give meanings to things in their environment differs. Some may perceive a management action as a threat, while some may view it as an opportunity for them to expand their horizon. Moreover, social support through interpersonal helping from colleagues helps to reduce stress. There are other minor causes of stress like unclear job description, inability to get things done on time either due to lack of knowledge, poor time management, lack of interpersonal relationship and poor and ineffective communication (Michac, 2009).

Organizational Commitment

Organizational commitment remains a vital issue to be considered in organization because with the presence of committed employees absenteeism, delays and displacements and other negative behaviours that hamper productivity will be reduced if not completely eliminated (Alipour & Kamaee. 2015). Commitment is that thing that makes an employee to like the job he or she is doing and be willing to put in more efforts (Bashaw & Grant, 2004). Employee commitment is considered to be a psychological immersion of an individual with his place of work through a proper identification or personal alignment with the goals and objective of the organization (Dolan, Tzafrir & Baruch, 2005). Gbadamosi (2010) defines employee commitment as an individual attitude towards the organization and the individual acceptance of the goals of the organization as well as his readiness to exert more positive energy on behalf of the organization. Okpara and Wynn (2008) posit that employees' commitment is an employee disposition to subscribe the goals and missions of the organization and be eager to remain with that organization. Employee commitment has both positive and negative implications. An over committed employee may become overzealous which can result to dysfunctional behaviors leading to poor performances (Mowday, Porter, & Steers, 2002). There is also a situation where an employee may be committed to his job, without being committed to the organization. Arokiasamy and Nagappan argue that for the fact that employee commitment directly affect the quality of output of university lecturers, concerted effort must be made in treating it as an important factor by university management (As cited in (Zhuwao, Setati, Rachidi , & Ukpere, 2015).

Meyer, Allen and Smith (1993) further identified three distinct dimensions of organizational commitment. Affective commitment refers to an emotional attachment which an employee has towards the organization where he or she works and at the same time, has a strong belief in its values. There are a lot of reasons why an employee may have such kind of emotional attachment. The most important is a liking in the system of administration or the culture of the organization. It may not however, mean that the employee is

satisfied with the job he is doing. According to Allen and Meyer (2000), affective commitment happens when the employee stays in the organization because he is willing to stay. This is in line with Dixit and Bhati (2012) description which says that affective commitment is seen as a relative strength of an individual employee identification with and involvement with a particular organization. That is why Herscovitch and Meyer (2002) posits that an individual with an affective commitment believes in the goals and values of the organization, put in maximum efforts towards achieving those goals and intend to stay with the organization. Employees who are affectively committed feel valued, act as ambassadors for their organization and are generally great assets for such organizations (Ahmad & Roslan, 2016).

Continuance commitment is when employee stays in the organization where he works because of the perceived economic benefits or remaining with the organization compared to leaving it. There are many reasons why this can happen. An employee has consciously examined the external environment and discovers that he will not get a job as pleasant as the place he works. For example, an employee may be committed to his employers because he is well paid, not because he likes the work, but because he is fully aware that he will not be able to get another job that will pay him that much. Continuance commitment reveals the deliberation on outcomes of action whether to remain in an organization or to leave. The cost associated with leaving the organization includes loss of attractive fringe benefits, wastage of time, disruption of personal relationships, loss of pension benefits and loss of status (Dixit, & Bhati, 2012). When an employee thinks and considers the benefits that will elude him when he leaves the organization, he or she will be forced to remain with the organization. According to Somers (1995), continuance commitment can further be divided into two: high sacrifice continuance commitment, which is the personal sacrifices associated with leaving ones current employer; and low alternative continuance commitment, which he describes as limited opportunities for another employment is the external environment. An employed man married to an unemployed woman is bound to have continuance commitment because he knows that he cannot leave his present employment when his wife is presently unemployed.

Normative commitment is when an employee stays with an organization because he or she is morally or ethically bound to do so. A good example is when an employee just developed a new project which has cost the organization a huge sum of money. The employee will be morally bound to stay with the organization because he knows that leaving the organization will make the organization lose the investment. Normative commitment is the state in which an employee feels responsible to stay in an organization. Another good example is an employee who has been sponsored through school by the organization. It will be morally and ethically wrong for the employee to leave the organization after enjoying such scholarship. When something like this happens, the employee sees it as his moral duty to reciprocate this gesture by remaining with the organization and contribute to that organization. According to Igbinowanhia (2011), normative commitment is value-laden where similarity between employee values and organizational values take prominence.

Methodology

This study is targeted at the teaching staff of Delta State Polytechnic Ogwashi - Uku. The population of

study is the entire staff made up of both permanent and adhoc staff of over 1000. This is therefore a cross sectional study. The conceptual scope rests on three antecedents of work related stress: work overload, role ambiguity and lack of autonomy. The study also dwells on the dimensions of affective commitment, normative commitment and continuance commitment. The study covers the period between July and October, 2018. The operationalisation of employee commitment was with The Employee Commitment Survey that was developed by Meyer and Allen (2004) with a slight modification. Job Stress Scale (Crank, Regoli, Hewitt & Calberson, 1995) was used to measure the frequency with which employees were bothered by stressful occurrences. It contains five subscales that assess the extent of occupational stress due to job responsibilities, quality concerns, role conflict, job vs. non-job conflict and workload.

Data Analysis

Level of Job Stress

These findings gave answer to research question one which is to examine the respondents' level of job stress. Table 1 shows the overall respondents' level of job stress. Based on the findings, majority of the respondents, that is 61.8% (n=68) reported of having high job stress while 29.1% (n=32) reported of having moderate job stress. Only 10 respondents, representing 9.1 % claimed that they experience low level of stress. This result indicates that less than 50 percent of the participants actually enjoy their job, judging from the angle of stress. The mean score for the level of job stress was 12.742 with the standard deviation of 3.126.

Table 1: Overall Level of Job Related Stress

Stress level	Frequency (N)	Percentage %	Mean	Standard Error
High	68	61.8		
Moderate	32	29.1	12.742	3.126
Low	10	9.1		
Total	110	100.0		

Source: Author

Table 2 reveals the respondents' level of affective commitment. 39 respondent corresponding to 35% of the respondent are low in terms of affective commitment dimension of organizational commitment. 71 respondents, corresponding to 65 % have low affective commitment. A little over half (53.1%, n=139) of the respondents were categorized in low level and followed by 46.9% (n=123) in high level. The mean score for affective commitment in this study was 25.386 with the standard deviation of 1.847. The minimum score for level of affective commitment was 21 while the maximum score was 27. The analysis is shown in Table 2 below.

Table 2: Employee level of Affective Commitment

Level of affective commitment	frequency	Percentage	mean	Standard deviation
High	39	35		
Low	71	65	25.386	1.765

191

Total	110	100.0		

Min: 21

Max: 29

Source: Author

The result of continuance commitment reveals that 42 respondents scored high on continuance commitment. This number represents 38.2% of the respondents, while 68 respondents representing 61.8 % scored low on continuance commitment. The mean score for the continuance commitment dimension in this study was 27.437, with the standard deviation of 1.921. The minimum score for level of continuance commitment was 21 while the maximum score was 32. The analysis is shown in Table 3 below:

Table 3: Employee Level of Continuance Commitment

Level of continuance commitment	frequency	percentage	mean	Standard deviation
High	42	38.2		
Low	68	61.8	27.437	1.921
total	110	100.0		

Min: 21

Max: 32

Source: Author

In the dimension of normative commitment, 25.45% (n=28) of the respondents were categorized in high level while 74.55% (n=82) in are at low level. The mean score for normative commitment in this study was 27.321 with the standard deviation 1.932. The minimum score for level of subjective happiness was 18 while maximum score scored by the respondent was 34. The analysis is displayed in Table 4 below:

Table 4: Employee level of Normative Commitment

Level of normative commitment	Frequency	Percentage	Mean	Standard deviation
High	28	25.45		
Low	82	74.55	27.321	1.861
Total	110	100.0		

Min: 19

Max: 36

Source: Author

Relationship between job stress and organizational commitment

These findings answer to the second objective of the study, which is to determine the relationship between job stress and organizational commitment. The correlation for all variables included in this study is

192

presented in Table 5. The findings revealed that job stress were significantly related to organizational commitment of the respondents. As shown in Table 5, job stress was found to have a negative association with affective commitment (r=-.319, p=.000), continuance commitment (r=-.242, p=.010) and normative commitment (r=-.269, p=.000). This result is consistent with prior research suggesting that the higher stress experienced in work place by the workers, the lower will be their commitment to the organization Sue, 2004; Tytherleigh, Webb, Cooper, & Rickens, 2005); Velnampy, & Aravinthan, 2013; Nart & Batur, 2014). The result is displayed in table 5 below:

Table 5: Relationship between works related stress and employee commitment

variable	Affective commitment	Continuance commitment	Normative commitment
γ	-.319*	-.242*	-.269*
p	.000	.01	.000

*p<.05

Conclusion and Recommendations

Work related stress has been proven to have a significant negative relationship with employee commitment of teaching staff of Delta state polytechnic, Ogwashi - Uku. The implication of the statement therefore is that concerted should be made to reduce the level of stress on the teaching staff of Delta State Polytechnic, Ogwashi-Uku, and by extension, all other institutions of higher learning in Nigeria that operate on the same horizon. More so, staff should not be pushed to do more with fewer resources at their disposal, expecting them to do more than the resources at their disposal can do. This is more so with the head of departments who are not given the financial resources to run their departments. This in no small measure adds to the stress level of departmental heads. Increasing the span of control have been found to account for why most heads of departments are under extreme pressures which account for most of the causes of work stress. Staff should be trained on the need to build and develop extra role behaviour by trying to encourage and assist colleagues when the need arises. In fact, emphasis should be placed on team as against individual accomplishments. It is on this basis that there should a kind of interpersonal helping among colleagues. Furthermore, there should be a free flow of communication among staff. Information is very important when it comes to the flows work, and that is why management should encourage both horizontal and vertical dissemination of information. Finally, the issue of cultism was indirectly mentioned, howbeit, not significantly related to employee commitment. Some teaching staff is of the opinion that security should be beefed up in the school especially during examination. They claimed that some notorious students do harass them during examination, thereby marring the reliability of the examination in testing the competencies of the students. These activities therefore hinder them from performing to their optimum, thereby leading to a high level of stress. The findings lend support to the existing literature that for organizations to make progress and stand the trend of competitiveness, the human resources must exhibit more than their normal job roles by imbibing the spirit of extra role behaviour which is associated with highly commitment employees. Organizational commitment level

shows how long the employee tends to stay in the organization. Lower commitment level among employee shows that the employee will leave the organization soon. Therefore, employers will need to strive hard by removing those issues that bring about stress within the organization. School management can use the results of this study as evidence to be considered in planning to reduce the causes of job stress and increase the level of commitment in employees. It is hoped that this research will contribute a great deal towards a better and ideal policies pertaining to organizational management, as well as good guidance in manpower planning and development of workforce.

Limitations of the Study

Firstly, due to the cross-sectional nature of the data retrieved, the conclusion about the direction of effects regarding to the relationship between job stress and organizational commitment among teaching staff of Delta State Polytechnic, Ogwashi Uku, and therefore may not be generalised to other organizations. Secondly, the study sample are academic staff of Delta state Polytechnic, Ogwashi Uku, so none academic staff were not included. This will restrict the generalizability of the findings. Thirdly, data was collected during the second semester examination. This is a period where lecturers are keenly involved in examination supervision, marking and compilation of results. This may affect the result of the studies because there are indications that at some of other times, the presuure of work may not be as high as it is during examinations. We hope future researchers to do more studies about additional variables that related to job stress factors as job demand, job control and job support, work life balance etc and to apply the studies in other fields.

References

Ahmad, S., & Roslan, N.F. (2016). Relationship between job stress and organizational commitment among public servants in Pontian Johor. International Journal of Business, Economics and Law, 10(2), 234-246.

Ali, W., Raheem, A., Nawaz, A., & Imamuddin, K. (2014). Impact of stress on job performance: An empirical study of the employees of private sector universities of Karachi, Pakistan. International Science Congress Association, 3(7), 14-17.

Alipour, F., & Kamaee, M. (2015). Examining the relationship between job stress and organizational commitment among nurses of Hospitals. Patient Safety Quality Improvement, 3(4), 277-280.

Alnaqib, M. (2012). Organizational factors causing job stress and its relationship to organizational commitment. Al-Anbar University Journal for Economic and Managerial Sciences, 4(9), 148- 167.

Alsharm, S. (2005). Organizational climate relationship with occupational stress for faculty members in Saudi Arabia universities, doctoral thesis, Al-Azhar University, 136.

Ammar, T. (2006). The effect of internal variables on the level of job stress on the employees of Palestinian Universities at Gaza Strip. Master thesis, Islamic university, Gaza, 55.

Arnold, H.J. & Feldman, D.C. (2000). Handbook of psychology, industrial and organizational psychology, 304.

Bashir, U., & Ramay, M.I. (2010). Impact of stress on employee job performance: A study of banking sector of Pakistan. International Journal of Marketing Studies, 2(1), 122-128.

Bhati, M.H., Akram, M.U., Hashim, M., & Akram, Z. (2016). Relationship between job stress and organizational commitment: An empirical study of banking sector. Journal of Business Management and Economics, 7(1), 29-37.

Chraif, M. (2010). Counter-productive behavior at work place. Bucharest: University Press.

Conley, S. & Woosley, S .A. (2000). Teacher role stress, higher order needs and work outcomes. Journal of Educational Administration, 38(2), 179-201.

Cooper, C.L, & Payne, R. (1978). Stress at work. London: Wiley.

Doxit, V., & Bhati, M. (2012). A study of employee commitment and its impact on sustained productivity in Indian auto-component industry. European Journal of Business and Social Sciences, 1(16), 34-51.

Dolan, S.L., Tzafrir, S.S., & Baruch, Y. (2005). Tesing the causal relationship between procedural justice, trust, and organizational citizenship behavior. Revue de gestion des Resources Humaines, 57, 79-89.

Fairbrother, K., & Warn, J. (2003). Workplace dimensions, stress, and job satisfaction. Journal of Managerial Psychology, 18, 8-21.

Gharib, M., Jamil, S.A., Ahmad, M., & Ghouse, S.M. (2016). The impact of job stress on job performance: A case study on academic staff at Dhofar University. International Journal of Economic Research 13(1), 21-33.

Glomb, T.M., Kammeyer-Muller, J.D., & Rotundo, M. (August 2004). Emotional labour demands and compensating wage differentials. Journal of Applied Psychology, 89(4), 700-714.

Greenberg, J., & Baron, R.A. (2007), Behavior in organizations: understanding and meaning the human side of work. New York: Prentice Hall.

Gul, Z. (2015). Impact of employee commitment on organizational development. FWU Journal of Social Sciences, 19(2), 117-124.

Health and Safety Executive (2001). Tackling work related stress: A guide for employees. Sudbury: HSE Books.

Husain, S. (2013). Measuring job stress impacts on job performance levels. Journal of Baghdad College for Economical Sciences, 36, 208- 227.

Idris, M. (2011). Over time effects of role stress on psychological strain among Malaysian Public University Academics. International Journal of Business and Social Science, 4(1), 44-48.

Igbinomwanhia, O.R. (2011). Organization behavior. Benin City: Broadgate Publisher.

Hercovitch, L., & Meyer, J. (2002). Commitment to organizational change: Extension of the three component model. Journal of Applied Psychology, 87(3), 474-487.

Jamal, M. (2005). Burn out among Canadian and Chinese employees: A cross-cultural study. European Management Review, 2, 224-230.

Jaros, Jermie, Koehler, & Sincich (2003). Effects of continuous and affective commitment on the withdrawal procession evaluation of eight structural equation models. Academy of Management Journal, 36, 951-995.

Kazmi, R., Amjad, S., & Khan, D. (2008), occupational stress and its effect on job performance case study of medical house officers of district. Abbottabad. J. Medical Coll Abbottabad, 20(3), 135-139.

Khatibi A, Asadi H. & Hamidi M. (2009). The relationship between job stress and organizational commitment in National Olympic and Paralympic Academy. World Journal of Sport Sciences, 2(4, 272-278.

Kholifat, A. & Almatarneh, S. (2010). The impact of job stress on job performance amongst public school's managers in south Jordan province. Damascus University Journal, 26 (1+2), 599- 642.

Kolt, G. (2003). Eustress, distress, and interpretation in occupational stress, Journal of Managerial Psychology, 18(7), 726-744.

Kotteeswari, M. & Sharief, S. (2014). Job stress and its impact on employees performance. International Journal of advanced research in management, 5(2), 19-27.

Li, P., Lui, Y., Yuan, P., & Ju, F. (2017). The study on the relationship between Universities Faculties' job stress and organizational commitment in China. Procedia Computer Science Journal, 122, 642-648.

Luthans, Fred. (2013). Organizational behaviour: An evidence based approach. McGraw Hill: New Delhi.

Manshor, A.T., Rodrigue, F., & Chong, S.C. (2003). Occupational stress among managers: Malaysiann survey. Journal of Managerial Psychology, 18(6), 622-628.

McEiroy, J.C. (2001). Managing workplace commitment by putting people first. Human Resources Management Review, 11, 327-335.

Meyer, J.P., & Allen, N.J. (2000). Commitment in the workplace: Theory, research and application. Tousand Oaks: Sage.

Michac, J. (2009). Stress and productivity. Slovak Republic: Trexima.

Moorhead, H., & Griffen, F. (2003). Organizational behaviour. Boston: Houghton Mifflin.

Mowday, R.T., Porter, L.M., & Steer, R.M. (2002). The measurement of organizational commitment. Journal of Vocational Behaviour, 5, 180-188.

Mullins, L. J., 2007. Management and Organizational Behaviour. (8th ed.) Harlow: Financial Times Prentice Hall.

Muse, L.A., Harris, S. G. & Field, H.S. (2003). Has the inverted-U theory of stress and job performance had a fair test? Human Performance, 16, 349-364.

Nelson, D.L., & Sutton, C. (December 1990). Chronic work stress and coping: A longitudinal study and suggested new directions. Academy of Management Journal, 16, 859-869.

Newcombe, T. (2012).Work-related stress caused 10 million lost working days last year. Retrived on November 1, 2012 from http://www.hrmagazine.co.uk/hro/news/1075193/work-related-stress-caused-million-lost-days-hse.

Okpara, J.O., & Wynn, P. (2004).The impact of ethical climate on job satisfaction, and commitment in Nigeria: Implications for management development. Journal of Management Development, 27(9), 935-950.

Omolara, B.E.(2008). Influence of work related stress on organizational commitment at Olabisi Onabanjo University, Ago Iwoye, Ogun state, Nigeria. EABR and TLC Conference proceedings. Rothenberg, Germany.

Pitariu H. D, Radu I., & Chraif, M. (2009). Selection and psychological evaluation of personnel. The Journal of Human Resources Psychology, 12(8), 1190-1208.

Rana, B., & Munir, K. (2011). Impact of stressors on the performance of employees on line at http://mpra.ub.uni-muenchen.de/32729/MPRA Paper No.32729.

Revati, C. D. (2012). A healthy way to handle work place stress through yoga, meditation and soothing humor. International Journal of Environmental Sciences, 2(4), 237-248.

Riketta, M. (March, 2002). Attitidunal organizational commitment and job performance: A meta-analysis. Journal of Organizational Behaviour, 13, 257-266.

Rizwan, M., Waseem, A., Bukhari, S. (2014), Antecedents of Job Stress and its impact on JobPerformance and Job Satisfaction. International Journal of Learning & Development, 4(2), 187-203

Robbins, S.P., & Judge, T.A. (2009). Organizational behaviour (13th ed.). London: Pearson Education Inc.

Rollinson, D. (2005). Organizational behaviour and analysis: An integrated approach. London: Prentice- Hall.

Seller, R.M., & Damas, A.J. (2002). One role or two? The function of psychological separation in role conflict. Journal of Applied Psychology, 87(3), 574-582.

Setar, S., Buitendach, J., & Kanengoni, H. (2015). The moderating role of psychological capital in the relationship between job stress and the outcomes of incivility and job involvement amongst call Centre employees. SA Journal of Industrial Psychology, 41(1), 1183- 1196.

Shockley-Zalabak, P., Ellis, K., & Winograd, G. (2000), Organizational trust: What it means, why it matters? Organizational Development Journal, 18(4), 35-48.

Siu, O. (2002). Occupational stressors and well-being among Chinese employees: The role of

organizational commitment. Journal of Applied Psychology, 51(4), 527–544.

Somers, M.J. (1995). Organizational commitment, turnover, and absenteeism: An examination of work organizations. Administrative Science Quarterly, 19, 533-546.

Soran, S., Balkan, M., & Serin, M. (2014). Job stress and performance: the mediating effect of emotional intelligence. European Journal of Business and Social Sciences, 3(5), 67-75.

Swanepoel, B.P. (2001).Human resources management: Theory and practice. South Africa: Juta and Co. Limited.

Trayambak, S., Kumar, P., & Jha, A.N. (2012). A conceptual study on role stressors, their impact and strategies to manage role stressors. IOSR Journal of Business and Management, 4(1), 44-48.

Tsui, H., & Ajala, G.A. (2007). Emotional intelligence in leadership and organization. New York: Gross Est Putnam.

Velnampy, T., & Aravinthan, S. A. (2013).occupational stress and organizational commitment in Private banks: A Sri Lankan experience. European Journal of Business and Management, 5 (7), 254-266.

Wahab, A.B. (2010). Stress management among artisans in construction industry in Nigeria.

Global Journal of Researchers in Engineering, 10(1), 93-103.

Work related stress (November, 2001). A short guide: Health and Safety Executive.

Wright, T.A. & Bonett, D.G. (December, 2002). The moderating effects of employee tenure on the relation organizational commitment and job performance: A meta-analysis. Journal of Applied Psychology, 1183-1190.

York, P. (October, 2001). Getting a grip on stress. Management Today, p.105.

Zafar, Q., Ali, A., Hameed, T., Ilyas, T., & Younas, H. (2015), The Influence of Job Stress onEmployees Performance in Pakistan. American Journal of Social Science Research, 1(4), 221-225.

Zhuwao, S., Setati, T.S., Rachidi , M.P., & Ukpere, W.I. (2015). Occupational stress and organizational commitment of employees at higher educational institution. Journal of Governance and Regulation, 4(4), 740-746.

THE EFFECTS OF ROLE STRESS AND EMOTIONAL INTELLIGENCE ON AUDITOR PERFORMANCE WITH PSYCHOLOGICAL ASPECTS AND WELL-BEING AS A MODERATING VARIABLE (THE EMPIRICAL STUDY AT PUBLIC ACCOUNTING FIRM IN MAKASSAR CITY)

Magfirah Wahyu Ramadhani

Faculty of Economic and Business, Hasanuddin University

Andi Ulfaisyah Yusuf

Faculty of Economic and Business of, Hasanuddin University

Ridha Rizkiyah

Faculty of Economic and Business of, Hasanuddin University

Haliah

Lecture of Faculty of Economic and Business of, Hasanuddin University

Mediaty

Lecture of Faculty of Economic and Business of, Hasanuddin University

Abstract

This study aims to examine the effect of role stress and emotional intelligence on auditor performance with aspects of psychological well-being as a moderating variable. This research is a quantitative research with a descriptive approach. The population in this study are all auditors who work in the Public Accounting Firm (KAP). The sampling technique uses purposive sampling method. The sample in this study was the profession of auditors who worked for KAP in Makassar City provided that the respondents concerned had at least worked for one year in the KAP, while the samples in this study were 33 auditors. The data collection method is using questionnaires that are distributed directly. The data used in the study is primary data collected through questionnaire surveys. Data analysis using analysis multiple linear regression and regression moderating analysis with MRA (Moderated Regression Analysis) approach. Multiple linear regression analysis for hypothesis role stress and emotional intelligence. Multiple linear regression analysis with test The MRA for the role stress and emotional intelligence hypothesis is moderated by aspects of psychological well-being. The results showed that role stress had a negative effect and emotional intelligence had a positive effect on auditor performance. The analysis of moderating variable with the MRA approach shows that the aspects of psychological well-being are able to moderate the role stress hypothesis and emotional intelligence on auditor performance.

