

THE RELATIONSHIP BETWEEN BIG FIVE MODEL AND
IMPULSIVE BUYING BEHAVIOUR OF MIDDLE INCOME
FAMILIES IN PENINSULAR MALAYSIA: A STUDY ON
POST GST IMPLEMENTATION

BY

LEE SHA NI

LOOI KHAI YEEN

LOW YING YING

TEY EE ERN

YEO KHAI WEN

A research project submitted in partial fulfillment of the
requirement for the degree of

BACHELOR OF COMMERCE (HONS) ACCOUNTING

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE

DEPARTMENT OF COMMERCE AND ACCOUNTANCY

AUGUST 2016

Copyright @ 2016

ALL RIGHTS RESERVED. No part of this paper may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, graphic, electronic, mechanical, photocopying, recording, scanning, or otherwise, without the prior consent of the authors.

DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the research project.
- (4) The word count of this research report is 10518 words (excluded tables, references and appendices).

Name of Student:	Student ID:	Signature:
1. Lee Sha Ni	1205970	_____
2. Looi Khai Yeen	1307951	_____
3. Low Ying Ying	1300510	_____
4. Tey Ee Ern	1300686	_____
5. Yeo Khai Wen	1400573	_____

Date: 11 August 2016

ACKNOWLEDGEMENT

First and foremost, we would like to express our deepest gratification to our beloved supervisor, Mr. Loo Thin Tuck for his patience and guidance throughout the conduct of this research. Without restricting us in a definite comfort zone, he has provided us so much of freedom in supporting our creativity, imagination and any valuable fresh ideas during the process of writing this thesis. This research project would not be done without his support in every stage of this final year project. Besides our supervisor, we would also like to sincerely thank our second examiner, Puan Nur Diyana Binti Ismail who has given us with valuable recommendations and professional feedbacks for the improvement of this research during VIVA presentation. This has motivated us to further enhance our research in a way that could be beneficial to different parties.

Furthermore, we would like to give special credit to our Research Methodology and Project's coordinator, Ms. Shirley Lee Voon Hsien who has equipped us with all the professional knowledge and skills in conducting a research. Despite of her tight schedule, she is always willing to understand the obstacles that we have encountered throughout the research and then providing useful solutions and advices for us to solve the problems. Her professionalism, kindness, friendliness, and sacrifice on time are highly appreciated by every single one of us.

Without losing sight on the help received from the community, we would like to express our gratuitous appreciation to all the middle-income earners for their generous participation and patience in helping us to complete this final year project by answering the survey questionnaire. We would also want to express our gratefulness to our families and friends who have given us unconditional love and support in contributing to the success of this final year project.

DEDICATION

This research project is dedicated to:

Our respectful supervisor,

Mr. Loo Thin Tuck

Who guided us with patience and endurance throughout the research.

Our research coordinator,

Ms. Lee Voon Hsien

Who lectured us on the knowledge of conducting research.

UTAR,

For providing the complete facilities in completing this research.

AND

Families and friends,

For their never-ending love and unconditional support in both physically and mentally.

TABLE OF CONTENTS

	Page
Copyright Page.....	ii
Declaration.....	iii
Acknowledgement.....	iv
Dedication.....	v
Table of Contents.....	vi
List of Tables.....	xi
List of Figures.....	xii
List of Appendices.....	xiii
List of Abbreviations.....	xiv
Preface.....	xvi
Abstract.....	xvii
CHAPTER 1 RESEARCH OVERVIEW.....	1
1.0 Introduction.....	1
1.1 Research Background.....	1
1.2 Problem Statement.....	3
1.3 Research Objectives.....	5
1.3.1 General Objective.....	5
1.3.2 Specific Objectives.....	6
1.4 Research Questions.....	7
1.5 Hypotheses of the Study.....	8

1.6	Significance of the Study.....	8
1.7	Chapter Layout.....	10
1.8	Conclusion.....	11
CHAPTER 2 LITERATURE REVIEW.....		12
2.0	Introduction.....	12
2.1	Review of the Literature.....	12
2.1.1	Openness to Experience.....	13
2.1.2	Conscientiousness.....	14
2.1.3	Extraversion.....	14
2.1.4	Agreeableness.....	15
2.1.5	Neuroticism.....	16
2.2	Review of Relevant Theoretical Models.....	17
2.2.1	Application of Theory in Research.....	19
2.3	Proposed Theoretical Framework.....	21
2.4	Hypotheses Development.....	22
2.5	Conclusion.....	22
CHAPTER 3 METHODOLOGY.....		23
3.0	Introduction.....	23
3.1	Research Design.....	23
3.2	Data Collection Methods.....	24
3.2.1	Primary Data.....	24
3.3	Sampling Design.....	26