Keywords: Role Stress, Emotional Intelligence, Psychological Aspects of Well-Being, Auditor Performance.

BACKGROUND

Along with the times, fulfillment of the availability of labor in the industrial world and increasingly diverse business. However, "today the profession as a public accountant is one of the professions that are of great interest to the public" Ermawati et al (2014). public funding is a profession based on "the trust of the community or users of services to provide professional services to interested parties, both internal and external parties" Soepriadi et al (2015).

Today, public trust in the accounting profession has undergone significant changes as a result of several cases of failed audits. Nakula and Anna (2013) in their study stated that the case that had occurred was the revocation of the public accountant's license and KAP's permission to public accountants in 2009, namely public accountant Hans Burhanuddin Makarao who was subject to three months of sanctions. This is due to not yet fully complying with the Public Accountants Professional Auditing Standards (SA-SPAP) in conducting general audits of the financial statements of PT. Samcon in the 2008 financial year, which was considered potentially and had a significant influence on the independent auditor's report.

Poor auditor performance in carrying out tasks can be influenced by conditions where the auditor is vulnerable to work stress. "Work conditions that are less conducive can affect auditor performance so that it can influence public confidence in the auditor as an independent party in auditing financial statements" Hanif (2013). Individuals who are required to interact with many people both inside and outside the organization with diverse desires and expectations are likely to be vulnerable to role stress.

The role stress is something that affects not only the auditor in relation to the auditor's performance itself but also to the KAP where they work. This is in line with the research of Wiryathi et al (2014) which states that "professions in accounting, especially auditors are professions that have high stress levels. "Stress at a certain level can actually motivate someone to improve performance and complete the work done. However, excessive levels of stress can have a negative impact that can lead to decreased performance, and job dissatisfaction can lead to depression and anxiety. There are three elements of role stress as stated by Fogarty et al. (2000), those are "role of conflict, role of ambiguity, and of role overload."

Auditors' performance is not only seen from their perfect work ability, but also the ability to master and manage themselves and the ability to build relationships with others. This ability by Daniel Goleman is called emotional intelligence or emotional intelligence that will provide an influence from within a person. With emotional intelligence, it is expected that in carrying out the work of the auditor it can better regulate his emotions, so that the auditor can work better and comfortably so that he can get out of the pressure of that role.

The concept of emotional intelligence is a phenomenon that is still relatively new in the world of industrial and organizational psychology, but its use in the world of work today is needed. Performance is not only seen by intellectual factors, but also by emotional factors. Someone who can control his emotions well will be able to produce good performance too. There are psychological factors that underlie the relationship between a person and his organization. Psychological factors that influence the ability of accountants in their organizations include the ability to manage themselves, the ability to coordinate

emotions within themselves, and do calm thoughts without being carried away by emotion.

Well-being and happiness is something that every individual wants to have in life in this world. "Psychological well-being is a multidimensional measure of psychological development and mental health, including the scale of the level of independence and positive relationships with others," Wikanestri and Prabowo (2015). If the auditor can place his emotions in the right portion, sorting out satisfaction and regulating moods and supported by aspects of psychological well-being on him is expected to improve performance in carrying out his assignment. "The high level of work stress is believed to be able to be overcome by each individual, if each individual has a good psychological well-being," Rizkia and Reskino (2016).

Based on the explanation above, the researcher was interested in conducting a study entitled "The Effect of Role Stress and Emotional Intelligence Against Auditor Performance with Psychological Well-Being Aspects as the Moderate Variable in Public accountant firm in Makassar City ".

LITERATURE REVIEW

A. Goal Setting Theory

This theory was put forward by Edwin Locke in 1978. This theory explains the relationship between purpose and behavior. If someone understands his purpose well, it will also be affected by his performance. Locke argues that the intention to achieve a goal is the main source of work motivation. The goal will be to tell an individual what to do and how much effort must be spent. This theory explains that "a person's behavior is determined by two cognitions that value and intentions (goal)" Ward et al (2015). People have set goals for their behavior in the future and these goals will affect the behavior that actually occurs. His behavior will be governed by ideas (thoughts) and his intentions that will influence the actions and consequences of his performance.

B. Theory of Ethical Attitudes and Behavior

The attitude and ethical behavior theory is a theory that states that a person's behavior is determined by attitudes, social rules, habits and knowing the consequences of these behaviors. The theory of attitude and behavior developed by Triandis (1971). The attitude and behavior theory wants to explain about the attitudes held by someone in determining a person's behavior. According to Ayuningtyas and Pamudji (2012) "this theory is seen as a theory that can be underlying to explain the acceptance of aberrant behavior." The theory states that behavior is determined for what people want to do (attitude), what they think they will do (rules social rules), what they can do (habits) and with the consequences of the behavior they think about. Attitudes concerning the cognitive component are related to beliefs, while the affective attitude component has the connotation of likes or dislikes.

C. Attribution Theory

Attribution theory was proposed by Fritz Heider in 1958 who explained a person's behavior and studied the process of how someone interpreted an event, studied how someone interpreted the reason or cause of his behavior. According to Heider, there are two sources of attribution to behavior. First, is internal

or dispositional attribution. Second, is external or environmental attribution. In our internal attribution we conclude that a person's behavior is caused by internal strength or disposition (the psychological element that precedes behavior), namely factors that originate in a person such as ability, knowledge or effort. In our external attribution we conclude that:

"A person's behavior is caused by the environmental forces eg luck, chance and the environment" According Febrina (2012), Models of Scientific Reasoned described the 4 (four) important information to conclude attribution someone, as follows:

1. Distinctiveness: Behavior can be distinguished from the behavior of others when facing the same situation.
2. Consensus: If other people agree that behavior is governed by some personal characteristics.
3. Consistency over time: Whether the behavior is repeated.
4. Consistency over modality (the way in which the behavior is carried out): Is the behavior repeated in different situations.

D. Role Stress

According Syafariah (2017) "role stress is a condition in which an affected by something vague and contradictory that any other act that can lead independent so the results of his work to be biased and detrimental to certain parties. "Stress at a certain level can actually motivate someone to improve performance and complete their work. However, "excessive levels of stress can have a negative impact that can lead to decreased performance, job dissatisfaction, and can lead to depression and anxiety" Rizkia and Reskino (2016). Three elements of role stress as stated by Fogarty et al. (2000), those are:

1. Role Conflict

   Role conflict is a conflict that arises due to a mismatch between implementing organizational bureaucratic control of rules, ethics, norms, and professional independence. This "can cause a decrease in one's performance because it is not followed by high concentration" Rosally and Jogi (2015).

2. Role ambiguity

   According to Fembriani and Budiartha (2016) "unclear role is not enough information to complete the work and the absence of clear direction and policy, uncertainty about authority, and uncertainty about sanctions and rewards for behavior carried out. "Unclear roles occur when a person does not have clear information, direction and goals regarding the role or task that must be performed. Individuals who experience role obscurity will experience anxiety becoming more dissatisfied and doing work less effectively with other individuals thereby reducing their performance.

3. Role Overload

   Role overload is a "condition where employees have too much work to do or under the pressure of a tight time schedule." Fiscal et al (2012). Overload can be distinguished quantitatively and qualitatively. It is said to be quantitative overload if the amount of work targeted exceeds the capacity of the employee. As a result, these employees are easily tired and in high tension. "Overload

qualitatively if the work is very complex and difficult so it seizes the ability of employees" Fiscal et al (2012).

E.   Emotional Intelligence

The term Emotional Intelligence was originally a development of the word emotion that refers to an intelligence in managing emotions appropriately. Emotions play an important role because emotion is a "lifeline for self-awareness and self-survival that deeply connects us with ourselves and others and with nature" Andriani (2014). Emotional Intelligence allows a person to achieve his goal. "Self-awareness, self-mastery, empathy and good social skills are abilities that are very supportive of someone in a challenging job and competition among coworkers," Hidayati et al (2010).

F.   Auditor performance

Auditor performance is an action or implementation of audit tasks that have been completed by the auditor within a certain period of time. Arianti (2015) states that better auditor performance achievement must be in accordance with standards and a certain period of time, namely: Quality of work is the quality of work completion by working based on all abilities and skills, as well as knowledge possessed by auditors; work quantity is the amount of work that can be completed with the target that is the responsibility of the auditor's work, as well as the ability to utilize the facilities and infrastructure to support the work, the timeliness of the completion of work in accordance with the available time. Arianti (2015).

G.   Aspects of Psychological Well-Being

According to Misero and Hawadi (2012) operationalizing psychological well-being into six main dimensions, those are autonomy, environmental mastery, personal growth, positive relation with others, purpose in life, and self-acceptance. The psychological well-being of a person in the world of work is an important topic in shaping a person's behavior or a situation in the work environment. The high level of work stress is believed to be able to be overcome by each individual, if every individual has a good psychological well-being. Psychological well-being can be seen from the following determinants, namely:

1. Autonomy

    Can make their own decisions and be independent, able to avoid social pressure and can act in certain ways. Can regulate behavior from within and evaluate themselves with personal standards.

2. Environmental Growth

    The ability of individuals to choose or form an environment that is in accordance with their conditions. Having a sense of mastery and competence in managing the environment, controlling complex rules in activity - external activities, can utilize effectively the opportunities that are all around, being able to select or create things that fit your needs and personal values.

3. Self-Growth

    Having a sense of continuous self-development, seeing oneself as a person who grows and develops, is open to experience new experiences, realizing personal potentials, seeing

self-development and self-behavior over time, changing in ways that reflect knowledge and effectiveness.

4. Positive Relationships with Others

Have a warm, mutually satisfying relationship and trust with others. Having the ability to empathize, feel, and get along well. Demonstrate affection and are able to engage in deep friendships and identify with others.

5. Purpose of life

Have specific goals in life and control over oneself, feel the meaning of past and present life, hold beliefs beliefs that lead to the purpose of life, have goals and points of view in life.

6. Accepting yourself

A positive attitude towards yourself by knowing and accepting aspects of oneself, including good and bad qualities, as well as positive views about life in the past.

H. Hypothesis Framework and Development

1. Effects of Role Stress on the Auditor

There are three elements of role stress as stated by Fogarty et al. (2000) that "the role conflict, role ambiguity, and role overload. "According to Hanna (Ramadan 2013), "one can experience role ambiguity if they feel there is no clarity with respect to expectations work." The results of research conducted by Utomo (2011) are role ambiguity that has a negative effect on leader performance. The lower the role ambiguity, the higher a person's performance. Hanif (2013) states that "unclear role arises because of insufficient information needed to complete tasks or jobs provided in a satisfying manner." According to Almer & Kaplan (2002) "auditors who experience role overload can have an impact on the results of his work. " As a result, someone is easily tired and in high tension. This can reduce the performance of someone. Based on the description above, the hypothesis can be formulated as following:

H1: Role stress has a negative effect on auditor performance.

2. Effect of Emotional Intelligence on Performance The auditor

Emotional intelligence will influence the behavior of each individual in overcoming problems that arise in themselves, including in work problems. The results of research conducted by Sitompul et al (2012) and Setiawan and Latrini (2016) are emotional intelligence positively influencing auditor performance. This shows that an auditor will can control emotions that will affect their cognitive abilities to deal with various client demands, it is easy to cooperate in an audit team so that could run it task with well and will influence an auditor's performance. Based on the description above, the hypothesis can be formulated as follows:

H2: Emotional Intelligence has a positive effect on auditor performance

3. Psychological Well-Being Aspect Moderating Role Relationships Stress on Auditor Performance.

The existence of role stress is something that influences not only the auditor regarding the auditor's performance itself but also the KAP where they work. The psychological well-being of a

person in the world of work is an important topic in shaping a person's behavior or a situation in the work environment. Research conducted by Gratia (2014) also states that psychological well-being plays an important role in overcoming role stress and improving auditor performance. High levels of job stress is believed to be addressed by each individual, if the individual has the psychological well-being is good. Based on the description above, the hypothesis can be formulated as following:

H3: The aspects of psychological well-being moderate the influence of role stress on auditor performance.

4. **Aspects of Psychological Well-Being Moderating the Relationship of Emotional Intelligence to Performance The auditor.**

Setiawan and Latrini (2016) states that "emotional intelligence is intelligence controlling and monitoring the feelings of others and oneself and using those feelings to guide actions and thoughts," so that success in working and producing outstanding performance in work requires emotional intelligence. In addition to having emotional intelligence, one's performance will be better if it has aspects of psychological well-being where the psychological well-being aspect is a condition where individuals have a positive attitude towards themselves and others, make their own decisions, regulate the environment that suits their needs, have the purpose of life and being able to develop itself so that it is more meaningful. So that if the auditor can place his emotions in the right portion, sorting out satisfaction and regulating moods and supported by aspects of psychological well-being on him is expected to improve performance in carrying out his assignment. Based on the description above, the hypothesis can be formulated as following:

H4: The psychological well-being aspect moderates the effect of emotional intelligence on auditor performance.

RESEARCH TYPE AND LOCATION

1. **Research Type**

This study method used is quantitative research that uses numbers and with statistical calculations.

2. **Research sites**

This research was conducted at the Public Accounting Office (KAP) in the city of Makassar.

Population and Samples

The population in this study were all independent auditors working at the Public Accounting Firm (KAP) in the city of Makassar, namely: (1) KAP Benny, Tony, Frans & Daniel; (2) KAP Bharata, Arifin, Mumajad & Sayuti (Cab); (3) KAP Drs. Harly Weku; (4) KAP Drs. Rusman Thoeng, M.Com, BAP; (5) KAP Drs. Thomas, Blasius, Widartoyo & Rekan (Cab); (6) KAP Usman & Rekan (Cab); (7)Yakub Ratan KAP; (8) KAP Drs. H. Muhamad Fadjar. Samples are independent auditor who works in public accounting firm in Makassar city. Sampling in the study was conducted by purposive sampling method, where the sample is determined by certain considerations or criteria. The sample in this study is the profession of auditors who work in the Public accountant firm in Makassar provided that the respondent concerned at least has worked for one year as an auditor at the Public Accounting Firm. The

reason for choosing these criteria is because the auditor has the time and experience to adapt and assess the conditions of his working environment.

A. Data Collecting Method

In this study the facts revealed are actual facts, namely data obtained from questionnaires in the form of a list of written statements and previously formulated which will be answered by the respondent, where alternative answers have been provided so that the respondent just has to choose.

B. Research Instrument

The instruments used in this study were using questionnaires or questionnaires. The questionnaire to measure the variable Role Stress (X 1), Emotional Intelligence (X 2), Aspects of Psychological Well-Being (M), and Auditor Performance (Y). To measure the opinions of respondents used 5 Likert scale of five numbers, namely starting number 5 for opinions strongly agree (SS) and number 1 for strongly disagree (STS). The details are as follows:

Number 1 = Strongly Disagree (STS)

Number 2 = Disagree (TS)

Number 3 = Doubtful (R)

Number 4 = Agree (S)

Number 5 = Strongly Agree (SS)

C. Data analysis method

In this study, researchers used quantitative analysis. "Quantitative analysis is a form of analysis that is intended for large data grouped into categories that are tangible numbers" Saranela and Laksito (2011). The method of data analysis uses descriptive statistics, data quality tests, classic assumption tests and hypothesis testing with the help of computers through the IBM SPSS 20 for Windows program

1. Descriptive Data Analysis

This descriptive statistic is used to provide an overview of the demographics of the research respondents. The demographic data includes: auditor position, educational background, education level, and other types of demographic data.

2. Data Quality Test

Data quality test is intended to find out how much the level of consistency and accuracy of the data collected from the use of research instruments. Testing of the data quality of this research can be done by validity and reliability testing.

3. Classic assumption test

The classical assay for the regression model used in this study was conducted to test whether the regression model was good or not. In this study, the classic assumption test used was normality test, multicollinearity test, and heteroscedastity test.

4. Hypothesis testing

a. Multiple Linear Regression Analysis

Regression analysis is used to predict the influence of more than one independent variable on one dependent variable, either partially or simultaneously.

b. Moderated Regression Analysis (MRA)

Interaction test or often called Moderated Regression Analysis (MRA) is "a special application of linear multiple regression in which the regression equation contains elements of interaction (multiplying two or more independent variables)" Liana (2009). This hypothesis test is done by testing the coefficient of determination and partial regression test (t-test):

Discussion

1. Effect of Role Stress on Auditor Performance

The first hypothesis (H1) proposed in this study is that role stress has a negative effect on auditor performance. The results of the analysis show that unstandardized beta coefficients of role stress variables are -0.233 and (sig.) T of 0.013. Based on the results of the analysis show that role stress has a negative effect on auditor performance. This means that the lower the role stress auditors in the Makassar city, the higher the performance given, thus the first hypothesis is accepted. Research result This reinforces the results of the research by Fanani (2008), and Hidayati et al (2010) which states that there is a negative influence between role stress on auditor performance.

Sari and Suryanawa (2016) state that "role stress is a condition in which a person is affected by something vague, difficult, and contradictory so that he acts differently that can cause independence," so that the results of his work become biased and detrimental to certain parties. "The existence of role pressure is something that affects not only the auditor in relation to the auditor's performance itself but also to the KAP where they work"

2. Effect of Emotional Intelligence on Auditor Performance

The second hypothesis (H2) proposed in this study is emotional intelligence which has a positive effect on auditor performance. The results of the analysis show that the unstandardized beta coefficient of the emotional intelligence variable is 0.413 and (sig.) T is 0.005. Based on the results of the analysis show that emotional intelligence has a positive effect on auditor performance. This means that the better the emotional intelligence that is owned by an auditor in the Makassar city, then the performance provided will also be better, thus the second hypothesis is accepted.

The results of this study indicate that emotional intelligence has a positive effect on auditor performance due to emotional intelligence will affect the behavior of each individual in overcoming problems that arise in themselves, including in work problems so that it is more likely for someone to achieve his goals. The results of this study reinforce the results of the research of Hidayati et al (2010) and Putra and Latrini (2016) which state that there is a positive and significant influence between emotional intelligence on performance.

3. The Influence of Psychological Well-Being Aspects in Moderating Role Stress to Auditor Performance

The third hypothesis (H3) proposed in this study is the aspect of psychological well-being moderating role stress on auditor performance. The results of the analysis show that the unstandardized beta coefficient X1M is 0.058 and (sig.) T is 0.042. Based on the results of the analysis indicate that the interaction between aspects of psychological well-being and role stress affects the auditor's performance. This means that the third hypothesis states that the aspects of psychological well-being

moderating role stress on auditor performance are accepted.

Psychological well-being is a condition of individuals who have a positive attitude towards themselves and others. "This positive attitude is characterized by the ability to make their own decisions and regulate their behavior" Rizkia and Reskino (2016). The psychological well-being of a person in the world of work is an important topic in shaping a person's behavior or a situation in the work environment. Research conducted by Gratia et al (2014) also states that "psychological well-being plays an important role in overcoming role stress and improving auditor performance."

4. Aspect Influence Psychological Well-Being in Moderating Emotional Intelligence Against Auditor Performance

The fourth hypothesis (H4) proposed in this study is psychological well-being moderating emotional intelligence on auditor performance. The results of the analysis show that the unstandardized beta coefficient of X2M is 0.085 and (sig.) T is 0.013. Based on the results of the analysis show that the interaction between aspects of psychological well-being and emotional intelligence has an effect on auditor performance. This means that the fourth hypothesis states that the aspects of psychological well-being moderate the emotional intelligence of the auditor's performance is accepted.

According to Hadjam and Nasiruddin (2003) "psychological well-being is a concept used to describe individual psychological health based on fulfilling positive psychological function criteria proposed by psychologists." The psychological well-being aspect is a condition where individuals have a positive attitude towards themselves and others, make their own decisions, set the environment to match their needs, having a purpose in life and are able to develop themselves it means more meaningful. It means if the auditor can place his emotions in the right portion, sorting out satisfaction and regulating moods and supported by aspects of psychological well-being on him is expected to improve performance in carrying out his assignment.

Conclusions

This study aims to determine the effect of independent variables, those are role stress and emotional intelligence on the dependent variable, those are auditor performance and the interaction of moderating variables, namely aspects of psychological well-being.

1. Based on the results of the analysis show that role stress has a negative effect on auditor performance. It means that the lower the role pressure that is owned by an auditor, the better the performance given.

2. Based on the results of the analysis show that emotional intelligence has a positive effect on auditor performance. It means that the better the emotional intelligence the auditor has, the better the auditor's performance.

3. The results of the moderation regression analysis with the interaction test approach or MRA (Moderated Regression Analysis) indicate that the interaction of aspects of psychological well-being and role stress influences auditor performance. It means that aspects of psychological well-being are able to moderate the relationship of role stress with auditor performance.

4. The results of the moderation regression analysis with the interaction test approach or MRA (Moderated Regression Analysis) indicate that the interaction of aspects of psychological well-being and emotional intelligence has an effect on auditor performance. It means that the aspect of psychological well-being is able to moderate the relationship of emotional intelligence with auditor performance.

REFERENCES

Agustina, Lidya. 2009. Pengaruh Konflik Peran, Ketidakjelasan Peran, dan Kelebihan Peran terhadap Kepuasan Kerja dan Kinerja Auditor. (Penelitian pada Kantor Akuntan Publik yang Bermitra dengan Kantor Akuntan Publik Big Four di Wilayah DKI Jakarta). Jurnal Akuntansi, 1 (1): 40-69.

Almer, ED, and Kaplan, SE, 2002. The Effect of Flexible Work Arrangements on Stressors, Burnout, and Behavioral Job Outcomes in Public Accounting. *Behavioral Research in Accounting,* 14: 01-34.

Andriani, Asna. 2014. Kecerdasan Emosional (Emotional Quotient) Dalam Peningkatan Prestasi Belajar. *Edukasi,* 2 (1): 4 59-472.

Arianti, Heny. 2015. Faktor-Faktor Yang Mempengaruhi Kinerja Auditor (Studi Empiris Pada KAP di Surakarta dan Yogyakarta). *Naskah Publikasi* : 1-15.

Ayuningtyas, Harvita Y. dan Pamudji, S. 2012. Pengaruh Pengalaman Kerja, Independensi, Objektivitas, Integritas, dan Kompetensi terhadap Kualitas Hasil Audit. Diponegoro JournaL of Accounting, Vol.2, No. 1.

Darwati, Yuli. 2015. Keterlambatan Mahasiswa Dalam Studi Ditinjau dari Teori Atribusi from Weiner (Upaya Looking for Solusi on Keterlambatan Mahasiswa dalam Studi di Prodi Psikologi Islam STAIN Kediri). *Jurnal Psikologi,* 9 (1): 57-65.

Ermawati, Made Dewi., Ni Kadek Sinarwati and Edy Sujana. 2014 Pengaruh Role Stress Terhadap Kinerja Auditor dengan Emotional Quotient Sebagai Variabel Moderating (Studi Empiris pada Kantor Akuntan Publik di Bali). *E-Journal* , 2 (1): 1-12.

Fanani, Zaenal. 2008. Pengaruh Struktur Audit, Konflik Peran dan Ketidakjelasan Peran Terhadap Kinerja Auditor. *Accounting Conference, Faculty of Economics Universitas Indonesia:* 135-349.

Febrina, Husna Lina. 2012. Analisis Pengaruh Karakteristik Personal Auditor Terhadap Penerimaan Auditor Atas Dysfunctional Audit Behavior (Studi Empiris pada Kantor Akuntan Publik di Jawa Tengah dan di Yogyakarta). *Essay.* Faculty Ekonomika and Business University Diponegoro Semarang.

Fembriani, Astrid dan Budiartha. 2016. Faktor-Faktor yang Memengaruhi Kinerja Auditor BPK RI Perwakilan Provinsi Bali. *E-Jurnal Ekonomi dan Bisnis,* 5(3): 601-628.

Fiscal, Yunus., Syilvya dan Muh. Nur Ram'dhan. 2012. Pengaruh Pengalaman Kerja, Otonomi Kerja, dan Tekanan Peran Terhadap Kinerja Auditor pada Kantor Akuntan Publik di Bandar Lampung (Study Kasus pada Kantor Akuntan Publik di Bandar Lampung). *Jurnal Akuntansi dan Keuangan.* 3 (2): 281-298.

Fogarty, TJ, Jagdip Singh, Gary K. Rhoads, Ronald K. Moore. 2000 Antecedents and Consequences of Burnout in Accounting:

Beyond the Role Stress Model". *Behavioral Research in Accounting* : 31–67.

Gratia, Angelina Ave. 2014 Pengaruh Gaya Hidup Sehat Terhadap Psychological Well-Being dan Dampaknya pada Auditor KAP. *Essay.* Fakultas Ekonomika dan Bisnis Universitas Diponegoro Semarang

Hadjam, M. Noor Rochman dan Arif Nasiruddin. 2003. Peranan Kesulitan Ekonomi, Kepuasan Kerja dan Religiusitas Terhadap Kesejahteraan Psikologis. *Jurnal Psikologi:* 72-80.

Hanif, Rheny Afriana. 2013. Pengaruh Struktur Audit, Konflik Peran, dan Ketidakjelasan Peran To Performance Auditor. *Jurnal Ekonomi,* 21 (3): 1- 15.

Hanna, Elizabeth dan Friska Firnanti. 2013. Faktor-Faktor yang Mempengaruhi Kinerja Auditor. *Jurnal Bisnis dan Akuntansi* . 15 (1): 13-28.

Hidayati, Reni., Yadi Purwanto dan Susatyo Yuwono. 2010. Korelasi Kecerdasan Emosi dan Stres Kerja Dengan Kinerja. *Jurnal Ilmiah Berskala Psikologi,* 12 (1): 81-87.

Liana, Lie. 2009. Penggunaan MRA dengan SPSS untuk Menguji Pengaruh Variabel Moderating terhadap Hubungan antara Variabel Independen dan Variabel Dependen. *Jurnal Teknologi Informasi Dinamik,* 14 (2): 90-97.

Mindarti, Ceacilia Sri. 2015. Pengaruh Karakteristik Individu Terhadap Kinerja Auditor. *Jurnal Ekonomi dan Bisnis,* 18 (3): 59-74.

Misero, Priscillia Susan dan Lydia Freyani Hawadi. 2012. Adjustment Problems dan Psychological Well-Being pada Siswa Akseleran (Studi Korelasional Pada SMPN 19 Jakarta dan SMP Labschool Kebayoran Baru). *Jurnal Psikologi Pitutur* , 1 (1): 68-80.

Nakula, Nadiyya Harum Kamilah dan Yane Devi Anna. 2013. Pengaruh Locus Of Control, Komitmen Profesional, dan Pengalaman Audit Terhadap Perilaku Auditor dalam Situasi Konflik Audit pada Kantor Akuntan Publik di Bandung. *Philosophical Research Online* : 1-11.

Nurrohma, Siti dan Aman F. 2016. Pengaruh Sistem Pengendalian Mutu Kantor Akuntan Publik Terhadap Efektivitas Perencanaan Audit. *Jurnal Riset Akuntansi dan Keuangan,* 4 (1): 957-966.

Putra, Kadek Agus Santika Putra dan Made Yenni Latrini. 2016. Pengaruh Kecerdasan Intelektual, Kecerdasan Emosional, Kecerdasan Spiritual, Komitmen Organisasi Terhadap Kinerja Auditor. *E-Jurnal Akuntansi,* 17 (2): 1168-1195.

Rizkia, Putri dan Reskino. 2016. Pengaruh Healthy Lifestyle, Role Ambiguity dan Role Conflict Terhadap Job Satisfaction Dimediasi oleh Job Burnout dan Psychological Well-Being (Studi Empiris pada Auditor Internal di Kementrian RI). *E-Jurnal Ekonomi dan Bisnis,* 3 (5): 1-30.

Rosally, Catherina dan Yulius Jogi. 2015. Pengaruh Konflik Peran, Ketidakjelasan Peran, dan Komitmen Organisasi Terhadap Kinerja Auditor. *Business Accounting Review,* 3 (2): 31-40.

Sari, Ni Putu Eka Ratna dan I Ketut Suryanawa. 2016. Konflik Peran, Ketidakjelasan Peran, dan Kelebihan Peran Terhadap Kinerja Auditor dengan Tekanan Waktu Sebagai Pemoderasi. *E-Jurnal Akuntansi,* 15 (2): 1392-1421.

Setiawan, Yuliana Grece dan Made Yenni Latrini. 2016. Pengaruh Kecerdasan Emosional, Kecerdasan Spiritual, Kecerdasan Intelektual dan Independensi pada Kinerja Auditor. *E-Jurnal Akuntansi,* 16 (2):1034-1062.

Soepriadi, Setriadi., Hendra Gunawan and Herlianto Utomo. 2015. Pengaruh Locus Of Control, Self Efficacy, dan Komitmen Profesional Terhadap Auditor dalam Situasi Konflik Audit (Survey Pada Akuntan Publik di Kota Bandung, Jawa Barat). *Prosiding Penelitian SpeSIA* : 361-371 .

Triana, Happy. 2010. Pengaruh Tekanan Klien dan Tekanan Peran Terhadap Independensi Auditor dengan Kecerdasan Spiritual Sebagai Variabel Moderating. *Essay.* Fakultas Ekonomi dan Bisnis, Universitas Islam Negeri Syarif Hidayatullah.

Trisnaningsih, Sri. 2007. Independensi Auditor dan Komitmen Organisasi Sebagai Mediasi Pengaruh Pemahaman Good Governance, Gaya Kepemimpinan dan Budaya Organisasi Terhadap Kinerja Auditor.*Simposium Nasional Akuntansi X* : 1-56.

Utomo, Joko. 2011. Antecedent Role Stressor dan Pengaruhnya Terhadap Kepuasan Kerja dan Kinerja Pemimpin (Studi Empirik pada Kepala Puskesmas di Propinsi Jawa Tengah). *E-Jurnal:* 1-33.

Wardhana, Gede Ary Surya., Ni Ketut Rasmini dan Ida Bagus Putra Astika. 2015. Pengaruh Kompetensi pada Akuntabilitas Kinerja Instansi Pemerintah dengan Komitmen Organisasi Sebagai Variabel Moderasi. *E-Jurnal Ekonomi dan Bisnis* , 4 (9): 571-598.

Wikanestri, Winilis dan Adhyatman Prabowo. 2015. Psychological Well-Being pada Pelaku Wirausaha. *Seminar Psikologi dan Kemanusiaan* : 431-439.

Wiryathi, Ni Made., Ni Ketut Rasmini dan Made Gede Wirakusuma. 2014. Pengaruh Role Stressors pada Burnout Auditor dengan Kecerdasan Emosional Sebagai Variabel Pemoderasi. *E-Jurnal Ekonomi* , 3 (5): 227-244.

Factors Affecting Interest in Using *Cloud Accounting* Applications
in Small and Medium Enterprises (SMEs)

Andi Ulfaisyah Yusuf[1]
Asnita[2]
Grace T.Pontoh[3]
Mediaty[4]

[a] Faculty of Economics and Business, Hasanuddin University

Corresponding Author's E-mail: ulfaisyah@yahoo.com, asnitaalie@gmail.com, gracetpontoh@gmail.com, unhasmediaty@gmail.com

Abstract

Using *Cloud Accounting* applications requires a lot of consideration in addition to considering how to use and also considering the risks that will be faced. This is what makes a lot of research related to IT in SMEs increase rapidly, but research on the factors of using cloud accnting is still very limited.The purpose of the study was to determine the factors of using *Cloud Accounting* in SMEs. This research is a quantitative study, the population of SME entrepreneurs, the sample uses simple random sampling technique. Methods of collecting data using questionnaires, SPSS analysis tools. Based on the results of the analysis, there is a positive influence on the ease of use of interest in using *Cloud Accounting*, There is a positive effect of trust in the interest in using *Cloud Accounting*. There is a positive effect on the interest in using *Cloud Accounting*.

Keywords: *Cloud Accounting, software quality, accounting software*

1. Introduction

The development of cloud computing brought a new evolution in accounting information systems. Accounting Information Systems (AIS) is a computer-based method for tracking accounting activities using information technology resources. According to Dimitriu and Matei, the development of accounting information systems is increasingly rapid with the need to increase efficiency and accuracy in translating the real economic situation into summary forms to make it easier to understand (Dimitriu and Matei, 2015). The modern era of various types of *Cloud Accounting* related applications has been developed such as QuickBooks, Speedy Books, Xero Accounting, Zoho Books, and many more, with various types of applications related to *Cloud Accounting* that bring many benefits to the morning of big business people and small entrepreneurs because Current *Cloud Accounting* applications not only record financial transactions and produce accounting reports, but include functionality for managerial decision making aimed at gaining competitive advantage. According to Dimitriu and Matei (2015) "business accounting software (SBA) has made a huge technological leap in strength, speed, sophistication and flexibility in recent years."

The growth of SME entrepreneurs is very encouraging, because SMEs are one of the factors driving the nation's economy. With the increasing number of SME entrepreneurs, of course competition in business will also be increasingly stringent. SME entrepreneurs are competing to be the best, one of them is by continuing to keep up with increasingly sophisticated technology and make it easier for SMEs to manage their business. One of the emerging technologies used by SME entrepreneurs is claud accounting. The many *Cloud Accounting* applications make SMEs more flexible in choosing which applications they need. Using *Cloud Accounting* applications requires a lot of consideration. In addition to considering how to use it also considers the risks that will be faced in using *Cloud Accounting* applications. This is what makes a lot of IT related research in small and medium enterprises (SMEs) rapidly increase, especially over the past few decades, but published research on the factors that influence the use of *Cloud Accounting* applications among small and medium enterprises is still very little. Given that research on the factors of using cloud acconting is still very limited and there are many *Cloud Accounting* applications now, the authors feel motivated in conducting research with the title of this research.

2. The Foundation of Theory and Formulation of the Hypothesis

2.1 TAM *(Technology Acceptance Model)*

TAM (Technology Acceptance Model) the purpose of this theory is to know the behaviors that occur in computer users. This TAM theory was first introduced by Fred Davis in 1986 mentioned in Nunik Yuli W (2013). According to Jogiyanto (2007: 111) in Nunik Yuli W (2013) Technology Acceptance Model (TAM) is one theory about the use of information technology systems that are considered very influential and are generally used to explain individual acceptance of the use of information technology systems. This TAM model is a model developed from the previous model called TRA. The main purpose of this theory is to explain a basic step from the emergence of an external factor in internal trust, attitudes and interests. So that in the known TAM (Technology Acceptance Mode) 5 constructions:

1. Perceived ease of use, means the extent to which a person believes in the use of a technology will be free from effort perceived usefulness, means the extent to which a person believes in the use of a technology will improve performance.
2. Attitudes towards the use of technology (attitude toward using), interpreted as user evaluation in their interest in the use of technology.
3. Behavioral interest (behavioral intention), interpreted as someone's interest in performing certain behaviors. Behavior, can be measured by the amount of time that has been used to interact with the technology and the frequency of using the technology.

2.2 *Cloud Accounting* and the Benefits of Using It

Cloud Accounting is an accounting system-based technology that allows users more easily in the accounting process because it has been computerized. *Cloud Accounting* offers various benefits in terms of recording transactions, documentation, (Guney and Ozyigit, 2015: 291). In general the benefits of using *Cloud Accounting* are to increase the productivity and accuracy of the

accounting department in terms of cost savings, integration of two or more in the system and better reporting or investigation because of the need for less labor (Emin Yurekli et al, 2017). *Cloud Accounting* helps accountants or business owners to make sales estimates, business economic models and other decision-making tools. They also automate financial information from businesses by limiting erroneous data and offering default standards and mathematical validation processes (Emin Yurekli et al, 2017). The choice of a *Cloud Accounting* program is very important, using the wrong program can cause a lot of damage. The results of the study show that business data cannot be processed in a correct and practical way, the correct information cannot be evaluated at the right time in the decision-making stage because the business cannot provide optimal benefits due to program selection errors (Demir (2015) in Emin Yurekli et al, (2017).

2.3 Factors that influence the Selection of *Cloud Accounting*

1. Perception of Ease of Use

Perception of ease of use is defined as the degree to which a person believes using a technology will be free from effort. Users or someone who considers an information system easy to use, then surely the information system will be used, on the contrary if an information system is considered difficult to use, then an information system will not be used. The perception of the ease of use of *Cloud Accounting* in this study is the views or assumptions of users regarding *Cloud Accounting* applications that are not confusing, clear and easy to understand users will feel *Cloud Accounting* facilitates their work because it can be made at home, at work and anywhere. The following is a division of perceptual dimensions of ease of use according to Venjatesh and Devis (2000) in Irmadhani (2013), as follows:

1. Individual interactions with the system are clear and easy to understand.
2. There is no need to use a lot of effort to interact with the system
3. Easy to use system.
4. Easy to operate the system in accordance with what the individual wants to do.

This study uses the four dimensions above in making the questions to be used in the questionnaire.

2. Trust

Trust is that trust will occur if someone has confidence in an exchange with a partner who has integrity and can be trusted. Based on the understanding of trust above, it can be concluded that trust is a person's belief to put choices on the other side in a changing and risky condition and hope that the person who is trusted will give an action to the person who believes it. In the sense of trust in *Cloud Accounting* applications is where someone is willing to trust *Cloud Accounting*. According to Ganesan and Shankar (1994) explained that trust is a reflection of 2 components, namely:

1. Credibility: which is based on the amount of trust in partnerships with other organizations and requires expertise to produce work effectiveness and reliability.

2. Benevolence: which is based on the amount of trust in partnerships that have goals and motivations that are advantages for other organizations when new conditions arise, namely conditions where commitment is not formed.

3. Ability

Ability is a belief in one's ability to use computer applications, operating systems, handling files and hardware, storing data and using keyboard keys to carry out tasks well. Compeau and Higgins (1995) in Irmadhani (2013) explain that there are three dimensions of ability, namely: (1) magnitude (2) strength and (3) general ability. Magnitude is the level of ability of a person in computing, Strength refers to the level of a person's confidence in his ability to properly complete tasks related to computers. General ability refers to the level of one's expertise in hardware and software, if someone who has a high level of general ability is considered capable of using different software and computer systems, compared to someone who has a low level of general ability. In this study, researchers will use the three dimensions mentioned above as a basis for making the questions that will be included in the research questionnaire.

2.4 Previous Research

1.2 Previous Research

1. M. Thirmal Rao, et al (2017) with the journal title Impact of *Cloud Accounting*: Accounting Professional's Perspective. The results of the study, Continuous changes occurring in *Cloud Accounting* are expected to influence various industries and companies, and every business owner must sooner or later face the impact of shift.*Cloud Accounting* is sure to have a big impact on SME growth. With various benefits such as cost efficiency, high security, ease of use, etc. to offer, *Cloud Accounting* is the right choice for any business that wants to keep up with its competitors. *Cloud Accounting* can be very beneficial for SMEs because it offers efficient technology and accounting services at a lower cost. Customization offered by *Cloud Accounting* is a big benefit for any business adopting it, which allows every business whether small, medium or large to adjust cloud software according to requirements.

2. Emin Yurekli, et al (2017) in his journal entitled "Evaluation of the Factors Affecting the Purchasing Decisions of Accounting Package Programs". The results of the study are the most important criteria for accounting programs are security. Safety factors are very important because the data contained in the accounting program and the information produced is very confidential.

3. Ahmad A. Abu-Musa (2005) in his journal entitled "The Determinantes of Selecting Accounting Software: A proposed model" provides instructions for prospective users to choose a accounting program that is quality for the needs of its users. Unlike the other two studies that reviewed accounting programs, in this study researchers used criteria as a design that could be used by prospective users in considering which accounting program was the most appropriate to choose. These criteria include four parts of assessment, namely an assessment of the main determinants in choosing an accounting program, an assessment of the features and attributes of an accounting program, an assessment of the ability to modify accounting programs, and an assessment of

financial reporting features of accounting programs. Then based on the existing criteria, the accounting program is assessed in a sequential assessment table in accordance with the most crucial criteria to the criteria that are the least crucial level.

2.5 Hypothesis

1. The effect of ease of use on the interest in using *Cloud Accounting Cloud Accounting* is an application that makes it easy for users to make financial reports. Users who think that *Cloud Accounting* is easy to understand, easy to operate, users will be interested in using *Cloud Accounting*, if users assume that *Cloud Accounting* is difficult to understand in application, complicated in operation, users will not be interested in using *Cloud Accounting*. So the hypothesis can be formulated:

    H1: Ease of use has a significant positive effect on interest in using *Cloud Accounting*

2. Effect of trust in interest in using *Cloud Accounting*

    The researcher considers trust to be an act of surrender to other parties to get feedback from that trust. Users who believe in *Cloud Accounting* applications means that users believe that the application is really made for convenience and the application is safe and not damaged by a virus. The higher the confidence in the *Cloud Accounting* application, the user will be interested in using the application. But the lower the trust in *Cloud Accounting* applications, the lower the user's interest in using *Cloud Accounting* applications. So the hypothesis can be formulated:

    H2: Trust has a significant positive effect on interest in using *Cloud Accounting*

3. Effect of ability to interest in using *Cloud Accounting*

    Ability is a belief that someone can use or run a computer in completing the work that has been given, while in relation to the use of *Cloud Accounting* applications is the user's confidence in the ability to use computers in financial reporting using the *Cloud Accounting* application. Users with high levels of ability will be interested in using the *Cloud Accounting* application. But if the user with a low level of ability, the interest in using *Cloud Accounting* applications will also be low. So the hypothesis can be formulated:

    H3: Capability has a significant positive effect on interest in using *Cloud Accounting*

Figure 2.1

Framework
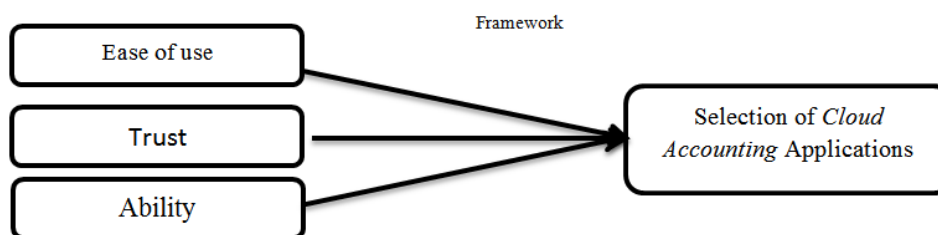
3. Research methods

This study uses a population of SME entrepreneurs. While for the sample in this study using simple random sampling technique. The focus of this research is to see the effect of user convenience,

trust and ability to interest using *Cloud Accounting* applications. Methods of collecting data using a questionnaire (questionnaire). The data collection technique is by distributing questionnaires to SME entrepreneurs who are randomly selected. Likert scale is the measurement scale used in this study. According to Sugiyono (2009) a Likert scale is a scale used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena.

3.1 Research Variables

1. Bound / Dependent Variables (Y)

   Dependent variable is a variable that concerns the researcher or the main variable which is the factor that applies in the investigation (Uma Sekaran, 2011: 115). In this study, the dependent variable is the interest in using *Cloud Accounting*. The interest in using the *Cloud Accounting* application application is a stimulus in someone to do the preparation of financial statements using the *Cloud Accounting* application. Instruments used to measure interest include the desire to use, always try to use and continue in the future. This variable is measured by nine question items. Each item is measured using a Likert Scale from 1 Strongly Disagree to 4 Strongly Agree. In this study using 4 choices on a Likert Scale to avoid respondents who will answer neutral or doubt.

2. Independent / Independent Variables (X)

   a. Ease of Use (X1)

      The ease of use of the *Cloud Accounting* application in this study that users in using or running *Cloud Accounting* applications does not require much effort. The ease of use can be measured using indicators of individual interaction with the system clearly and easily understood, it does not require a lot of effort to interact with the system, the system is easy to use and easy to operate the system according to what the individual wants to do.

   b. Trust (X2)

      Trust in the *Cloud Accounting* application is that someone is willing to trust the *Cloud Accounting* application and this trust will benefit and give a good result to the user and also the maker of the application. Trust can be measured using reliable application indicators, keeping promises and commitments and thoughts to trust the application.

   c. Ability (X3)

      Capability is a condition where someone considers being able to use a computer in running a *Cloud Accounting* application. Ability can be measured using indicators in the user's magnitude, strength, and general abilities. Where magnitude is the level of a person's ability to use the application without help or a little help from others. Strength is a level of confidence about one's confidence in completing tasks well. General ability is in the different domains of various hardware and software configurations.

3.2 Instrument Trials

1. Test Validity

   A questionnaire will be said to be valid if the question in the questionnaire is able to reveal something that will be measured by the questionnaire (Imam Gozali, 2011). In this study used

product moment correlation techniques to test validity, using the formula (Suharsimi Arikunto, 2009):

$$r_{\chi\gamma} = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N\Sigma X^2 - (\Sigma X)^2\{N\Sigma Y^2 - (\Sigma Y)^2\}}}$$

Description: $r_{\chi\gamma}$: Correlation coefficient between X (Dependent Variable) and Y (Independent Variable), N: Number of Subjects, ΣXY: Number of times the value of X (Dependent Variable) and Y (Independent Variable), ΣX: Number of X values (Dependent Variables), ΣY: Amount of Y (Independent Variables), ΣX^2: Amount of squared value of X (Dependent Variable), ΣY^2: Amount of squared value of Y (Independent Variable)

2. Reliability Test

Reliability is related to the accuracy and accuracy of a measurement. The questionnaire is said to be reliable when a person's answer to a question is consistent or stable over time (Imam Gozali, 2011). Reliability can be calculated using the Cronbach Alpha formula, namely:

$$(1 + x)^n = (\frac{K}{K-1})\,(1 - \frac{\Sigma\sigma^2 b}{\sigma^2 t})$$

Description: r: instrument reliability coefficient (Cronbach Alpha), K: number of questions or number of questions, $\Sigma\sigma^2 b$: total variance of grain, $\sigma^2 t$: total variant

3.3 Data Analysis Techniques

1. Descriptive Analysis

The determination of the Interval Class and Frequency Distribution can be searched using the Sturges formula:

a. Number of Classes: K = 1+ 3.3 Logs n

b. Data Range: Data Range = maximum value - minimum value

c. Class Explanation: Class Explanation: Data Range Number of Interval Classes

2. Prerequisite Test for Analysis

a. Linearity Test

Linearity test is to find out whether there is a linear relationship between the dependent variable and the independent variable. If the linearity assumptions are met, a linear regression analysis can be carried out. Then use the F test using the formula:

Freg =RKreg : Rkres

Description: Freg: Price F number for regression line, RKreg: Average square of regression line CTR: Average squared residue (Sutrisno Hadi, 2004 in Nunik Yulia W, 2013).

b. Classic assumption test

1. Multicollinearity

Mulitikolinieritas test according to Imam Ghozali (2011) can be done in two ways VIF (Variance Inflation Factor) and Tolerance Value. The formula is as follows: VIF = 1: Tolerance Value If VIF ≥ 10 and Tolerance Value ≤ 0.10, the symptoms of Multicollinearity

occur. If VIF ≤ 10 and Tolerance Value ≥ 0.10 then the limited model of Multicollinearity can be used in a study.

2. Heteroscedasticity test

   For this test use the Glejser Test. The characteristics are the significance of the independent variable greater than 5%, there will be no Heteroscedasticity (Imam Ghozali, 2011).

3. Test the Hypothesis

   Simple linear regression. The general equation of simple linear regression is:

$$Y = a + Bx$$

Description: Y: subject in predicted dependent variable, a: price Y if X = 0 (constant price), b: number direction or certain regression coefficient x: subject to an independent variable that has a certain value. (Sugiyono, 2007: 270 in Nunik Yulia W, 2013).

4. Research Results and Discussion

4.1 Description of Respondents

A total of 86 questionnaires were distributed using the purposive sampling method. The distribution of questionnaires can be seen in Table 1 (attachment).

Table 1. Research Reports

Description	Number of Questionnaires
Number of questionnaires distributed	86
filled and returned questionnaire	76
questionnaire not filled in	10
questionnaire is not feasible	0
Questionnaire used	76

Source: primary data (processed)

4.2 Hypothesis Testing

1. Test of Hypothesis 1: there is a positive influence on ease of use (X1) on interest in using *Cloud Accounting* (Y).

   Based on the results of a simple regression calculation in table 2 (attachment) a simple regression equation can be obtained as follows:

$$Y= 11,260 + 0,501X1$$

The equation from that simple regression has a constant value of 11,260. These results can be interpreted that if the Ease of Use is zero, then the change in interest in using *Cloud Accounting* becomes 11,260 units. The ease of use regression coefficient of 0.501 is positive which means that every increase in ease of use by 1 unit will increase the interest in using *Cloud Accounting* by 0.501 units. This can also be seen from the regression correlation value (R) which has a

positive value between ease of use and interest in using *Cloud Accounting* of 0.637. The coefficient of determination (R Square) of 0.406 shows that 40.6% of the variables of interest in using *Cloud Accounting* are influenced by the ease of use variable and the remaining 59.4% is influenced by other variables not examined in this study. In the test the value of t count of 7.116 (above the value of t table which is 1.665) indicates that the Ease of Use variable has a significant effect on the Interest variable in Use of *Cloud Accounting*. This is also supported by a significance value of 0,000; because t count> t table (7.665> 1.665), the significance is smaller than 0.05 (sig <5%) and the regression value has a positive value so that the first hypothesis (H1) states that "there is a positive influence and significant ease of use towards interest The use of *Cloud Accounting* in MSMEs is accepted ".

2. Test of Hypothesis 2: there is a positive influence of Trust (X2) on interest in using *Cloud Accounting* (Y).

   Based on the results of a simple regression calculation in table 3 (attachment) a simple regression equation can be obtained as follows:

   $$Y = 12,278 + 0,597X2$$

   The equation from simple regression has a constant value of 12,278. These results can be interpreted that if the Trust is zero, then the change in interest in using *Cloud Accounting* becomes 12,278 units. The confidence regression coefficient of 0.597 is positive which means that every use trust of 1 unit will increase the interest in using *Cloud Accounting* by 0.597 units. This can also be seen from the regression correlation value (R) which is positive between trust and interest in using *Cloud Accounting* of 0.502. The coefficient of determination (R Square) of 0.252 shows that 25.2% of the variables of interest in using *Cloud Accounting* are influenced by variables of trust and the remaining 74.8% is influenced by other variables not examined in this study. In the test the value of t count of 4.998 (above the value of t table is 1.665) indicates that the Trust variable has a significant effect on the Interest variable of Using *Cloud Accounting*. This is also supported by a significance value of 0,000; because t count> t table (4.998> 1.665), significance is smaller than 0.05 (sig <5%) and the regression value has a positive value so the second hypothesis (H2) states that "there is a positive and significant influence Trust in Interest in Use *Cloud Accounting* for SME entrepreneurs is accepted ".

3. Test of Hypothesis 3: there is a positive effect of ability (X3) on interest in using *Cloud Accounting* (Y).

   Based on the results of the regression calculation in table 4 (attachment). Based on the table above, a simple regression equation can be obtained as follows:

   $$Y = 21,123 + 0,343X3$$

   The equation from that simple regression has a constant value of 21,123. These results can be interpreted that if the ability is zero, then the change in interest in using *Cloud Accounting* becomes 21,123 units. The ability regression coefficient of 0.343 is positive which means that each ability to use as much as 1 unit will increase the interest in using *Cloud Accounting* by 0.343 units. This can also be seen from the regression correlation value (R) which has a positive

value between the ability and interest in using *Cloud Accounting* of 0.229. The determination coefficient (R Square) of 0.053 shows that 5.3% of the interest variables for using *Cloud Accounting* are influenced by the ability variable and the remaining 94.7% is influenced by other variables not examined in this study. In the test the value of t count is 2.027 (above the value of the t table which is 1.665) indicates that the ability variable has a significant effect on the interest variable in the use of *Cloud Accounting*. This is also supported by a significance value of 0.046; because t count> t table (2.027> 1.665), significance is smaller than 0.05 (sig <5%) and the regression value has a positive value so that the third hypothesis (H3) states that "there is a positive and significant effect on the Interest in Use *Cloud Accounting* for SME entrepreneurs is accepted ".

5. Discussion Conclusion

1. There is a positive and significant influence on the ease of use of interest in using *Cloud Accounting* for MSME entrepreneurs.

   This means that Ease of Use influences the level of interest in using *Cloud Accounting*. The higher the ease of use, the higher the interest in using *Cloud Accounting*. The First Hypothesis (H1) which states that the Ease of Use has a positive effect on Interests The use of *Cloud Accounting* for MSME entrepreneurs is accepted because it has been supported by Davis's theory (Technology Acceptance Model Theory) in Venkatesh and Davis (2000) which shows that a perceived ease of use influences acceptance the user. In the context of this study ease of use influences the interest in using *Cloud Accounting*. The same results are also shown in M. Thirmal Rao's research, et al (2017) which states that continuous changes occur in *Cloud Accounting* expected to influence various industries and companies, and every business owner must sooner or later face the effects of shift.*Cloud Accounting* This is sure to have a big impact on the growth of SMEs. With various benefits such as cost efficiency, high security, ease of use, etc. to offer, *Cloud Accounting* is the right choice for any business that wants to keep up with its competitors.

2. There is a positive and significant influence on trust in interest in using *Cloud Accounting* for MSME entrepreneurs.

   This means that trust affects the level of interest in using *Cloud Accounting*. The higher the trust, the higher the interest in using *Cloud Accounting*. The second hypothesis (H2) which states that Trust has a positive effect on Interests The use of *Cloud Accounting* in MSME entrepreneurs in Makassar is accepted because it has been supported by research by Yousafzai et al (2005) which states that in transactions via e-commerce, time is something that is needed to build trust so that trust can be identified as an important key for e-commerce. In the context of this research, trust influences the interest in using *Cloud Accounting*.

3. There is a positive and significant influence on the ability to use *Cloud Accounting* in MSMEs. This means that the ability to influence the level of interest in using *Cloud Accounting*. The higher the ability, the higher the interest in using *Cloud Accounting*. The third hypothesis (H3) which states that ability has a positive effect on Interests The use of *Cloud Accounting* for MSME entrepreneurs is accepted because it has been supported by the results of research.

6. Research Conclusions and Limitations

There is a positive and significant influence on ease, trust and ability towards interest in using *Cloud Accounting* in MSMEs. So that all hypotheses are accepted. In this study has limitations, namely in taking data using questionnaire techniques so that the resulting data has a greater chance of occurrence of a bias. The occurrence of a bias in this study is the difference in perception between researchers and respondents (MSME entrepreneurs) to the questions or statements submitted, the difficulty of getting data of MSME entrepreneurs registered in Kemenkop, so researchers only provide questionnaires to MSME entrepreneurs who are considered capable of providing the right answers and the large number of MSME entrepreneurs is Makassar so that researchers only provide questionnaires to 86 MSME entrepreneurs who are given randomly.

REFERENSI

Abu Musa, Ahmad A. 2005. "*The Determinates of Selecting Accounting software: A proposed Model*". Journal The Review of Business Information System.

Aduamoah, *Maurice and lagu Yinghua*. 2017.*" Riding the Waves of Technology: A Proposed Model for the Selection of Appropriate Computerized Accounting Software for Implementation in SMEs in Developing Countries"*. Journal   Business Research.

Davis, F. D. (1989). "*Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology*". *MIS Quarterly*. Vol. 13, No. 5, pp. 319-339.

Demir E. (2015). "*Criteria of Smes for the Selection of Accounting Package Programs and Their Awareness"*. Journal of Academic Social Science Studies.

Dimitru, Otilia and Marian   Matei. 2015. "*Accounting   in The   Cloud"*. Journal Technologi, Innovation and Industrial Management.

Ganesa dan Shankar. (1994). "*Determinatsof Long-Time Orientation in Buyer-Seller Relationship*". *Journal of marketing*. Vol. 58.

Guney, S., & Ozyigit, H. (2015). "*Use of Accounting Data in Management and Effect of Electronic Accounting Data on Management Decisions"*. Journal of Social Sciences, 14 (53), 279-297

Irmadhani. (2013). "Pengaruh Persepsi Kebermanfaatan, Persepsi Kemudahan Penggunaan dan *Computer Self Efficacy* Terhadap Penggunaan *Online Banking*

Jugiyanto Hartono. (2007). *System Informasi Keprilakuan.* Yogyakarta: Andi.

Nunik Yuli Winayu. (2013). "Pengaruh Kepercayaan, *Perceived Ease of Use* dan *Perceived Usefulness* Terhadap Minat Menggunakan *E-Commerce* Forum Jual Beli Kaskus".

Prilahardo Rahadian. 2017. *"Review Of Accounting Information Systems for Small And Medium Enterprises Are Based On Cloud*". Journal

Rao M. Thirmal and TGJyotsna. 2017. "*Impact of Cloud Accounting: Accounting Professional's Perspective*". Journal of Business and Management (IOSR-JBM).

Sugiyono. (2009). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Bandung: Alfabeta.

Uma Sekaran. (2011). *Research Methods for Business Metodologi Penelitian untuk Bisnis.* Jakarta: Penerbit Salemba Empat.

Yurekli, Emin dan Selcuk Burak. (2017). "*Evaluation of the Factors Affecting the Purchasing Decisions of Accounting Package Programs*". Journal Aplication and Management

PROSPECTS AND PROBLEMS OF ELECTRONIC MARKETING

APPLICATION: THE

NIGERIAN PERSPECTIVE

Obi Keneth, Department of Marketing, Imo State Polytechnic, Umuagwo, Nigeria

Correspondence: gandicuniversalservices@gmail.com

Abstract

This paper focused on benefits and challenges of electronic marketing application, taking insights from Nigeria. It also looked at necessary conditions that must be put in place before electronic marketing will thrive. Conclusion and recommendations were made as to how the perceived challenges facing electronic marketing adoption can be overcome.

Keywords: Electronic marketing, application, benefits and challenges.

Introduction

Electronic marketing has indeed brought about a paradigm shift in the buying and selling of goods and services in such a way that the survival of organizations whether profit or non-profit oriented will to a great extent depend on its application, from all indications.

Electronic marketing approach just like marketing has witnessed tremendous evolution in the preceding decades. E-marketing became prominent in the 19th century with the aid of telegraph and subsequently other electronic medium which include; radio, television and cable network subsequently emerged Onuoha (2010).

As opined by Kotler and Keller (2006), Anukam and Iweka (2016) which is also a common held view by marketing authors; electronic marketing, on-line marketing, digital market, are not mutually exclusive and are used interchangeably in extant marketing literature.

The problem facing marketers is the need to remain competitive, in a world of intense competition. To achieve this objective requires change in marketing orientation and strategies. The traditional marketing approach which is off-line based which is also referred to as marketing in "brick and mortar" has inherent limitations arising from its very nature as empirical studies reveal. Among the limitations of traditional marketing include but not limited to- physical contact between buyers and sellers before transaction can be concluded, limited customers and potential customers to serve, impracticable to provide bespoke goods and services to large members of customers and customer relationship maintenance challenge. With these shortcomings in sight, the application of electronic marketing becomes the only panacea to overcome these obvious limitations.

In the light of the above, thus paper attempts to introduce the term and concept of electronic marketing, highlight necessary conditions for e-marketing application, discuss the advantages of electronic marketing application, discuss some of the challenges facing electronic marketing application especially in the

Nigerian context and finally make conclusion and recommendations.

Electronic Marketing: Meaning

The term electronic marketing has a plethora of definitions and has been viewed from various perspectives. According to Kotler and Keller (2006) e-marketing portrays company's effort to inform and communicate with buyers and promote and sell its products and services over the internet.

In his view Delone and Mc lean (2004) opines that electronic marketing deals with the facilitation of transactions and selling of product on-line either via internet or any other telecommunications network.

In the same vein, Boone and Kurtz (2004) see electronic marketing as a strategic process that creates, distributes, promotes, prices products and services to a target market over the internet or through such digital too is as fax machines, computers modems, telephone and CD ROMs.

For Jobber (2004) e-marketing is any application of a wide range of network communication technology including mobile phones, digital television in the pursuit of marketing objective.

Implicit from the definitions is that electronic marketing:-

1. Relies extensively on the internet as a major driving force.
2. Its aim is to increase the marketers reach with its concomitant   benefits.
3. Is facilitated or done through the aid of an electronic medium.

Necessary Conditions for E-Marketing Application

To start up e-marketing and run it successfully, certain facilities must be provided as noted by Olayiwola et.al (2013). which is in congruence with Anukam and Iweka (2018).

- ❖ A complete configuration that is internet reading and has current facilities to operate.
- ❖ Internet network configuration that is fast and reliable for easy access to internet.
- ❖ Regular power supply to promptly attend to customers' needs and wants.
- ❖ Website package should be provided by a web designer to perform audio, graphic, video and text function.
- ❖ Establishment of a payment system that is convenient to customers
- ❖ Qualified and experienced I.T Personal to run the e-marketing facility and attend to customers.
- ❖ Security arrangement - The installation and continued update of facility that protect customers and their various transactions from fraud.
- ❖ Customer Service System- Adequate arrangement and attention should be given to customer care to ensure customer satisfaction and minimizing delays or waiting time.

Benefits/Prospects of Electronic Market Application for Nigeria

A lot of prospects or benefits are inherent with the practice of electronic marketing. Shokan (2006), Kotler and Keller (2006) enumerated some of the benefits or prospects of e-marketing to include:-

i.   **Disintermediation:** This is the elimination of middle men with its   associated cost and involves the one-on-one marketing where sellers sell to buyers directly.

ii. **Speed in Transaction:** transaction takes place within seconds, minutes   through   telephone   or other telecoms through an electronic media.

iii. **Immediate Feedback:** Sellers get immediate feedback about their   products   which   will   enable them redesign or improve the quality of   products and services to suit customers taste.

iv. **Cost of Selling and Distribution is Very Low:** The e-marketer need not   pay for warehouse or hire sales agents or persons. This makes products   sold   through this means relatively cheap. Also in the buyers side, there is   elimination of road accidents in sourcing for products and services.

v. **Volume of Transaction is Very Large:** E-marketing platforms connects   millions of buyers world aide via the web site. ie (www). hence, millions   of buyers entails greater sales and by extension profitability.

vi. **Wider Scope of Market:** Unlike the traditional marketing approach that   markets   products   and services to people in a specific geographic area, the   reach of e-marketing is wide as it links up buyers and sellers who are in   various parts of the globe.

vii. Closer and direct relationship exist between the buyer and the seller. This   guarantees   customer retention as it entails exchange of information.

viii. **Customization of Products and Services:** Since information pertaining   to customers is at the disposal of the e-marketer i.e "data bank", the   seller is better equipped to provide the numerous customers with bespoke   products and services which is different from the standard products   available in the market.

ix. **24/7/365 Services**: E-marketing avails the sellers the opportunity to sell   their   products   and services 24 hours a day, 7 days a week and 365 days in   a year without observing weekend breaks or not selling in the night time.   It provides round the clock access to products and services.

Challenges/Problems of Effective Application of Electronic Marketing Particularly in the Nigerian Context

There is no doubt that Nigeria as a developing country is lagging behind the developed ones as it concerns electronic marketing application, just as it is in other spheres of life. Some of the common problems that have been adduced to be responsible for the slow pace of e-marketing application in Nigeria include the following: Wikipedia (2018) which is congruent with Onuoha (2010).

i. **Scale of Operation:** many companies in Nigeria are very small, as such   finds it difficult to raise fund to establish and run e-marketing platforms   which is obviously expensive to install and maintain.

ii. **Security Concern:** There is the challenge of determined mode and   security of payment. Internet fraud or cyber crimes are increasing at an   alarming rate, as a result   eroding the confidence of potential and   intending e-marketing buyers and sellers.

iii. Irregular Power Supply or total absence of power supply in some   locations continues to impede e-marketing application in the Nigerian as   e-marketing facilities depends on electricity to operate.

iv. **Poor Service Network:**   No doubt, poor service network has been blamed for the low rate of electronic marketing application. Most internet   service providers (ISP) experience fluctuations in their service. This   affects smooth e-marketing operation

v. **Low Computer Literacy Rate:**   Nigeria has very few people who are computer literate. Also, the general literacy rate of Nigeria is not very   encouraging and supportive of e-marketing comparative to developed   countries of the world. literacy as used here is the ability to read and right.

vi. **Inadequate I.C.T Experts:** Nigeria is faced with inadequate skilled I.C.T experts to managed and maintain e-platforms. This no doubt   contributes to slow usage or application of electronic marketing.

vii. **High installation Cost:** The cost of facilities needed to effectively run e- marketing is high. This is not unconnected with the high inflation and exchange rate prevalent in the Nigeria environment. The installation cost include the cost of computers, generators web design and payment of I.C.T experts.

Conclusion

There is no doubt that the future market place will be predominantly electronic driving and online based, as significant growth in online markets and online buying and selling as evidenced by the phenomenal rise in online shops sales volume speaks volumes. The success story of Jumia and other online shops in Nigeria is worth mentioning. Certain facilities that must be put in place before electronic marketing can commence have been considered.

The numerous benefits of electronic marketing which have been x-rayed speak volume of the need for it adoption. Empirical findings suggest adopting electronic marketing will guarantee access to wider markets, ensure prompt customer feedback, provide useful data for customization and ensure customer retention among others. The practice of electronic marketing in Nigeria is faced with obvious challenges as have been discussed. In the light of the above, the researcher presents the following recommendations.

Recommendations

➢ Adequate security measures should be put in place to protect online buyers and to allay their fears.
➢ Efforts should be made by the government at all level to improve power supply.
➢ Computer literacy should be given more attention in our schools. Practical knowledge of computer should be encouraged by setting up computer training institutes and centres at subsidized rate.
➢ Online buyers should be giving enough incentives to discourage offline buying.
➢ Products advertised online should be a replica of what they represent in real life. Editing of pictures to look more attractive and misleading should be avoided.

References

Aduloju Olayiwola, Peter O, Kayode A, John M, Emmanuel Busari O.A (2013). Distance learning Modules, Lagos: Ojik press.

Anukam I.A. & Iweka (2018). *E-marketing: Business Anytime, Anywhere*, Joe Mankpa publishers.

Avantika monappa (2007) *Definition of Digital Marketing*. Retrieved 27/6/18 http://www.simplelearn.com>authors.

Boone, L.E. and Kurtz D.L. (2004) *Contemporary Marketing* Thompson learning, U.S.A.

Delone, W.H & Mclean E. R (2004) measuring E-commerce success: "*applying the Delone and Mclean information System success model" International Journal of electronic commerce 9(1), pp. 31 - 47.*

E-marketing Mix. Retrieved 18/6/18. http://www.learnmarketing.net/emarketing.htm.

Jobber D. (2004). Principles and practice of marketing (4th edition), London, MA: Addison Wesley Longman Inc.

Kotler P and Keller KL (2006). *Marketing Management*, Pearson Prentice Hall

Maclayton Dw & Gladson G.N (2002) *Dynamic of Product Management* Avan-Panno Global Ltd, Owerri.

Nwokah N.G., Hamilton, D.I & Ugorji, E.I.(2006). *E-commerce and Internet Marketing* Portharcourt, Man-Phillips Publication.

Online survey report (2017). Retrieved http://www.philipsconsulting.net/surver report.

Onuoha J.K. Ezekwe C.A. and Egbuta A.O (2010) *Electronic/Internet Marketing*. Cape publishers In't Ltd.

Shoken O.O. (2006). Electronic Marketing Lagos; Shona investment company Ltd.

Ugorji G.C (2008). *Internet Marketing and E-commerce Strategies*: Benin: Higher ground   Business Association.

A PROPOSED MODEL OF DETERMINING THE CUSTOMER'S USE OF MOBILE BANKING SERVICES: TOWARDS THE DIFFERENTIAL ROLE OF GENDER

Ayman N. Alkhaldi

Department Management Information Systems, University of Hai'l,

Baqa'a Road, Hai'l, Kingdom of Saudi Arabia

*Corresponding Author: a.alkhalid@uoh.edu.sa, Preferable: ayman_alkhaldi@hotmail.com

ABSTRACT

The gender differences of users' is a key factor in segmenting the market and making decisions, thus the influence of such factor should be examined to decision makers to draw m-banking services strategies. Therefore, this study seeks to develop a conceptual model that determines the customer's awareness effect alongside the role of gender differences on their intention to use m-banking services. A quantitative method was utilized, in the form of a non-structured survey. A questionnaire was distributed in Saudi Arabia and the responses were analyzed using SPSS and SEM using AMOS. The study provides evidence that user awareness, performance expectancy, and effort expectancy affect users' intention to use m-banking, but that risk, as well as costs of use, do not affect the use of m-banking. The study also finds that gender factor has failed to play a role in the aforementioned variables.

Keywords: Awareness, Customer's Intention, Gender, Mobile Banking, Mobile Services

1. INTRODUCTION

Information and Communication Technologies (ICTs) play a crucial role of all new development changes in various sectors (AL-Zyadat, 2018). Of late, the banking sector continuously becomes more competitiveness. Therefore, each bank needs to develop proprietary services to attract new customers and/or retain existing customers. Banks should focus on customer satisfaction through conveying the maximum utility and convenience to them (Boonsiritomachai & Pitchayadejanant, 2017). Banks must have a digital platform with safe and fast access (Shaikh & Karjaluoto, 2015), such as, Mobile banking (m-banking), which is a modern self-service delivery, permits banks to provide services and information to their customers via mobile devices (Hassan et al., 2014). M-banking services should be an energetic part of the banks' strategy to satisfy customers (Shaikh et al., 2015).

In developing countries, organizations' projects are faced challenges lending from the traditional banking channels (Temelkov and Samonikov, 2018). Many banking institutes in developing countries have transformed to the mobiles as a potential platform for delivering their banking services. This advance was additionally motivated by the fact that more people have cell phones than bank accounts in

developing countries. For instance, A statistical reported by Statista (2015), found that 4.61 billion cell phone users in the world and the number is expected to reach 4.77 billion in 2017, which dominate 65% of the global population in 2017. It's worth mentioning that 60% of these users are living in developing countries (Geo et al., 2017). Though banks inspire their customers to use mobiles for banking transactions, the negative trends in the adoption of such new innovative services creates the imperative to conduct more studies to address issues that encouraging users' adoption of m-banking services in the developing world (Hanafizadeh et al., 2014).

Yu and Chantatub (2016) indicated the necessity to explore what factors could affect customers to adopt m-banking services. These investigations would enable banks to understand the user's characteristics in order to formulate effective marketing strategies prior to offering such services (Khasawneh, 2015). For example, a segmentation strategy based on users' gender can smooth the evolution of customer's engagement in m-banking services (Venkatesh et al., 2012). Gender factor is crucial in segmenting the market and counselling decisions of technology service providers. Addressing gender differences in m-banking adoption is significant for two reasons. First, as per Males and Females have diverse processes in making decisions. Second, gender information is effortlessly accessible and distinguishable in a way enabling the practitioners to manage gender segments effectively through implementing different marketing strategies (Geo et al., 2017).

Though, many researches have investigated the relationship between demographic factors and different banking channels (Jamshidi et al., 2013), Abdinoor and Mbamba, (2017), calls for more studies that take into account the influence of demographic factors in predicting customers' adoption of m-banking, especially gender factor (Geo et al., 2017) in developing countries. Recently, several researches, (e.g, Mishra & Singh, 2015; Shaikh & Karjaluoto, 2015), have stated the significance of demographic factors in affecting user's perceptions associated with adoption of m-banking. In some cases, demographic factors are more significant than other factors, such as usefulness or the trust of the technology for Jordanian, which is Middle Eastern country (Alafeef et al., 2011).

A closer look at demographic factors resulted in affirming that user's gender is one of the most crucial demographic factors in the settings of m-banking (Chiu et al., 2017), its effect can even lead users to decide either rejection or adoption of m-banking (Laukkanen, 2016). Limited of gender-based studies, particularly in m-banking adoption field of research was evident (Kishore and Sequeira, 2016), especially in the Middle East, Baabdullah et al., (2018), have reviewed studies in mobile services (m-services); they stated that a handful of studies have focused on Saudi Arabia; the importance of focus on the people perspective in the m-services in Saudi Arabia; and the need to expand the theoretical horizon of Unified Theory of Acceptance and Use of Technology (UTAUT) by considering other factors such as user's awareness. In addition, based on the review of the current study, we observed that although gender differences are crucial in Saudi Arabia, yet, there is no gender-based study has measured the degree of m-banking awareness in Saudi Arabia; nor investigated the customer's gender role on m-banking in the Middle East as a whole.

Questions remain regarding the degree of awareness among bank customers towards m-banking in Saudi Arabia; To what extend the customer's awareness of m-banking might influence (both directly and

indirectly) their perceptions to adopt m-banking; how customers' gender differences can moderate their intention to use m-banking in Saudi Arabia; And what are the implications of these possible differences in terms of practitioners in banks?. Therefore, this study aims to develop a conceptual model that determines the influence of customer's awareness of m-banking alongside gender differences on their intention to use m-banking in Saudi Arabia.

The aim of this study is composed of multi-points. First, this study investigates m-banking adoption in Saudi Arabia, which is a developing country. Second, this study enriches the literature by providing a rich comparative review. Third, this study provides a comprehensive insight into the predictive factors influencing the user's m-banking adoption. Fourth, this study theoretically proposes and empirically tests the potential impact of a set of factors (i.e, Theoretical model) that could determine customer's intention to adopt a new emerging mobile technology (i.e., m-banking). Ultimately, this study provides a highlight on the role of gender in m-banking services adoption intention. To the best of our knowledge, this is the first study conducted in Pakistan to investigate gender differences in m-banking adoption.

2. LITERATURE REVIEW

2.1 A Review of Customer's Awareness and Gender Differential in M-Banking Acceptance

The literature emphasized that there are major differences between males and females users, specifically; there are weaknesses among females' user's perceptions regarding IT adoption (Baker et al., 2007; Al-Gahtani, 2008), and especially in self-service technologies, such as, e- and m-banking services (Dean, 2008). Often, lower awareness of technology among female rather than males. For example, male customers are always having higher awareness on e-banking services in India, it is reported that 38.1% of females are having low awareness on e-banking services, while only 13.9% of males are having low awareness (Dhandayuthapani, 2012). In m-money security awareness, males had 82.82% and females had 82.37% level of awareness (Malero, 2015). In SMS-based e-government services, by a global survey, 70% of males were aware and 48% adopted such services, while 50% of females were aware and only 30% have adopted the services (Susanto & Goodwin, 2010).

In Saudi Arabia, Alkhunaizan and Love (2013) reported that gender has no effect on m-commerce actual use. Also in the case of Saudi Arabia, there are differences between users' attitude of m-banking based on demographic characteristics (Sohail and Al-Jabri, 2014). Afterward, Al-Jabri (2016) has published a paper entitled, "Customers' perceptions of mobile banking services: are there any differences between men and women in Saudi Arabia?" reported that there were significant differences between men and women in relative advantage, compatibility, and observability, but there were no significant differences in complexity, trialability, and risk.

It's notable that the role of user's awareness factor was not considered in previous studies, which is expected a major determinant, especially along with user's gender. These emerging the need for further researches, which to investigate focus on the role of customer's gender characteristics in m-banking, particularly in Saudi Arabia. Conducting further research would reach reliable results on the factors

affecting the adoption of m-banking in the Arab Middle East (Al-Hosni et al, 2010). Further, examining demographic factors along with social features emerges the significance of those factors (Shaikh & Karjaluoto, 2015).

User's awareness role was confirmed in several technologies. For instance, Bernier et al., (2015) confirmed gender differences in awareness of adoption of climate-smart technologies. They stated that awareness is essential to increase adoption. In general, lack of information about new technologies is more relevant among women as compared to males, these leading to a gender society gap (Mittal, 2016). User's differences such as gender, and prior knowledge of mobile technology can influence users' perceptions of mobile technology (Al-Hunaiyyan et al., 2017). Peterman et al., (2014) reviewed existing microeconomic empirical past decade literature on gender differences in use, access, and adoption of technological resources inputs in developing countries. They found that men are having higher input measures than women in general. This reflects the influence of user's awareness factor alongside deferential gender, in developing countries in particular.

In m-banking services adopting, differences between male/female users exist (Azad, 2016; Mishra & Singh, 2015). For instance, Püschel et al., (2010) discovered that m-banking users in Brazil were mostly males; similar findings were stated in Jordan by Alafeef et al., (2011). In India, it was observed that males are more likely to use online banking services than are females (Joshua & Koshy, 2011). Chiu et al., (2017) compared males with females in m-banking services; they found that men are more task-oriented and more open to technological innovations.

In m-banking, the lack of awareness might be associated with what these m-banking services can be used for (Abdinoor & Mbamba, 2017). Further, users' awareness of cost, use, benefits and legal issues of m-services can inspire them for the adoption of such services (Abu-Shanab, 2017). Low awareness of m-banking is a key factor that could lead people to decide not adopting m-banking (Ahmad & Gupta, 2015). When promoting these services, the concepts of m-banking have not yet been communicated sufficiently, possibly not considering customer's gender characteristics. For example, individual awareness was not significant for males, while perceived benefit was not significant for females. Perceived usefulness failed to affect each of males and females, while the perceived cost of services left a negative influence to both females and males. Therefore it can be concluded that gender factor is a promising factor in the adoption of m-banking (Abdinoor & Mbamba, 2017).

The importance of awareness in m-services in Saudi Arabia was confirmed. For example, Baabdullah et al., (2018) evaluated the current situation of m-services in Saudi Arabia, aims to provide more understanding about the m-services adoption in such country. They noticed low adoption and that there are correlated issues (e.g, users' awareness) of m-services have been seldom surveyed in Saudi Arabia. They believed of the necessity to select a theoretical base to fit the perspective of Saudi customers. Therefore, they extended UTAUT2 by adding awareness factor, highlighting the importance of awareness in m-services in Saudi Arabia, and it's applicability through UTAUT. Inconsistent findings were reported by Alotaibi et al., (2017), that awareness failed to influence intention to adopt m-government (not m-banking) in Saudi Arabia, which cannot be generalized to other types of m-services.

2.2   A Review of Acceptance Models of M-Banking Acceptance

Several studies have applied various acceptance theories in investigating the role of demographic factors (e.g, gender) on users' adoption of m-banking. For instance, the Technology Acceptance Model (TAM) was extended by Goh and Sun (2014), as well as Suoranta and Mattila, (2004) to take into consideration the gender factor. Teo et al., (2012) combined TAM with Theory of Planned Behavior (TPB); Koenig-Lewis et al., (2010) integrated TAM and IDT. Another study by Riquelme and Rios (2010) added risk and gender factors to the TAM. Yuan et al., (2016) integrated TAM with the Task-Technology-Fit model (TTF) to the Expectancy Confirmation Model (ECM) . Laukkanen and Pasanen (2008) used Innovation adoption categories; and Laforet and Li (2005) used attitude, motivation, and behaviour.

Some studies (e.g, Yu, 2012; Laukkanen, 2016), who had extended UTAUT for investigating the demographic factor of gender and provided evidence of the significance of different demographic factors. Studies on technology acceptance, in different contexts, proof the validity and reliability of UTAUT (Venkatesh et al., 2003; Ghalandari, 2012), some of such studies were examined developing countries (Ghalandari, 2012), and specifically in Saudi Arabia by Baabdullah, et al., (2013). UTAUT is a comprehensive model among other acceptance models, provides a unified view, as it considers factors from eight different models, excluding replications of some variables (Venkatesh et al., 2003). The UTAUT not only emphasizes the essential determinants predicting the user's intention to adoption, but also allows investigators to analyze the likelihoods from moderators that would constraint the influence of core determinants (Yu, 2012). UTAUT is a well-accepted model, especially for predicting user acceptance of m-commerce (Lai, 2012).

As the focus of this study is to determine customers' gender differences on their intention to use m-banking, it is useful to extend the UTAUT. UTAUT originally includes the gender demographic factor, and this factor is theorized as a moderator through the UTAUT. Further, UTAUT can explain approximately 70% of the variance in user's intention to use a technology (Venkatesh et al., 2012). Based on the above reasons, this study used the UTAUT as a based acceptance model.

3.   RESEARCH CONCEPTUAL MODEL AND HYPOTHESES

This study employed the Alsheikh and Bojei (2014) m-banking model, which extended the original UTAUT to proof that the awareness factor is a predictor of customers' intention to adopt m-banking services in Saudi Arabia. The current study contributes through considering the possible gender differences amongst customer's in adopting such m-services.

The factors namely, perceived ease of use, perceived usefulness, and perceived complexity are not adapted in our conceptual model. This is because this study extends the UTAUT, which is developed by Venkatesh et al., (2003). Venkatesh et al., have captured the essential elements from eight acceptance models to develop the UTAUT, the performance expectancy is driven from perceived usefulness; and they captured the factor perceived ease of use, and complexity to outline effort expectancy (Yu, 2012).

In our conceptual model, the degree of awareness will be further measured as to what extent does the four independent variables (i.e, performance expectancy, effort expectancy, perceived cost of services,

and perceived risk are significantly indispensable in influencing the bank customers' intention to adopt m-banking services, and more importantly, alongside the differential effects of gender. The prior review showed that there is no study developed a single model that includes all these four independent factors and definitely, the effect of awareness of these factors on customers' according to with their gender differentiation in m-banking in Saudi Arabian context. The factors that are considered in the study are:

3.1 Awareness of Services

A recent study by Abu-Shanab, (2017) reported that users' awareness of the cost of m-services can inspire them for the adoption of such services. From a different perspective, customer's awareness of services is positively associated with user's performance expectancy, as well as, their effort expectancy of m-banking (Alsheikh & Bojei, 2014). In the same way, Ahmad and Gupta, (2015) asserted that the more aware customers of m-banking are more expected to perceive m-banking as easier to use, and useful, that encourage them to adopt such technology. The same findings were reported by Al-Somali et al., (2009) on Internet banking in Saudi Arabia. Laforet and Li (2005) found that lack of awareness can inhibit the adoption of m-banking services in Finland, in Tanzania as reported by Abdinoor, and Mbamba, (2017); also by Amin et al., (2008) in Malaysia.

Users' awareness about how to use, benefits and legal issues of m-services can encourage them to accept such services (Abu-Shanab, 2017). Typically, the perceived risk rises with uncertainty situations and/or the amount of related negative outcome. That is, the more aware customers of m-banking are more expected to perceive m-banking as more secure and lower risk, which powers their intention towards m-banking (Ahmad & Gupta, 2015). Awareness factor is negatively correlated with users' perceptions of m-banking risks (Laukkanen & Kiviniemi, 2010).

H1: User's awareness of m-banking has a negative effect on the perceived cost of services of m-banking services.

H2: User's awareness of m-banking has a positive effect on performance expectancy of m-banking services.

H3: User's awareness of m-banking has a positive effect on effort expectancy of m-banking services.

H4: User's awareness of m-banking has a negative effect on perceived the risk of m-banking services.

Some studies have examined the effect of customer's awareness of technology banking. For example, Safeena et al., (2011) reported that users' awareness leaves a positive effect on the intention to adopt m-banking. The same was found by Kumar and Madhumohan (2014) about internet banking in India. Low awareness of m-banking is a key factor that could lead people to decide not adopting m-banking (Ahmad & Gupta, 2015). Inconsistent findings were reported by Alotaibi et al., (2017), that awareness failed to influence intention to adopt m-government (not m-banking) in Saudi Arabia, which cannot be generalized to other types of m-services.

H5: User's awareness of m-banking has a direct positive effect on behavioural intention to use m-banking.

3.2 Perceived Cost of Use

The concept perceived cost of use in the present study refers to the possible expense of using m-banking (i.e., access cost, equipment costs, and transaction fees). Perceived cost of use is a crucial factor that affects users' decisions to accept or reject a technology: the lower the costs, the more attractive it is for users to adopt the technology (Venkatesh et al., 2003; Chitungo & Munongo, 2013; Goh & Sun, 2014; Hanafizadeh et al., 2014; Abdinoor & Mbamba, 2017). However, AlSoufi & Ali, (2014) reported that perceived cost of use failed to influence user's behavioural intention to use m-banking. The same was found by Alsheikh and Bojei, (2014) in Saudi Arabia.

H6: the Perceived cost of use has a negative effect on behavioural intention to use m-banking.

3.3 Performance Expectancy

When users intend to adopt a new technology, they fundamentally have high expectations about the ability of a specific service to satisfy their needs. Performance expectancy therefore effects the user's intention to adopt m-banking services (Zhou et al, 2010; Jaradat & Rababaa, 2013; Alsheikh & Bojei, 2014), and e-banking services (Venkatesh et al., 2003).

H7: Performance expectancy has a positive effect on behavioural intention to use m-banking.

3.4 Effort Expectancy

Effort expectancy was found significant and positively affect users' intention to adopt m-banking in Saudi Arabia (Alsheikh & Bojei, 2014); also in Jordan (Jaradat & Rababaa, 2013). Still, Zhou et al, (2010) reported the none-significance of effort expectancy on users' intention to adopt m-banking. They expected that when a user expects difficulties and effort in using m-banking this will leads to greater perceptions of risk as well as on their performance expectancy. The later was stated by Tan, and Lau, (2016). These relationships were not investigated in Saudi Arabia. Thus this study hypothesized:

H8a: Effort expectancy has a positive effect on performance expectancy of m-banking.

H8b: Effort expectancy has a positive effect on behavioural intention to use m-banking.

H8c: Effort expectancy has a positive effect on perceived of risk to use m-banking.

3.5 Perceived Risk

In the current study, the perceived risk is associated with financial risks might occur in online transactions (Im et al., 2008). Some researchers argue that the adoption of a new technology is in essence related to peoples' perception of risk of such technology (Yang, 2009; Laforet & Li, 2005). The perceived risk is a major factor in m-services adoption (Wu and Wang, 2005). Several studies (e.g, Venkatesh et al., 2003; Laukkanen & Kiviniemi, 2010; Chitungo & Munongo, 2013; Hanafizadeh et al., 2014; Gupta et al., 2017) reported the negative effect of perceived risk on users' behavioural intention to use m-banking. Consistency findings were reported by AlJabri and Sohail, (2012) about Saudi Arabia. However, AlSoufi and Ali, (2014) reported a weak influence in Bahrain.

H9: Perceived of risk has a negative effect on behavioural intention to use m-banking.

3.6 Behavioural Intention to Use

Users' behavioural intention is the decision to adopt a technology. In the current study, the behavioural intention to use m-banking is examined.

3.7 Gender

It's agreed that gender factor is expected to play a role in people's adoption and use of the online services. Adoption forms across gender were remarkable in numerous countries, sciences, technologies.

In an economic psychology study, Powell and Ansic (1997) examined gender differences tendency in financial decision-making. They revealed that females are less risk-seeking than males irrespective of costs or uncertainty. Venkatesh et al., (2012) reported the significance of gender factor as a moderator to influence the relationship between price value (associated with perceived cost) and behavioural intention to use technology, where the effect was stronger for females. Venkatesh et al., were argued that females are more cost aware than males, and paid more attention to the prices of products and services. Users' demographic characteristics along with perceived cost might have an effect on their m-banking adoption (Suoranta & Mattila, 2004). For example, females are more concerned with the perceived cost of online access of m-banking services than are males (Cruz et al., 2010). These results are similar to the findings found by Baker et al., (2007) in new technology adoption; also by Al-Gahtani et al, (2007) in IT adoption and use. Differently, Chiu et al., (2017) reported no moderating effect of gender on the relationship between perceived cost and behavioural intention to use m-banking in the Philippines. In Saudi Arabia, a user's perception of risk was found the second salient variable affecting online services adoption (AlGhaith et al., 2010); yet the promising role of user's gender is unknown in Saudi Arabia. In this study, the following hypothesis is proposed:

H1a: Gender moderates the relationship between user's awareness and perceived cost of m-banking use.

H1f: Gender moderates the relationship between the perceived cost of use and behavioural intention to use m-banking.

Several studies (e.g Venkatesh et al., 2000; Venkatesh et al, 2003; Dean et al., 2008; and Venkatesh et al., 2012) have found that males are more likely to accept a new technology based on their perceptions of advantages and benefits. MacGregor and Vrazalic (2006) reported that females were more concerned about e-commerce adoption unsuitability; suitability could be relevant with technology benefits such as performance. Al-Ghaith et al., (2010) argued that it's a reasonable difference, due to the conservative nature of Saudi society (Berkman, 2005). Though the number of women workforce is increasing, yet, in usual, women staying at home while the men working out of home (GTS, 2009). In such a society, females tend and prefer to achieve their needs from home via the Internet (Siddiqui, 2008). Al-Ghaith et al., (2010) argued that studies with diverse perspectives on the issue can be easily found, this could be explained by Gatignon and Robertson (1985), who observed that inconsistency, and documented

that the diffusion of technology use can be affected by social accesses, which refers to the knowledge (i.e, awareness) required to adopt a technology.

H1b: Gender moderates the relationship between user's awareness and performance expectancy of m-banking.

H1g: Gender moderates the relationship between performance expectancy and behavioural intention to use m-banking.

In e-commerce adoption, MacGregor and Vrazalic (2006) found that males expressed more concern about the difficulty than females. Ease of technology use expectation is greater for female adopters in general, especially when adopting a new mobile service (Venkatesh and Morris, 2000). In contradict, Teo et al., (2012) reported that female's perceived m-banking to be more difficult and therefore have more effort expectancy than males do. Also females are less expected to adopt m-banking than males (Laukkanen & Pasanen, 2008; Koenig-Lewis et al., 2010). It appears that the literature was reported inconsistence findings, thus demonstrating the need for further investigation to prove the promising different findings in a different country, technology.

In Saudi Arabia, the user's perceived complexity was found to be the most salient factor affecting online services adoption (Al-Ghaith et al., 2010). In such country, there are major differences between males and female in IT adoption, due females perceive greater weaknesses in IT adoption (Baker et al., 2007; Al-Gahtani et al., 2007). Therefore, females' increased expectation of difficulties in using m-banking possibly leads to more perceptions of risk and performance associated with the use of such a banking channel in Saudi Arabia. In general, males are more concerned about risks than females do in adoption and use of technology (Al-Gahtani et al., 2007), especially a new technology (Baker et al., 2007) in Saudi Arabia; the same reported by Cruz et al., (2010) about m-banking in different country. These relations were not examined in Saudi Arabia. Yuan et al., (2016) found that gender moderates the effect of perceived risk on intention to continue to use m-banking, not intended to use, nor in the Saudi context. Therefore, the following hypotheses are formulated:

H1c: Gender moderates the relationship between user's awareness and effort expectancy of m-banking.

H1e1: Gender moderates the relationship between effort expectancy and performance expectancy.

H1e2: Gender moderates the relationship between effort expectancy and perceived risk of m-banking.

H1H: Gender moderates the relationship between effort expectancy and behavioural intention to use m-banking.

Powell and Ansic (1997) discovered that females are less risk-seeking than males irrespective of familiarity and uncertainty in financial decision-making. Inconsistently, Garbarino and Strahilevitz, (2004) pointed out that females perceive a higher risk than males do in online shopping. This highlights the correlation between users' gender and their risks in adopting IT. In m-banking adoption, Laforet and Li, (2005) reported that most users in China are males. They reasoned that security issues such as perceived risk are critical in hindering the m-banking adoption. The literature reporting contradictory findings, For example, a study conducted by AlSoufi and Ali, (2014) failed to prove the negative effect of perceived

risk on behavioural intention to use m-banking. Alsheikh and Bojei, (2014) were successes to evidenced that about Saudi Arabia, as well as, online services adoption in Saudi Arabia by Al-Ghaith et al., (2010).

H1d: Gender moderates the relationship between user's awareness and perceived risk of m-banking.

H1i: Gender moderates the relationship between perceived risk and behavioural intention to use m-banking.

A study by Al-Ghaith et al, (2010) concluded that online services adopter can be found among males in different countries. Several studies (e.g, Laukkanen & Pasanen, (2008); Haider et al., (2018); Riquelme & Rios, (2010); Goh & Sun (2014) have examined the impact of gender factor, focused on m-banking. Other studies investigated the user's gender differences in different technologies, such as, MacGregor and Vrazalic, (2006) in e-commerce; Slyke et al., (2002) in Web-based shopping; Garbarino and Strahilevitz, (2004) in online shopping; and Venkatesh and Morris, (2000) in technology acceptance and usage in general. They surveyed Western countries, indicated that males are more likely to adopt e-services than females. The same findings reported about m-banking by Laukkanen and Pasanen, (2008), that females are less expected to adopt than males. Alalwan et al., (2015) indicated that there are slight gender differences among users to adopt m-banking in Jordan. However, the same probably not true in Saudi Arabia case (Siddiqui, 2008).

H1j: Gender has a direct effect on the user's behavioural intention to use m-banking.

The aforementioned hypotheses extension of the UTAUT is represented in the proposed model (Figure 1).

Figure 1: Proposed Research Model

4. METHODOLOGY

A quantitative method was employed using a non-structured survey questionnaire. The type of questionnaire's questions is closed-ended questions, which provide an ease of answering the questions, and to facilitate better understanding by the respondents' opinion (Sekaran & Bougie, 2013). The questionnaire comprises of two main sections. The first section is asking bank customer's their demographic information. The second section consists of questions of each factor that formulated to prove the hypotheses in the research conceptual model. These factors' questions were adapted from previous related studies and then modified to fit the aim of the current study. The questions that measured the factors namely, performance expectancy, effort expectancy, and behavioural intention to use m-banking were adapted from Al-Somali et al., (2009) study; while the questions of awareness of services, perceived risk, and perceived cost of use were adapted from Yuan et al., (2016). Appendix at the end of this paper shows the questionnaire items. The questionnaire was initially formulated in English. However, it was translated into Arabic. This is reasonable essential, as the Arabic language is the official language in Saudi Arabia.

4.1 Data Collection

The questionnaires were distributed by two techniques were: hard copy questionnaires and online-based questionnaires. The questionnaires were distributed randomly to the stratified targeted respondents (Saudi banks' customers, as well as mobile users) in different regions in Saudi Arabia from October 22, 2015, until April 20, 2016. A total of 389 valid questionnaires and thus were submitted for analyses. The response rate was 29.1%.

4.2 Data Analysis

Statistical Package for Social Sciences (SPSS) Version 17 was used to produce frequency and descriptive statistics associated with the demographic profile of the respondents and data of each item used in the questionnaire. Then, reliability testing of scales and exploratory factor analysis were functioned for reliability and validity testing. Additionally, Structural Equation Modeling (SEM) approach using Analysis of Moment Structure (AMOS) was used to test the hypotheses. A two-step SEM approaches (i.e. measurement model and structural model).

4.3 Results

Table 1 . Demographic Profile Analysis

Demographic factor	Categories	Frequency	Percentage
Age	< 20	14	3.6
	20-29	155	39.8
	30-39	138	35.5
	40-49	58	14.9
	> 50	24	6.2

Gender	Male	336	86.4
	Female	53	13.6
Education Level	High School or less	49	12.6
	Diploma	39	10.0
	Bachelor Degree	181	46.5
	Master Degree	61	15.7
	PhD Degree	59	15.2
Income (monthly)	Less than 1600 USD	149	38.4
	1600 –2650 USD	118	30.3
	More than 2650 USD	122	31.3

Table 1 provides the demographic characteristics of the respondents; it shows that most of the sample are young (20-39 years old); the majority (86.4%) of respondents are males; educational level of respondents was distributed, but concentrated on a bachelor degree; income was almost distributed equally.

Table 2. Descriptive Testing of Scales Analysis

Factor	Mean	Number of Items	Standard Deviation
Awareness of services	3.31	4	1.04
Performance expectancy	3.49	5	0.79
Effort expectancy	3.98	4	0.81
The perceived cost of use	3.96	4	0.91
Perceived risk	2.88	4	1.02
Behavioural intention to use m-banking	3.11	3	0.94

Table 2 shows that the Mean perceived risk is 2.88, which reflects that on average the respondents had a neutral response regarding the risk of m-banking. Instead, the Means of the perceived cost of use, and effort expectancy are 3.96, and 3.98, respectively; therefore, the users are aware of the direct and indirect cost, as well as, expect less effort that might occur when using m-banking. The rest Means are ranged from 3.11 to 3.49, reflecting that respondents are agreed of their awareness of services, performance expectancy, and behavioural intention to use m-banking. Standard deviation values are almost up to 1.0, reflects no dispersion in data responses to the Means.

Table 3. Reliability and Convergent Validity Analysis

Constructs	Items	Factors Loading	Cronbach's Alpha

239

Awareness of Services	AW2	.842	0.86
	AW3	.882	
	AW4	.838	
Performance Expectancy	PE2	.698	0.88
	PE3	.823	
	PE4	.774	
Effort Expectancy	EE1	.734	0.88
	EE2	.821	
	EE3	.787	
	EE4	.725	
Perceived Cost of Use	PC1	.815	0.81
	PC2	.836	
	PC3	.746	
	PC4	.680	
Perceived Risk	PR1	.796	0.86
	PR2	.854	
	PR3	.776	
	PR4	.838	
Behavioural Intention to use	BIU1	.769	0.90
	BIU2	.820	
	BIU3	.762	

As shown in Table 3, Cronbach's alphas of scales were ranged from 0.81 to 0.90. All the Cronbach's alpha values of the questionnaire scales demonstrated acceptable (>0.70) internal reliability, reflecting that all values are valid for further analysis. Table 3 also, presents the results of a factor analysis results for the questions. Question 1 of awareness of services factor (i.e, AW1) was omitted since its loading was less than 0.5; also Question 1 and 5 of performance expectancy factor (i.e, PE1 and PE5) were omitted since they have double loadings. All other items were above 0.5 and loaded in under their components.

Table 4. Discriminant Examination of the Constructs

Constructs	EE	PE	AW	BIU	PC	PR
EE	**0.81**					
PE	0.68	**0.77**				
AW	0.40	0.39	**0.83**			

BIU	0.69	0.74	0.40	**0.87**		
PC	-0.04	-0.04	0.03	-0.03	**0.71**	
PR	-0.02	-0.06	0.02	-0.16	0.43	**0.77**

Notes. AW= Awareness of Services, PE= Performance Expectancy, EE= Effort Expectancy, PC= Perceived Cost of Use, PR= Perceived Risk, BIU= Behavioural Intention to use

Table 4 shows the diagonal elements, which represent the square roots of AVE, and the off-diagonal element are the correlation values among constructs. The results show that all the diagonal elements were higher than the off- diagonal elements in all constructs. Also, the AVE value for each construct was higher than all the squared correlations among any two constructs. Therefore, sufficient discriminant validity was confirmed.

4.4 Structural Equation Modeling

Structural equation modelling (SEM) consists of a set of statistical methods that enables the relationships between variables to be analyzed. SEM has two mechanisms, the measurement model and the structural model. In this study, the measurement model was evaluated using confirmatory factor analysis (CFA) and the model was then examined by testing the hypothesized structural model.

CFA results show that the overall model was fit and valid. As shown in Fig 2 below, which represents the measurement model using CFA.
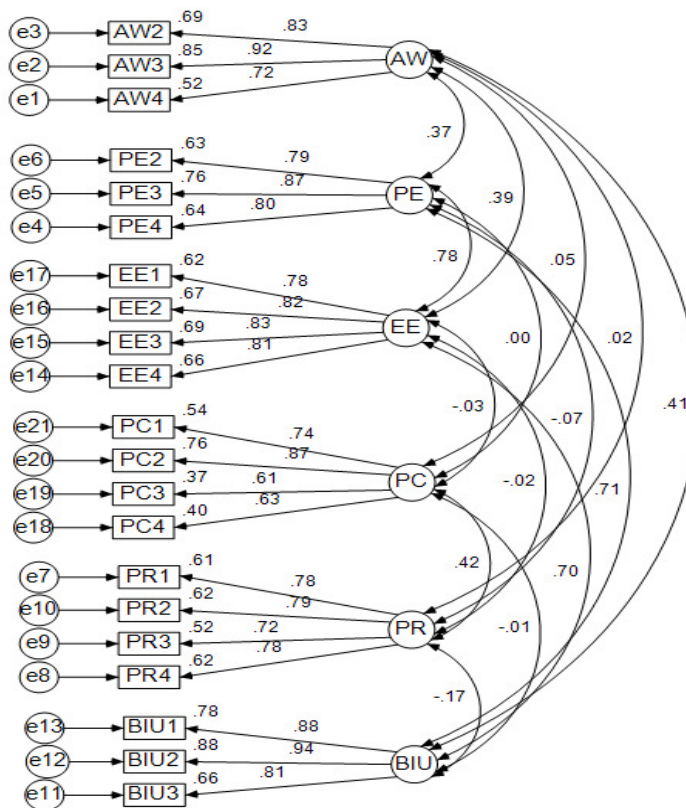
Figure 2. Measurement Model using CFA

Notes. AW= Awareness of Services, PE= Performance Expectancy, EE= Effort Expectancy, PC= Perceived Cost of Use, PR= Perceived Risk, BIU= Behavioural Intention to use

Table 5. Criteria and Results of Measurement Model Fit

Fit indices	Criteria	Reference	Result	Comment
χ2/df (CMIN/df)	<3 is a good fit; <5 is an acceptable fit.	Hair et al. (2010); and Byrne (2010).	2.11 (Sig, 0.000)	Good fit
RMSEA	<0.05 is an excellent fit; <0.08 is a good fit; <0.1 is an acceptable fit.	Byrne (2010)	0.059	Good fit
GFI	>0.95 is an excellent fit;	Hair et al. (2010)	0.903	Good fit
AGFI	> 0.90 is a good fit; > 0.80 is an acceptable fit.		0.871	Acceptable fit
IFI			0.952	Excellent fit
CFI			0.951	Excellent fit
TLI			0.941	Good fit

Notes. The indices are: CMIN (minimum discrepancy), chi-square (χ2), df (degree of freedom), root mean square error approximation (RMSEA), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), incremental fit index (IFI), and the Tucker-Lewis index (TLI).

For Structural model, multi-group moderation analysis was used to examine the relationships among all factors in the proposed model using AMOS 16. Following Hair et al. (2010), prior to making a valid comparison among structural parameters in multi groups of gender moderator, metric invariance should be confirmed. This is necessary to evidence the differences between groups. To fill this aim, a chi-squared difference test was executed to determine whether or not there is an invariant moderating effect of each gender moderator on the other constructs. Afterwards, the hypothesis testing was achieved according to the hypothesized moderators (gender).

The gender factor separated the data into two groups (i.e., males and females). Though the CFA measurement model shows a satisfactory fit [CMIN/df = 1.822, p = 0.00 (Sig), GFI = 0.864, AGFI = 0.834, IFI = 0.946, CFI = 0.938, TLI = 0.918, RMSEA = 0.041).The chi-square difference test indicated that the gender groups are not different at the model level, since the chi-squared change was statistically insignificant (p>0.5), with chi-squared difference = 3.596, the degree of freedom difference = 7, and p-value = 0.825. Therefore, no invariant moderation effects. In other words, the model is not different across gender groups. Statistically, the gender factor has failed to influence the relationships in the model. Based on the above results, the gender direct and indirect (i.e, moderating) effect should not be tested further.

Table 6. Criteria and Results of Structural Model Fit

Fit indices	Criteria	Reference	Result	Comment
χ2/df (CMIN/df)	<3 is a good fit; <5 is an acceptable fit.	Hair et al. (2010); and Byrne (2010).	1.21 (Sig, 0.034)	Good fit
RMSEA	<0.05 is an excellent fit; <0.08 is a good fit; <0.1 is an acceptable fit.	Byrne (2010)	0.024	Excellent fit
GFI	>0.95 is an excellent fit;	Hair et al. (2010)	0.997	Good fit
AGFI	> 0.90 is a good fit;		0.978	Acceptable fit
	> 0.80 is an acceptable fit.			
IFI			0.999	Excellent fit
CFI			0.999	Excellent fit
TLI			0.995	Good fit

Table 7. Hypotheses Testing

Hypotheses	Hypotheses Statement	Estimate	S.E	CR	P	Results

Code						
H1	AW has negative effect on PC	0.042	0.044	0.942	0.346	Rejected
H2	AW has positive effect on PE	0.071	0.027	2.612	0.009	Supported
H3	AW has positive effect on EE	0.272	0.037	7.319	0.000	Supported
H4	AW has negative effect on PR	0.027	0.050	0.547	0.585	Rejected
H5	AW has positive effect on BIU	0.099	0.034	2.897	0.004	Supported
H6	PC has negative effect on BIU	0.031	0.040	0.783	0.434	Rejected
H7	PE has positive effect on BIU	0.517	0.064	8.011	0.000	Supported
H8a	EE has positive effect on PE	0.691	0.035	16.515	0.000	Supported
H8b	EE has positive effect on BIU	0.320	0.063	5.099	0.000	Supported
H8c	EE has positive effect on PR	-0.010	0.061	-0.169	0.865	Rejected
H9	PR has negative effect on BIU	-0.139	0.038	-3.709	0.000	Supported

Notes. AW= Awareness of Services, PE= Performance Expectancy, EE= Effort Expectancy, PC= Perceived Cost of Use, PR= Perceived Risk, BIU= Behavioural Intention to use
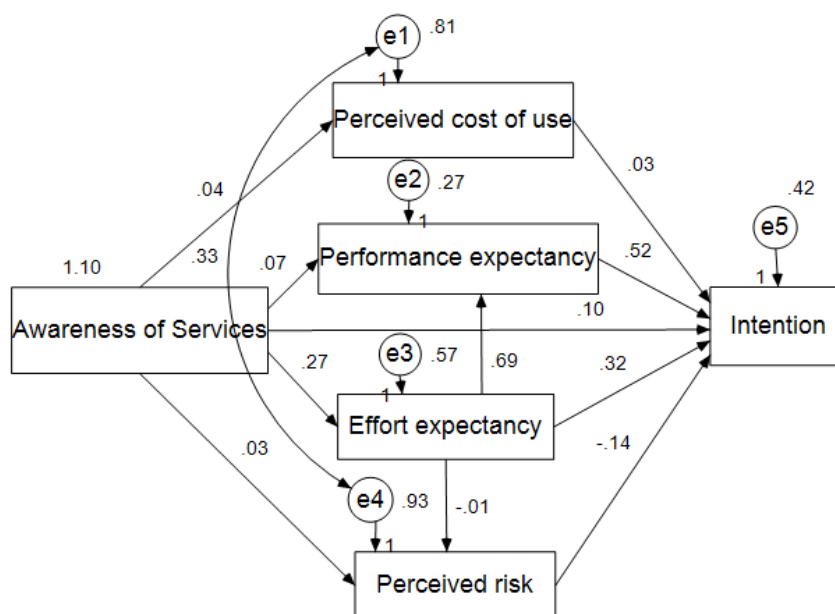

Figure 3. Structural Model

6. DISCUSSION

As mentioned earlier of this study, the moderating effect of the gender variable on the hypothesized direct relationships among the independent variables was not tested. This is because the model is not different across gender groups. Thus, gender variable failed to moderate the direct relationships in the proposed model (i.e, Hypotheses numbered, 1a, 1b, 1c, 1d, 1e1, 1e2, 1f, 1g, 1h, 1i, and 1j,). This is an inconsistency with the findings reported by Yu (2012). Several previous studies (Cruz et al., 2010; Baker et al., 2007; Al-Gahtani et al., 2007), who reported that Women were more concerned

about cost than were men, while men were more aware of risks than were women.

The results provide support for seven of the proposed direct effect hypotheses, not provide support for the remaining four, as shown in Fig 3, and Table 7. As such, awareness of services factor was insignificant to affect the perceived cost of use, nor perceived risk (i.e, Hypotheses 1, and 4). This is an inconsistency with the findings produced by Ahmad and Gupta, (2015); and Laukkanen and Kiviniemi, (2010), who reported that the more aware customers of m-banking are more expected to perceive m-banking as more secure and lower risk. Also dissimilar to the findings reported by Abu-Shanab, (2017), that users' awareness about the cost of m-services can encourage them for the adoption of such services. In addition, awareness of services factor was significant to affect performance expectancy, as well as, effort expectancy (i.e, Hypotheses 2, and 3). This is inconsistence with the results reported by Alsheikh and Bojei, (2014), who stated that customer's awareness of m-banking services is positively associated with their performance expectancy, as well as, effort expectancy of such system. As expected, hypothesis 5 was supported. This is consistent with what was reported by Alotaibi et al., (2017), that awareness failed to influence the intention to adopt m-government (not m-banking) in Saudi Arabia. However, this is inconsistence with the findings by Safeena et al., (2011), and (Ahmad and Gupta, 2015), who reported that users' awareness of m-banking is a key factor that could lead people to decide to adopt m-banking.

Unexpected in hypothesis 6, the perceived cost of use failed to affect users' intention to use m-banking. This result consistency with what observed by Alsheikh and Bojei, (2014) in Saudi Arabia, that there was no significant impact of the cost of use on the adoption of m-banking. Similar findings reported by AlSoufi and Ali, (2014) in a different country. Hypothesis 7 was supported as hypothesized, and this is consistency with (Zhou et al., 2010; Jaradat & Rababaa, 2013; Alsheikh & Bojei, 2014), who reported that the performance expectancy increases the user's intention to adopt m-banking services. Also, effort expectancy variable was a significant predictor to affect performance expectancy, as well as, behavioural intention to use (i.e, Hypotheses H8a, and H8b), but not users' perception of m-banking risk (i.e, hypothesis H8c). Consistency findings were reported by Alsheikh and Bojei, (2014) that the effort expectancy has a significant positive effect on users' intention to adopt m-banking in Saudi Arabia; also in Jordan by Jaradat and Rababaa, (2013). Also consistency with the expectation stated by Zhou et al., (2010) that more effort expected by users would lead to greater perceptions of performance expectancy. In dissimilarity, Zhou et al., (2010) reported insignificance of effort expectancy on users' intention to adopt m-banking, as well as, on users' effort in using m-banking. The unexpected result of hypothesis H8c is dissimilar with the findings stated by Tan, and Lau, (2016), but consistency with the expectation stated by Zhou et al., (2010) that more difficulties and effort expected by users would lead to greater perceptions of risk. As hypothesized in Hypothesis 9, this study found evidence for a significant negative effect of risk on intention to use m-banking. AlSoufi and Ali, (2014) found consistency findings; however, they reported that perceived risk has a weak effect on users' intention to use m-banking services.

7. CONCLUSION

This study deducts a new m-banking conceptual model that integrally focuses on users' gender along with some social factors as antecedents of m-banking adoption. The proposed model highlighted

the synthesizing the gender users' characteristic in adopting m-banking services. Though the proposed model was failed to continue testing the gender moderating differences in adopting m-banking services, this model is useful to be used further. This proposed model is capable to be applied in different cultures, technologies, and for different types of users. As different country and/or technology sample is promising different results. Furthermore, this model is capable to synthesize new moderator variables as well as to study technology acceptance, especially in developing countries. This study has added to the literature by reviewing, analyzing and comparing related studies. Finally, this study reported useful findings, associated with the direct effect of several factors, which have not surveyed in such synthesizing way. These findings can be generalized on Saudi Arabia and provide guide lines for banks in drawing marketing strategies.

This study proofs that each of user awareness of m-banking services, user performance expectancy, effort expectancy, and perceived risk are significant factors on user's behavioural intention to use m-banking services. Practically, bank providers are advised to develop an easy to use mobile application that does not require high experience. In addition, banks should generate a brief user manual for the application to increase awareness of m-banking services regarding how to use such services, costs and security issues, can enhance the safety of m-banking services to inhibit the users' perception of risk, and can add a reward system such as awarding points to the user when using the m-banking to inspire customer use of m-banking. As suggested in the results discussion, young people (less than 19 years) are not aware of m-banking services and do not have high-performance expectancy; therefore, banks need to focus on this segment of customers, perhaps by marketing their m-banking services via social network platforms. Ultimately, Saudi banks should implement their marketing strategies to retain current m-banking adopters, and attract non-adopters customers. These can raise the rate of online banking services usage (Al-Malkawi et al., 2016).

There are several limitations that need to be considered in future work. First, the population sample was chosen using simple random sampling techniques; however, since a demographic factor (i.e, gender) was considered, the stratified sampling method could be more appropriate. As in this study male respondents were dominate the sample, and only 14% of the respondents were female. Using stratified random sampling methods could have yielded a random sample of a satisfactory quota of the female strata, which would have caused in more equal subgroup representation. Future studies are advised to collect statistics from banks regarding the actual rate of m-banking users, rather than entirely relying on behavioural intention to use these services. Further, banks can be involved in future studies by applying the results of previous studies in a case study of a particular bank to clarify how the variables operate for that bank. For instance, a study by Laslom, (2015), who assessed the Internet banking satisfaction in the case of Saudi British Bank. He reported that only 4.5% of their customers used m-banking as the core channel for their transactions, while 82% of their customers used internet banking as their main channel for transactions.

APPENDIX: Survey Questionnaire Items

Constructs	Code	Items/Questions
Awareness of Services	AW1	I know about mobile banking services.
	AW2	I have received enough information about the benefits of using mobile banking services.
	AW3	I have received enough information of how to use mobile banking services.
	AW4	I have received information about the security system of mobile banking services from the bank.
Performance Expectancy	PE1	I would find mobile banking services beneficial.
	PE2	Using mobile banking services would enable me to accomplish banking task more quickly.
	PE3	Using mobile banking services would increase my productivity in handling my banking tasks.
	PE4	Using mobile banking services would enhance my bank transaction quality.
	PE5	Using mobile banking services would increase my efficiency in conducting my banking tasks.
Effort Expectancy	EE1	My interaction with mobile banking services would be understandable.
	EE2	It would be easy for me to become skillful at using mobile banking services.
	EE3	I would find mobile banking services easy to use.
	EE4	I would find mobile banking services to be flexible to interact with.
Perceived Cost of Use	PC1	I think bank charge (e.g. transaction fee, send SMS alerts) is expensive when using mobile banking services.
	PC2	I think mobile operator charge (e.g. accessing the internet, SMS charges) is expensive when using mobile banking services.
	PC3	I think the equipment cost (e.g. buy a new mobile phone) of using mobile banking services is expensive.
	PC4	I think mobile banking services are more expensive than other banking channels.
Perceived Risk	PR1	I think using mobile banking services for monetary transactions would be risky.
	PR2	I think using mobile banking services has no assured privacy.

	PR3	I have worries about the satisfactory of the banking transactions performance via mobile phone.
	PR4	I think mobile banking services are more risky than other banking channels.
Behavioural Intention to use	BIU1	I intend to use mobile banking services in the future.
	BIU2	I would use mobile banking services for different kinds of banking transactions.
	BIU3	I believe that adopting mobile banking services is worthy for me.

REFERENCES

Abdinoor A and Mbamba U O (2017). Factors influencing consumers' adoption of mobile financial services in Tanzania. Cogent Business and Management, 4(1), 1392273.

Abu-Shanab E A (2017). E-government familiarity influence on Jordanians' perceptions. Telematics and Informatics, 34(1): 103-113.

Alafeef M, Singh D and Ahmad K (2011). Influence of demographic factors on the adoption level of mobile banking applications in Jordan. Journal of Convergence Information Technology, 6(12), 107-113.

Alalwan A A, Rana N P, Dwivedi Y K, Lal B and Williams M D (2015, October). Adoption of mobile banking in Jordan: Exploring demographic differences on customers' perceptions. In Conference on e-Business, e-Services and e-Society (pp. 13-23). Springer, Cham.

Al-Gahtani S S, Hubona G S, and Wang J (2007). Information technology (IT) in Saudi Arabia: culture and the acceptance and use of IT. Information and Management, 44(8), 681-691.

Al-Gahtani S (2008). Testing for the applicability of the TAM model in the Arabic context: Exploring an extended TAM with three moderating factors. Information Resources Management Journal, 21, 1-26.

Al-Ghaith W, Sanzogni L and Sandhu K (2010). Factors influencing the adoption and usage of online services in Saudi Arabia. The Electronic Journal of Information Systems in Developing Countries, 40(1), 1-32.

Ahmad I and Gupta K (2015). A Study on customers' attitude towards mobile banking adoption in India. International Journal of Marketing and Financial Management, 3(11), 49-70.

AlJabri M and Sohail S (2012). Mobile banking adoption: Application of diffusion of innovation theory. Journal of Electronic Commerce Research, 13(4), 379-391.

Sohail M S and Al-Jabri I M (2014). Attitudes towards mobile banking: are there any differences between users and non-users?, Behaviour and Information Technology, 33, 335-344.

Al-Jabri I M (2016). Customers' perceptions of mobile banking services: Are there any differences between men and women in Saudi Arabia?. International Journal of Wireless and Mobile Computing, 10(3), 205-213.

Al-Hunaiyyan A, Alhajri R and Al-Sharhan S (2017). Instructors age and gender differences in the acceptance of mobile learning. International Journal of Interactive Mobile Technologies, 11(4), 4-16.

Al Khasawneh M H (2015). An empirical examination of consumer adoption of mobile banking (M-Banking) in Jordan. Journal of Internet Commerce, 14(3), 341-362.

Alkhunaizan A and Love S (2013). Effect of demography on mobile commerce frequency of actual use in Saudi Arabia. In Advances in information systems and technologies (pp. 125-131). Springer, Berlin, Heidelberg.

Alotaibi R, Houghton L and Sandhu K (2017). Factors influencing users' intentions to use mobile government applications in Saudi Arabia: TAM applicability. International Journal of Advanced Computer Science and Applications, 8(7), 200-211.

Alsheikh L and Bojei J (2014). Determinants affecting customer's intention to adopt mobile banking in Saudi Arabia. International Arab Journal of e-Technology, 3(4), 210-219.

Al-Malkawi H A, Mansumitrchai S and Al-Habib M (2016). Online banking in an emerging market: Evidence from Saudi Arabia. International Journal of Electronic Finance, 9(1), 1-17.

Al-Somali S A, Roya G and Ben C (2009). An investigation into the acceptance of online banking in Saudi Arabia. Technovation, 29(2), 130–141.

AlSoufi A and Ali H (2014). Customers perception of mbanking adoption in kingdom of Bahrain: An empirical assessment of an extended TAM model. International Journal of Managing Information Technology, 6(1), 1-13.

AL-Zyadat T A (2018). E government systems and its impact on quality of service at public hospitals in amman (filed study). International Journal of Information, Business and Management, 10(2): 201-205.

Amin H, Hamid M R A, Lada S and Anis Z (2008). The adoption of mobile banking in Malaysia: The case of Bank Islam Malaysia Berhad (BIMB), International Journal of Business and Society, 9(2), 43-53.

Azad MAK (2016). Predicting mobile banking adoption in Bangladesh: A neural network approach. Transnational Corporations Review, 8(3), 207-214.

Baabdullah M and Williams Y K D M D (2013). Evaluating the unified theory of acceptance and use of technology (UTAUT2) in the Saudi Arabian context. Nascent Connections 2013, p. 8.

Baabdullah A M, Alalwan A A and Al Qadi N S (2018). Evaluating the current situation of mobile services (m-services) in the kingdom of Saudi Arabia. In emerging markets from a multidisciplinary perspective (pp. 149-160). Springer, Cham.

Baker E W, Al-Gahtani S S and Hubona G S (2007). The effects of gender and age on new technology implementation in a developing country: Testing the theory of planned behavior (TPB). Information Technology and People, 20(4), 352–375.

Berkman C (2005). Internet filtering in Saudi Arabia in 2004. Retrieved from http://www.opennetinitiative.net/studies/saudi

Bernier, Q., Meinzen-Dick, R., Kristjanson, P., Haglund, E., Kovarik, C., Bryan, E., Ringler, C., Silvestri, S., (2015). Gender and Institutional Aspects of Climate-Smart Agricultural Practices: Evidence from Kenya. CCAFS Working Paper No. 79. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Boonsiritomachai W and Pitchayadejanant K (2017). Determinants affecting mobile banking adoption by generation Y based on the unified theory of acceptance and use of technology model modified by the technology acceptance model concept. Kasetsart Journal of Social Sciences. Doi: org/10.1016/j.kjss.2017.10.005

Byrne, B.M. Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming. 2nd ed. New York: Taylor and Francis Group, 2010.

Chitungo S K and Munongo S (2013). Extending the technology acceptance model to mobile banking adoption in rural Zimbabwe. Journal of Business Administration and Education, 3(1), 51-79.

Chiu J L, Bool N C and Chiu C L (2017). Challenges and factors influencing initial trust and behavioral intention to use mobile banking services in the Philippines. Asia Pacific Journal of Innovation and Entrepreneurship, 11(2), 246-278.

Cruz P, Neto P F, Munoz-Gallego P and Laukkanen T (2010). Mobile banking rollout in emerging markets: Evidence from Brazil. International Journal of bank marketing, 28(5), 342–371.

Dean D H (2008). Shopper age and the use of self-service technologies. Managing Serv. Qual. 18(3), 225–238.

Dhandayuthapani S P (2012). E-banking practices and customer satisfaction –in Thanjavur district Tamilnadu: an empirical study (PhD Thesis). Retrieved from Bharathidasan University, Department of Commerce and Financial Studies. http://hdl.handle.net/10603/9514

Dwivedi Y, Rana N, Chen H and Williams M (2011). A Meta-analysis of the unified theory of acceptance and use of technology (UTAUT), in Nüttgens, M. et al (Eds.), Governance and Sustainability in Information Systems, Managing the Transfer and Diffusion of IT, Springer Berlin Heidelberg, pp. 155-170.

Garbarino E and Strahilevitz M (2004). Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation. Journal of Business Research, 57(7), 768-775.

Gatignon H and Robertson T S (1985). A prepositional inventory for new diffusion research. Journal of Consumer Research, 11: 849-867.

Gender and Technology Spring 2009 (GTS). Gender and technology in Amish and Saudi Arabian cultures. Retrieved from http://gandt.blogs.brynmawr.edu/web-papers/writing-groups/gender-and-technology-in-amish-and-saudi-arabian-cultures

Ghalandari K (2012). The effect of performance expectancy, effort expectancy, social influence and facilitating conditions on acceptance of e-banking services in Iran: The moderating role of age and gender. Middle East Journal of Scientific Research, 12(6), 801-807.

Glavee-Geo R, Shaikh A A and Karjaluoto H (2017). Mobile banking services adoption in Pakistan: Are there gender

differences?. International Journal of Bank Marketing, 35(7), 1090-1114.

Goh T T and Sun S (2014). Exploring gender differences in Islamic mobile banking acceptance. Electronic Commerce Research, 14(4), 435-458.

Gupta S, Yun H, Xu H and Kim H W (2017). An exploratory study on mobile banking adoption in Indian metropolitan and urban areas: A scenario-based experiment. Information Technology for Development, 23(1), 127-152.

Haider M J, Changchun G, Akram T and Hussain S T (2018). Does gender differences play any role in intention to adopt Islamic mobile banking? An empirical study. Journal of Islamic Marketing, 9(4), 00-00. Doi: org/10.1108/JIMA-11-2016-0082.

Hair, J.F. et al., Multivariate data analysis: A global perspective. 7th Ed. New Jersey: Pearson, 2010.

Hanafizadeh P, Behboudi M, Koshksaray A A and Tabar M J S (2014). Mobile-banking adoption by Iranian bank clients. Telematics and Informatics, 31(1), 62-78.

Hassan M M, Rahman A, Afrin S and Rabbany G (2014). Factors influencing the adoption of mobile banking services in Bangladesh: An empirical analysis. International Research Journal of Marketing, 2(1), 9-20.

Al-Hosni N, Ali S and Ashrafi R (2010, November). The key success factors to mobile commerce for Arab countries in Middle East. Proceedings of the 12th International Conference on Information Integration and Web-based Applications and Services (pp. 787-790). ACM.

Im I, Kim Y and Han H J (2008). The effects of perceived risk and technology type on users' acceptance of technologies. Information and Management, 45(1), 1-9.

Jamshidi D, Hussin N and Wan H L (2013). The potential impact of demographic items on Islamic banking services acceptance and usage-a literature review. International journal of social science and humanities, 1(1), 34-39.

Jaradat M I R M and Al Rababaa M S (2013). Assessing key factor that influence on the acceptance of mobile commerce based on modified UTAUT. International Journal of Business and Management, 8(23), 102-112.

Joshua A J and Koshy M P (2011). Usage patterns of electronic banking services by urban educated customers: Glimpses from India. Journal of Internet Banking and Commerce, 16(1), 1-12.

Kishore S V and Sequeira A H (2016). An empirical investigation on mobile banking service adoption in rural karnataka. SAGE Open, 6(1). Doi: abs/10.1177/2158244016633731

Koenig-Lewis N, Palmer A and Moll A (2010). Predicting young consumers' take up of mobile banking services. The International Journal of Bank Marketing, 28(5), 410- 432.

Kumar S and Madhumohan S (2014). Internet banking adoption in India. Journal of Indian Business Research, 6(2), 155-169.

Laforet S and Li X (2005). Consumers' attitudes towards online and mobile banking in China. International journal of bank marketing, 23(5), 362-380.

Lai C F (2012). Extended UTAUT model of mobile commerce: An empirical study of negative user acceptance behaviours of

mobile commerce in Hong Kong (PhD Thesis). Retrieved from Macquarie Graduate School of Management, Macquarie University.

Laslom S M (2015). Assessment of Internet banking satisfaction: case of Saudi British Bank (SABB), (Unpublished Master Thesis). Retrieved from King Saud University, AlReyadh, Kingdom of Saudi Arabia.

Laukkanen T and Pasanen M (2008). Mobile banking innovators and early adopters: How they differ from other online users?, Journal of Financial Services Marketing, 13(2), 86–94.

Laukkanen T and Kiviniemi V (2010). The role of information in mobile banking resistance. International Journal of Bank Marketing, 28(5), 372–388.

Laukkanen T (2016), Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the internet and mobile banking. Journal of Business Research, 69(7), 2432-2439.

MacGregor RC and Vrazalic L (2006) E-Commerce adoption barriers in small businesses and the differential effects of gender. Journal of Electronic Commerce in Organizations, 4(2), 1-24.

Malero A (2015). Measuring security awareness on mobile money users in Tanzania. International Journal of Engineering Trends and Technology, 20(1), 44-47.

Mishra V and Singh V (2015). Selection of appropriate electronic banking channel alternative: Critical analysis using analytical hierarchy process. International Journal of Bank Marketing, 33(3), 223–242.

Mittal S (2016). Role of mobile phone-enabled climate information services in gender-inclusive agriculture. Gender, Technology and Development, 20(2), 200-217.

Peterman A, Behrman J A and Quisumbing A R (2014). A review of empirical evidence on gender differences in nonland agricultural inputs, technology, and services in developing countries. In Gender in agriculture (pp. 145-186). Springer, Dordrecht.

Powell M and Ansic D (1997). Gender differences in risk behaviour in financial decision-making: An experimental analysis. Journal of economic psychology, 18(6), 605-628.

Püschel J, Afonso Mazzon J and Mauro C, Hernandez J (2010). Mobile banking: proposition of an integrated adoption intention framework. International Journal of Bank Marketing, 28(5), 389–409.

Riquelme H E and Rios R E (2010). The moderating effect of gender in the adoption of mobile banking. International Journal of Bank Marketing, 28(5), 328–341.

Safeena R, Hundewale N and Kamani A (2011). Customer's adoption of mobile-commerce a study on emerging economy. International Journal of e-Education, e-Business, e-Management and e-Learning, 1(3), 228-233.

Sekaran U and Bougie R (2013) Research Methods for Business: A Skill-Building Approach, 6th ed., Wiley.

Shaikh A and Karjaluoto H (2015). Mobile banking adoption: A literature review, Telematics and Informatics, 32(1), 129–142.

Shaikh A A, Karjaluoto H and Chinje N B (2015). Consumers' perceptions of mobile banking continuous usage in Finland and South Africa. International Journal of Electronic Finance, 8(2-4), 149-168.

Siddiqui, H. (2008). Investigation of intention to use e-commerce in the Arab countries: A comparison of self-efficacy, usefulness, culture, gender, and socioeconomic status in Saudi Arabia and the United Arab Emirates (Ph.D. dissertation). Retrieved from Nova Southeastern University, United States - Florida.

Slyke C, Comunale C and Belanger F (2002). Gender differences in perception of Webbased shopping, Communications of ACM, 45(7), 82-86.

Statista (2015). Number of mobile phone users worldwide from 2013 to 2019 (in billions),   Retrieved from http://www.statista.com/statistics/274774/forecast-of-mobile-phone-users-worldwide.

Suoranta M and Mattila M (2004). Mobile banking and consumer behavior: New insights into the diffusion pattern.   Journal of Financial Services Marketing, 8(4), 354-366.

Susanto T D and Goodwin R (2010). Factors influencing citizen adoption of SMS-Based e-Government Services. Electronic journal of e-government, 8(1): 55-71.

Tan E and Lau J (2016). Behavioural intention to adopt mobile banking among the millennial generation. Young Consumers, 17(1), 18-31.

Temelkov Z and Samonikov M (2018). The need for fintech companies as non-bank financing alternatives for SME in developing economies. International Journal of Information, Business and Management, 10(3),25-33.

Teo A C, Tan G W H, Cheah C M, Ooi K B and Yew K T (2012). Can the demographic and subjective norms influence the adoption of mobile banking?, International Journal of Mobile Communications, 10(6), 578-597.

Venkatesh V and Morris M G (2000). Why don't men ever stop to ask for directions? gender, social influence, and their role in technology acceptance and usage behavior. MIS Quarterly, 24(1), pp.115-139.

Venkatesh V, Thong J Y and Xu X (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. MIS quarterly, 36(1), 157-178.

Venkatesh V, Morris M G, Davis G B and Davis F D (2003). User acceptance of information technology: toward a unified view. MIS Quarterly, 27(3), 425-478.

Venkatesh, A., Shih, E., Stolzoff, N. (2000, March). A longitudinal analysis of computing in the home. In: A., Sloane, and Rijn, F. (eds.), Home Informatics and Telematics, pp. 205–215. Springer, US.

Wu J H and Wang S C (2005). What drives mobile commerce?: An empirical evaluation of the revised technology acceptance model.   Information and Management, 42(5), 719–729.

Yang A S (2009). Exploring adoption difficulties in mobile banking services. Canadian Journal of Administrative Sciences, 26(2), 136–149.

Yu C S (2012). Factors affecting individuals to adopt mobile banking: Empirical evidence from the UTAUT model. Journal of

Electronic Commerce Research, 13(2), 104-121.

Yu C S, and Chantatub W (2016). Consumers' resistance to using mobile banking: Evidence from Thailand and Taiwan. International Journal of Electronic Commerce Studies, 7(1). Retrieved from http://academic-pub.org/ojs/index.php/ijecs/article/viewFile/1375/308

Yuan S, Liu Y, Yao R and Liu J (2016). An investigation of users' continuance intention towards mobile banking in China. Information Development, 32(1), 20-34.

Zhou T, Lu Y and Wang B (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. Computers in human behavior, 26(4), 760-767.

ABOUT THE AUTHORS

Ayman N. Alkhaldi is an Assistant Professor in the Management Information Systems Department, Community College, University of Hai'l, Kingdom of Saudi Arabia. Currently, he is the head of Management Information Systems DepartmentHe has a PhD degree in management information systems from University Kebangsaan Malaysia, Malaysia. His current research interests are in the areas of M-Banking, M-Government, M-Learning, Web Usability, Cloud Computing, Project Management Systems, and Enterprise Resources Planning.

FACTORS AFFECTING THE USE OF ONLINE FLIGHT BOOKING

IN ETHIOPIAN AIRLINES

By Abdurezak Mohammed Kuhil(PhD.)

Asst. Prof. of Business Leadership, Addis Ababa University, College of Business and Economics, School of Commerce

And

Rodda Temesgen(MA ,Ethiopian Airlines)

Abstract

The rapidly growing Information and Communication technology (ICT) is knocking the front door of every organization in the world. Online shopping has changed the way business is done & it has made international shopping very easy. As one of the   e-commerce categories, e-ticketing system nowadays is being actively and widely practiced. Due to the slow grabbling of E-Commerce and E-payment in Ethiopia, the utilization of e-ticketing in Ethiopian Airlines is an important issue that should be addressed to improve the deficiency of the system. This research aims to identify the factors that affect the use of E-Ticketing in EAL based on extended Technology Acceptance Model (TAM) (Davis, 1989). The study was made by collecting data from 399 respondents on Ethiopian Airlines flights. The results obtained from analysis confirmed   that Relative Advantage, Perceived Ease of Use, Perceived Trust and awareness and usage of E-ticketing are found to be having a positive significant relationship with adoption of E-Ticketing while perceived risk has shown a negative significant relationship. The research, therefore, suggests to EAL to promote the E-Ticketing services aggressively through appropriate media to increase users awareness and usage   on the advantage of E-ticketing services.

Key words: E-Ticketing, information technology, Ethiopian airlines

1. INTRODUCTION

The role of internet & websites has almost changed everything in the business world throughout the past couple of decades There is a rapid expansion of Electronic Booking & payment systems throughout the developed and the developing world. E-ticketing system and in general E – commerce provides tremendous amount of advantages, such as continuous availability, time saving, global reach, price transparency, time competitive responsiveness and faster supply chain processes (Morganosky and Cude, 2000). E-Ticketing is an alternative marketing strategy implemented by airline to serve their customers via the Internet. It is basically an online flight ticket purchasing system which is an essential application of online shopping (E-commerce). The E-commerce revolution has created a competitive environment that change the way how business is being delivered and designed (Turban & King, 2003).

Ethiopian Airlines (EAL) is one of the leading airlines in Africa and most profitable companies in

Ethiopia. Ethiopian Airlines currently operates flights to over 116 destinations and 5 continents in the world namely Africa, Asia, Europe, Middle East & North America. Tewolde Hailemariam EAL CEO (SelamtaMegazine, vol. Nov\Dec 2018)   said Ethiopian airlines has marked its 10 million passengers in the year 2018; it has opened eight new international destinations; received the four SKYTRAX customer service certification & introduced 14 brand new aircraft and surpassed its 100th aircraft in service.

EAL is popular for adapting new technologies, training its employees & allowing its customers take advantage of the new technology adapted to benefit the airline in reducing overheads and gaining a much closer access to target consumers.

Ethiopian Airlines dissolved its agreement with SITA at the end of 200G (ibid) and entered into an agreement with Saber soft airlines solution and started online flight booking (E-ticketing) system in2006. As a result, EAL has made available user-friendly Android & IOS E-ticketing mobile application software in addition to its website which is used for online booking, purchase and also check-in process for ease of use by travelers and competitiveness of the Airline itself. This has been developed for the purpose of online booking where passengers can book & purchase their tickets from the comfort of their seat in partnership with different bank online payment methods (E-payment) moreover check in and get their boarding passes with out having to queue at the terminal.

Although the benefits of using online flight booking system are obvious, it is a surprise that there are customers who prefer to stick to the traditional method of business transactions (IntanSalwani, 2010). In fact, E- shopping such as online E- ticketing and purchase is on an infant stage for Ethiopian Airlines customers who book their flights in Ethiopia.

Various researches have been done in the world and show that E- ticketing adoption vary based on different factors.Although, airline passengers' buying behavior has been looked at by different authors such as; Diggines (2010), Gupta et al. (2004) and Yu (2008) nonetheless all these stated works primarily focused on Anglo-American and Asian countries with no emphasis on sub-Saharan African consumers.

This study aims at exploring and determining the   main factors that affect   for the slow adoption of the E-ticketing system in Ethiopian Airlines. The objective of the study is to identify the factors that affect the use of E-ticketing in EAL and recommend the interventions ,to enhance the   usage of E-Ticketing in EAL.

The study is based on   testing seven hypothesis developed based on the literature:

H1: There is a positive relationship between Relative Advantage and usage of E-ticketing.

H2: There is a positive relationship between perceived usefulness and usage of E-ticketing

H3: There is a positive relationship between Perceived Ease of Use and usage of E-ticketing.

H4: There is a positive relationship between perceived behavioral control and usage of E-ticketing.

H5: There is positive relationship between Perceived Trust and usage of E-ticketing.

H6: There is a positive relationship between awareness and usage of E-ticketing.

H7: There is a negative relationship between Perceived Risk and usage of E-ticketing

2. LITERATURE REVIEW

Electronic commerce or E-commerce has been defined in several ways. Kalakota andWhinston (1997:7) broadly define ecommerce as "A modern business methodology that addresses the needs of organizations, merchants and consumers to cut costs while improving the quality of goods and services and increasing the speed of service delivery." They view E-commerce as a production process that converts digital inputs into value-added outputs through a set of intermediaries.

Despite the very high rate of growth in internet usage in Ethiopia, the use and adoption of E- commerce services remain low. The E commerce development in Ethiopia is at its starting stage.

Currently E- commerce in Ethiopia can be considered as accessing the internet to choose products over the web. Hence, only a customer can see the items and pay in person to actually buy the product. With the advent of new E- payment methods which serve as a catalyst, E-commerce is on the edge to draw thousands of new users with in Ethiopia. Review of the existing literature showed that e-commerce has been widely researched in the developed and emerging economies; however, there is not much of research for the developing Ethiopian economy. This study is therefore assumed to fill this gap.

E-ticketing can be defined as a new way of purchasing tickets and issuing tickets without papers to clients and the transactions are purely done through electronic devices such as telephone and Internet. E-ticketing was started by United Airlines back in 1994. A decade later, the industry was not able to gain profit from saving costs $3 billion a year as only 20% of all airlines issued e-tickets. In June 2004, IATA set an industry target of 100% e-ticketing in four years. This announcement had been criticized that it was an unrealistic goal and the return on investment was uncertain. However, on 1 June 2008, the industry has successfully transformed into 100% e-ticketing (IATA, 2010).

As one of the e-commerce categories, e-ticketing system nowadays is being actively and widely practiced by not only airline companies but also other companies in different fields, for example cinemas for entertainment industry; buses, and trains for transportation industry; banking industry; and sports industry (Haneberg, 2008).

The use of the Internet makes buying a ticket more convenient since the service is available at any geographical location, including your home (or even remotely via a laptop and cellular phone) and at any time of the day, any day of the year. Online ticket services have a further advantage by providing relevant information alongside the service. This can aid purchasing decisions and may encourage future usage (Buford,1998). Therefore, ticket buyers have quite an easy commute to the ticket offices, these days-they only have to get to their home personal computer and onto the internet. It beats standing in lines and transportation to ticket offices.

There are also benefits for those providing the service. New markets are being created and ticket sales are increased. Apart from maintenance and data updates, no manpower is required to provide the service once it has been established. The process of recording the transactions is more automated and overhead is reduced. An important point is that ticket providers are also providing a convenient service to customers and are thereby improving public image and encouraging return customers. (Burford, 1998).

Strong argument in favor of a ticketless system is the decrease in time "wasted" by the passenger at the

airport. The real benefit is for business travelers, as found by Reuben Gronau in his study of the monetary value of time for passengers, where he concludes: the price of time will determine the mode of transportation to use and business travelers price their time according to their hourly earnings, along with other factors such as the length of the trip, the time of the day, etc. Given the proven time reduction with a ticketless system, all of these factors contribute to time-value savings for the traveler. (Reuben Gronau,1970)

Consistently posting record profits for the past seven years, Ethiopian Airlines has been using Sabre's technology for its core reservations, network planning and e-commerce since 2005. Despite the daunting challenges in African aviation, Ethiopian Airlines has continued with thriving successes and has become the leading aviation group in Africa, nine years ahead of its 15-year strategic growth roadmap, Vision 2025. Addis Ababa Ethiopia and South Lake, Texas(Aug 31,2017))

"Leveraging the latest information technology and travel system solution is one of the pillars of our long-term growth plan, Vision 2025, and consequently we have made significant investments in technology to create a seamless passenger experience," said TewoldeGebreMariam, CEO, Ethiopian Group. "Sabre's technology partnership and expertise has been invaluable over the years, and that's a key decision driver in our expanded relationship which includes new cutting-edge technology that will help us create better customer experiences and remain the airline of choice among travelers around the world."

Several theories are offered in order to identify factors that cause people accept new technologies and information systems and use them (Rao and Troshani 2007).

TAM was first introduced by Fred Davis in 1989 to predict user acceptance of new technologies. According to (Davis 1989), TAM suggests that perceived usefulness (PU) and perceived ease of use (PEOU) are the two most important factors in explaining individual users' adoption intentions and actual usage. Davis (1989) defines perceived usefulness as the degree to which a person believes that using a particular system will enhance his or her job performance. Perceived Ease of Use refers to the degree to which the person believes that using the system will be free of effort.

A research model by (Yapp JiinFui, S. Mariapun, Abdullah- Al- Mamun, 2014) on adoption of E-ticketing combines Acceptance Model (TAM) (Davis, 1989), and online trust and purchase intention model for airline E- ticketing in Malaysia (Chen and Barnes, 2007 as cited from Goh, 2008). In the modified model, Internet trust (including perceived security and perceived privacy), personal trust disposition, perceived ease of use and perceived behavioral control are the independent variables whereas purchasing airline e-tickets is identified as the dependent variable. According to the study there are many factors that influence the intention, behavior, and attitudes to shop online or airline e-ticketing adoption. The factors include perceived risk, perceived usefulness, perceived ease of use, perceived enjoyment, perceived privacy, perceived security, subjective norm, trust, personal trust disposition, internet usage, experience, perceived behavioral control, and demographic variables.

i.   Perceived Usefulness

Perceived usefulness refers to the degree to which a person believes that using a particular system would

enhance his or her job performance (Davis 1989). In the context of online consumer behavior, Chen et al., (2002), Childers et al., (2001), and Heijden et al.,(2001) found that perceived usefulness affects attitude toward online shopping.Similarly, Chen et al., (2002), Gefen and Straub (2000), Heijden et al., (2001), and Pavlou (2001) found perceived usefulness to be a significant factor affecting intention to shop online.

ii.   Perceived Ease of Use

In contrast to PU refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis 1998) Perceived ease of use (PEOU) refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). PEOU has received enormous attention in the IT adoption studies. Chen et al., (2002), Childers et al., (2001) and Heijden et al., (2001) found that PEOU influences attitudes toward online shopping.

iii.   Perceived Behavioral Control:

The construct of control reflects beliefs regarding the availability of resources and opportunities for performing the behavior as well as the existence of internal/external factors that may impede the behavior(Ajzen, 1991). Perceived behavioral control is important in explaining human behavior since an individual who has the intentions of accomplishing a certain action may be unable to do so because his or her environment prevents the act from being performed. In the context of online ticketing in Ethiopia, computer access, Internet access and availability of assistance for passengers who intend to purchase tickets online in Ethiopia are all behavioral control factors that are important in facilitating the E-ticketing behavior .

iv.   Awareness

According to (Sathye 1999), customers go through "a process of knowledge, persuasion, decision and confirmation" before they are ready to adopt a product or service. The adoption or rejection of an innovation begins when "the customers becomes aware of the product".
Customers must become aware of the new brand or technology. An important characteristic for any adoption of innovation service or product is creating awareness among the customers about the service or product (Sathye 1999).

v.   Perceived Trust

Refers to the confidence a person has in his or her favorable expectations of what other people will do, based, in many cases, on previous interactions (Gefen, 2000). A significant number of studies (George 2002, Heijden et al., 2001, Jarvenpaa et al., 2000, Pavlou and Chai 2002) found that trust is a salient determinant of online shopping attitude. Moreover, Lynch et al., (2001) found that trust significantly

affects a potential consumers` intention to shop online. Therefore, adding the concept of trust to our model will improve the predictive ability of the model to investigate the driving factors of E-ticketing adoption in our country.

vi.   **Relative Advantage**

The notion of relative advantage is concerned with the extent to which an innovation is perceived by potential adopters as being superior from the idea, product or service it supersedes (Rogers, 1983). The construct of relative advantage is highly domain specific, although dimensions that are found to have some generality include reduced costs and greater convenience. A key issue is that it is not the better performance of an innovation in an objective sense that matters, but rather thesuperiority of performance as subjectively perceived by the customer (Szymigin and Bourne, 1999).

vii.   **Perceived Risk**

Perceived risk refers to a consumer's perceptions of uncertainty and adverse consequences of buying from the web (Grazioli and Jarvenpaa 2000). Prior studies (Heijden et al., 2001; Jarvenpaa and Todd 1996) found that perceived risk had a strong impact on attitude. Moreover, Heijden et al., (2001), Pavlou (2001) and Tan and Teo (2000) found that perceived risk affects intention to shop online significantly. Similarly, Miyazaki and Fernandez (2001) found perceived risk had a significant impact on online purchasing behavior. uncertainty plays a role in adoption decision in the form of perceived risk (Shimp and Bearden, 1982) and this construct is expected to be of considerable significance in relation to service adoption.

3. RESEARCH METHODOLOGY

The below research model is the modification and combination of extended Technology Acceptance Model (TAM) (Davis, 1989) by Yapp JiinFui, S. Mariapun, &Abdullah- Al- Mamun on the study of factors Affecting Airline Electronic Ticketing: Differences between Adopters and Non Adopter along with Relative Advantage.

In the modified model, Relative Advantage , perceived Usefulness , Perceived ease of use, perceived Behavioral control, Awareness and Perceived Risk are the independent variables   whereas Use of e-tickets in EAL is identified as the dependent variable.   The independent variables of security and privacy in the model of Chen and Barnes are merged under Perceived Risk and a schematic of the model is shown below:
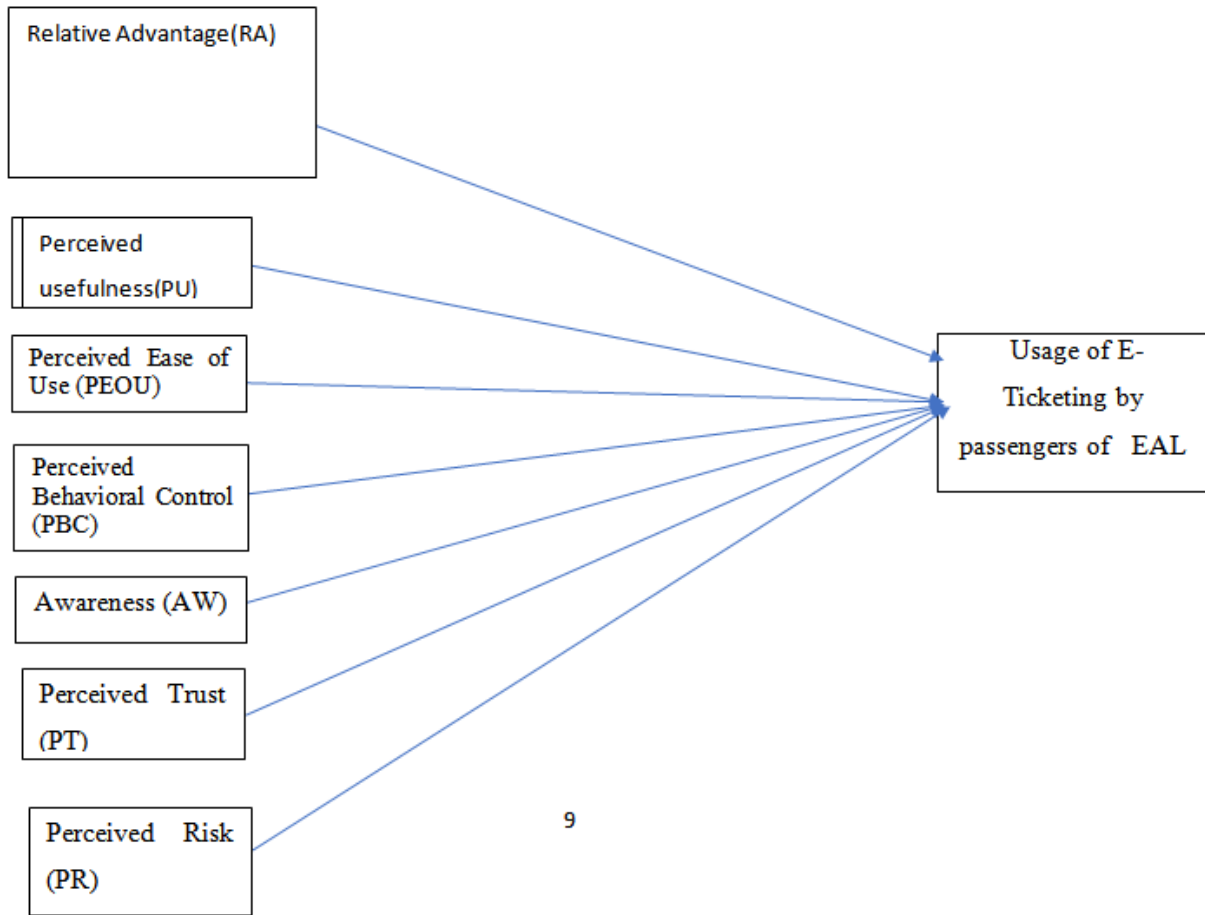
Fig: A modified conceptual framework for the study((Davis, 1989)

In this study, the primary data had been collected through 399 valid questionnaire surveys from target respondents of passengers who travelled using Ethiopian Airlines above the age of 18 years old on international flights. The instrument was structured based on the study variables and survey was carried out from 25th of Oct - 10th Nov 2018. A total of 420 questionnaires were distributed and 21 were found to be invalid and were excluded in the analysis. Statistical Package for social Science (SPSS v20) was used to generate the actual results on frequency tables while descriptive analysis was used to analyze and describe the findings. Inaddition, logistic regression was used to determine the extent to which identified factors affect usage of online flight booking in Ethiopian Airlines.

A quantitative research approach is appealing for this study because the research problem tends to be explanatory which seeks to explain the relationship between E-Ticketing adoption and its affecting factors, to achieve the objectives of the study and to test the hypothesis.

Jonker and Pennink (2010) contended that the essence of quantitative research is to use a 'theory' to frame and thus understand the problem at hand.

Based on the data obtained from Ethiopian Airlines Selamta magazine (Nov/December 2018) EAL has

reached its 10,000,000 passengers for the year 2018. Therefore, the target population will be the total number of passengers travelling annually using EAL. As the entire population size is very large, the researcher has used a sampling frame of the total number of passengers who used EAL with in two weeks of Oct 25th–Nov 10th 2018. As per the data from Ethiopian Airlines marketing department the number of passengers that travelled with in the 2 weeks is equal to 318,456. Then, a simplified formula by Yamane (1967), was used to calculate sample sizes with a 95% confidence level and precision P =0.05 .

$n = N/ 1 + Ne2$ Where n = sample size

N= population size

e = Error of 10 %

Sample size n = 302,040/ 1 + (302,040 ∗ (0. 052))

Sample size n= 399.52 passengers.

In this research study, probability and non-probability sampling technique of random and convenience sampling was used in which all the targeted respondents have been reached most conveniently and the survey questionnaire was distributed on willingness basis.

3.1 Descriptive Analysis

Descriptive analysis is used to describe and explain the information of sample collected and summarizes a given data set, which can either be a representation of the entire population or a sample. The measures used to describe the data set are measures of central tendency and measures of variability or dispersion.

Frequency Distribution

Frequency distribution is used for obtaining a count of the number of responses associated with different values of one variable and to express these count into percentage terms. Frequency distribution is used to analyze respondents" demographical profile in part A such as gender, age, Travel experience, occupation, residence and education level as well as general information in part B. In addition, the mean and standard deviation are measures of central tendency which are used to analyze data collected in the Section II of the questionnaire.

3.2 Logistic Regression

Logistic Regression attempts to investigate the relationship between two or more independent variables and a dependent variable that is dichotomous while keeping all the other variables constant. For this type of dependent variable there are only two categories to predict. In this study the dependent variable (Usage of E-ticketing) takes one of the two values of usage or nonusage. Logistic regression also accommodates independent variables that scaled end of a ratio scale ordinal or nominal.

In this study, whether an individual chooses to adopt E-Ticketing or not adopt E-Ticketing falls into the realm of two choice. Probabilities have to be between zero and one.

In logistic regression, we can write the equation in terms of log odds (logit) which is a linear function of the predictors. The coefficient β1 is the amount of the logit (log odds) change with a one unit change in 'X'. The logistic formulas are stated in terms of the probability that Y=1 which is referred as ^p. The probability that Y is 0 is 1-p^

ln (p^/1-p^)= β0+β1X

The 'ln' is a symbol to a natural logarithm and β0+β1X   is our familiar equation for the regression line. 'P' can be computed from the regression equation also. Therefore the regression equation is known then theoretically its possible to calculate the expected probability that Y=1 for a given value 'X'

P=   exp (β0+β1X)   = eβ0+β1X

      1   + exp (β0+β1X)   1+ eβ0+β1X

3.3 Pearson's Correlation Analysis

Pearson's correlation analysis is used to indicate the strength and direction of relationship between two variables. In this study, this analysis is chosen to measure the co-variation between the seven independent variables and traveler susage   of e-ticketing for EAL. The correlation coefficient determines how the value of one variable changes when the value of another variable changes.

3.3.1   Multi collinearity Test

Multicollinearity occurs when independent variables are correlated. If two independent variables are correlated then its difficult to keep the other independent variable constant. When multicollinearity arises, the ability to define any variable's effect is diminished (Hair et al., 2010). Independent variables should be *independent.* The acceptable level of correlation between each pair of the independent variables should be at 0.80 or less (Bryman and Cramer, 1999).

During multicollinearity test PBC was found to have value above 80 and it was omitted for the rest of the analysis and hypothesis

3.4 Cox & Snell R Square &Nagelkerke Analysis

The R Square refers to the percentage of the response variable variation. These variation takes a value between 0 & 100%. The higher the R square the better the model fits the data entered.

4.   RESULTS AND DISCUSSION

4.1   Descriptive Analysis (Usage of EAL E-Ticketing services)

Based on results of respondents replies 46.6% of the respondents are using E-Ticketing system and 47.4% started using it regularly after they had the awareness. Only 26.3% of the respondents have the mobile app on their smart devices and 93% of the respondents claimed that they didn't encounter risk related issue after they started using it.73.7% believed that attitude has an effect on usage of E-ticketing system. 59.6% of travelers felt that the promotion is appealing enough which leaves the rest of the 40.4% thinking the promotion was not good enough. Almost 60% of travelers approved that Travel experience has an effect on usage of the E-Ticketing system.

4.2 Factors Affecting E-Ticketing system usage in EAL

It is important for Ethiopian Airlines to understand the factors which affect the usage of E-Ticketing in order to be able to provide services which meet the customers' expectations and needs. Passengers were also requested to rate how important the identified factors were in influencing their decision to purchase their tickets online, ranging from ***strongly agree to strongly disagree*** on a numerical scale. The results of the responses were as shown in the table below: *Table Response of respondents on independent variables of Relative Advantage, Perceived Usefulness, Perceived ease of use, Perceived Behavioral Control, Perceived Trust, Awareness and Perceived Risk.*

factors	N	Mean	Std. Deviation
RA	399	1.9474	0.82387
PU	399	2.6249	1.17099
PEOU	399	2.2573	0.85951
PBC	399	2.6249	1.17099
PT	399	2.7076	0.48856
AW	399	1.5848	0.2673
PR	399	3.3816	1.01011

Source: Survey results on SPSS(November,2018)

Scale: 1=Strongly Agree, 2=Agree,3=Neutral,4=Disagree,5=Strongly Disagree

From the above table based on the average mean score calculated from the passengers' responses, the respondents agreed that Awareness is the major factor that affects usage of E-Ticketing with a mean of 1.58 where most passengers Strongly Agreed. The second major factor is Relative Advantage with 1.94. Perceived ease of use on the 3rd place while Perceived Behavioral Control has the same value with Perceived Usefulness with 2.62as 4th rank as per the travelers' responses. The 6th and the 7th factors which influences passenger's usage of E-Ticketing for EAL is perceived Trust and perceived risk. Therefore, the results confirm Perceived Risk is the least factor that affects E-Ticketing Usage.

4.3 Logistic Regression Analysis

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	444.410[a]	.235	.314

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

R square refers to the percentage of variance in the dependent variables that the independent variables explain. The value of R square shows the percentage of the response variable between the value of 0 and 100%. According to Cohen (1992) R-square value .12 or below indicate low, between 0.13 to 0.25 values indicate medium 0.26 or above values indicate high effect sizes. Therefore, the explained variation in the dependent variable based on the model ranges from 23% to 31%. Since Nagelkerke R Square is a modification of Cox & Snell, it is preferable to report Nagelkerke R value equals 31% which means that 31% of the changeability of in usage of E-Ticketing has been explained by the independent variables taken together.

Logistic Regression Results

Variables in the Equation		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	RA	.429	.198	4.718	1	.030	1.536	1.043	2.262
	PU	.128	.101	1.616	1	.204	1.137	.933	1.386
	PEOU	.559	.160	12.210	1	.000	1.748	1.278	2.391
	PT	.841	.244	11.924	1	.001	2.319	1.439	3.738
	AW	2.493	.493	25.566	1	.000	12.102	4.604	31.814
	PR	-.444	.154	8.362	1	.004	.641	.475	.867
	Constant	-6.944	1.275	29.644	1	.000	.001		

a. Variable(s) entered on step 1: RA, PU, PEOU, PT, AW, PR.

Scale: 1=Strongly Agree 2=Agree 3=Neutral 4=Disagree 5=Strongly Disagree

Accordingly, Relative Advantage was found to have statistically significant and positive relation with E-Ticketing usage. Holding other explanatory variables constant, perceived usefulness in this study has emerged to have statistically insignificant influence on customers usage of E-ticketing as its value of significance is greater than 0.05.Perceived Ease of use & Awareness also are found to have a high positive significant relationship while a negative significant relationship between perceived risk and E-Ticketing adoption was created.

Discussions of regression results

The identified factors affecting E-Ticketing Adoption for EAL are Relative Advantage, Perceived usefulness, Perceived ease of use, Perceived Trust, Perceived risk and awareness. Therefore, based on the

regression result table above

H1: *The significant value for RA is 0.03 (i.e. p<0.05). Therefore, reject H0 which indicates that there is a positive significant relationship between RA and E-Ticketing adoption in EAL.*

H2: *The significant value for PU is 0.204 (i.e. p>0.05). Therefore,accept H0 which indicates a value greater than 0.05 and that there is a positivebut statistically insignificant relationship between PU and E-Ticketing adoption in EAL.*

H3: *The significant value for PEOU is 0.000(i.e.p<0.05). Therefore, reject H0 which indicates that there is a positive HIGH significant relationship between PEOU and E-Ticketing adoption in EAL.*

H5: *The significant value for PT is 0.001 (i.e. p<0.05). Therefore, reject H0 which indicates that there is a positive significant relationship between PT and E-Ticketing adoption in EAL.*

H6: *The significant value for Awareness is 0.000 (i.e. p<0.05). Therefore, reject H0 which indicates that there is a positive HIGH significant relationship between Awareness and E-Ticketing adoption in EAL*

H7: The significant value for PR is 0.04 (p<0.05). Therefore, reject H0 which indicates *that there is a negative significant relationship between Perceived Risk and passengers usage of E-Ticketing method in EAL.*

5. CONCLUSION

This research aims to identify the factors that affect the use of E-Ticketing in EAL. In this research, the proposed conceptual model is supported by data collected from 399 respondents on Ethiopian Airlines flights. The results obtained from analysis conducted had put into a conclusion that hypotheses H1, H3, H5, and H6 have a positive significant relationship with adoption of E-Ticketing while H2 has a positive insignificant relationship and H7 has a negative significant relationship.

6. RECOMMENDATION

Based on the study, EAL(the case organization) shall continue to promote and advertise the E-Ticketing services in a better way which allow users to have awareness of the advantage. EAL has to develop a system that will assure travelers the safety of buying flight tickets online and confirmation for transaction mistakes such as refund & compensation.

- The airline should emphasize in designing an application and website that will allow better features of purchase considering the exposures of the passengers from all over the world. Such as lifestyle, culture & language.
- The airline should focus on the non-users   especially those who still show up at the travel agent should be given a new &clear view on the importance and advantages of using the E-Ticketing system.
- The airline should provide a means through which passengers can book their tickets online considering limited access to internet, smart device and payment systems they have in different countries.

REFERENCES

Ajzen, I. (1991). The theory of Planned Behavior. Organization behavior and human decision processes

Burford, D. (1998). 'Secure Electronic Ticketing on the Internet', Department of Computer Science, UCT.

Childers, T. L., Carr, C. L., Peck, J., and Carson, S. (2001) 'Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior', Journal of Retailing, 77: 4, 511-535.

Childers, T. L., Carr, C. L., Peck, J., and Carson, S. (2001) 'Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior', Journal of Retailing, 77: 4, 511-535.

Gefen, D., and Straub, D. W. (2000), 'The Relative Importance Of Perceived Ease of Use in IS Adoption: A Study of E-Commerce Adoption', Journal of Association for Information Systems, 1, 1-10.

Diggines, C. (2010). Passenger perceptions and understanding of the low-cost and full-service airline models in South Africa and the implications for service strategy.

Dasgupta, S., R. Paul, and S. Fuloria, (2011,):   'Factors Affecting Behavioral Intentions towards Mobile Banking Usage: Empirical evidence from India', Romanian Journal of Marketing, 3(1), 6-28.

Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3):319–340.

Davis, F. D., Bagozzi, R. P., &Warshaw, P.R. (1989). User Acceptance of ComputerTechnology: A Comparison of Two Theoretical Models. Management Science35(8), 982-1003.

Davis, F., D. (1989). Perceived Usefulness, Perceived Ease of Use and User Acceptanceof Information Technology, MIS Quarterly,13(3) 319-339.

Davis, F., D. (1993). User Acceptance of Information Technology :System Characteristics,User Perceptions and Behavioral Impacts, Intonation Journal of Manmachine Studies ,Mar 1993, 38,(3) 475 487 Letter, No.163, P1

IntanSalwani Mohamed, (2010). Empirical Investigation on Factors Determining Ecommerce Usage and Business Performance in Malaysia Service Industry. Unpublished PhD dissertation, Multimedia Universiti Malaysia.

Kalakota, R., and Whinston. A.B. (1996) 'Frontiers of Electronic Commerce' Reading, MA: Addison-Wesley

Khormm, 2009, 'E Commerce –AirAsia', viewed 16 June 2010,

<http://www.scribd.com/doc/24332975/E-Commerce-AirAsia>

M.A., and Cude, B.J. (2000), 'Consumer response to online grocery shopping', InternationalJournal of Retail and Distribution Management, Vol 28, No 1, pp 17–26.

YappJiinFui*, S. Mariapun** and Abdullah- Al- Mamun,(Sep 9,2014) "Factors Affecting Airline Electronic Ticketing: Differences between Adopters and Non Adopters" ,