3.3.1	Target Population.....	26
3.3.2	Sampling Frame and Sampling Location.....	26
3.3.3	Sampling Elements.....	29
3.3.4	Sampling Technique.....	30
3.3.5	Sampling Size.....	31
3.4	Research Instrument.....	32
3.5	Constructs Measurement.....	33
3.6	Data Processing.....	35
3.7	Data Analysis.....	36
3.7.1	Descriptive Analysis.....	36
3.7.2	Scale Measurement.....	37
3.7.2.1	Normality Test.....	37
3.7.2.2	Reliability Test.....	37
3.7.3	Inferential Analysis.....	38
3.7.3.1	Multicollinearity Problem.....	38
3.7.3.2	Linearity Test.....	38
3.7.3.3	Pearson's Correlation Analysis.....	39
3.7.3.4	Multiple Linear Regression Analysis.....	39
3.8	Conclusion.....	41
CHAPTER 4	DATA ANALYSIS.....	42
4.0	Introduction.....	42
4.1	Descriptive Analysis.....	42

4.1.1	Demographic Profile of the Respondents.....	42
4.1.2	Central Tendencies Measurement of Constructs.....	44
4.2	Scale Measurement.....	48
4.2.1	Reliability.....	48
4.2.2	Normality.....	50
4.3	Inferential Analysis.....	53
4.3.1	Pearson Correlation Analysis.....	53
4.3.2	Multiple Linear Regression Analysis.....	55
4.4	Conclusion.....	59
CHAPTER 5 DISCUSSION, CONCLUSION AND IMPLICATIONS....		60
5.0	Introduction.....	60
5.1	Summary of Statistical Analysis.....	60
5.2	Discussion of Major Findings.....	62
5.2.1	Openness to Experience.....	62
5.2.2	Conscientiousness.....	63
5.2.3	Extraversion.....	64
5.2.4	Agreeableness.....	64
5.2.5	Neuroticism.....	65
5.3	Implications of the Study.....	66
5.4	Limitations of the Study.....	68
5.5	Recommendations for Future Research.....	69
5.6	Conclusion.....	70

References.....	72
Appendices.....	88

LIST OF TABLES

	Page
Table 1.1 Research Objectives	6
Table 1.2 Research Question	7
Table 3.1: Definition of Variables	33-34
Table 4.1: Characteristics of Respondents	42-43
Table 4.2: Mean and Standard Deviation	44-47
Table 4.3: Reliability Test for Pilot Test	48
Table 4.4: Reliability Test for Actual Test	49
Table 4.5: Normality Test for Pilot Test	50-51
Table 4.6: Normality Test for Actual Test	51-52
Table 4.7: Pearson Correlation Matrix	54
Table 4.8: Model Summary	55
Table 4.9: ANOVA	56
Table 4.10: Coefficients	56
Table 4.11: Summary of Multiple Linear Regression Results	57

LIST OF FIGURES

	Page
Figure 2.1: Theoretical Framework between BFM and Impulsive Buying Behaviour	21
Figure 3.1: Mean Monthly Household Consumption Expenditure by State 2014	27
Figure 3.2: Median Monthly Household Income by State 2014	28
Figure 3.3: Multiple Linear Regression Equation	40

LIST OF APPENDICES

		Page
Appendix A	Summary of Past Empirical Studies	88-92
Appendix B	Variables and Measurement	93-98
Appendix C	Permission Letter to Conduct Survey	99
Appendix D	Survey Questionnaire	100-106
Appendix E	Other Relevant Materials	107-108

LIST OF ABBREVIATIONS

A	Agreeableness
ANOVA	Analysis of Variance
BFI	Big Five Inventory
BFM	Big Five Model
C	Conscientiousness
DV	Dependent Variable
E	Extraversion
FFM	Five Factor Model
GST	Goods and Services Tax
IBB	Impulsive Buying Behaviour
IV	Independent Variable
M40	Middle 40 percent of the Household Income Group
MAF	Malaysian AEON Foundation
MLR	Multiple Linear Regression
MRCA	Malaysia Retail Chain Association
N	Neuroticism
NEO-PI-R	Revised Neo Personality Inventory
O	Openness to Experience

OCEAN	Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism
PHD	Doctor of Philosophy
SAS 9.3	Statistical Analysis System 9.3
SST	Sales and Service Tax
WAOH	With All Our Heart program

PREFACE

The phenomenon of impulsive buying behaviour is gaining more attention from various developed countries. It is one of a sign showing the purchasing power of citizens in the country, whether or not they have the ability to purchase impulsively. Impulsive buying behaviour can be affected by various factors, and it was believed that the personality of human being can be a significant influence on their tendency to purchase impulsively. However, there are limited research on the issue of impulsive buying behaviour in Malaysia as well as Asian countries, and the relationship accessed between personality and impulsive buying behaviour is even lesser. It is noticeable that after the implementation of Goods and Services Tax (GST) in Malaysia, consumers are being more careful and conscious in spending. GST is meant to improve the economy of a country, with the supporting reference from other developed countries such as Singapore and United States, but in reality it has also increased the burdens of consumers especially low and middle-income earners. Besides, their quality of living has also reduced due to the careful considerations in purchasing after an addition 6% of GST is being charged to their consumptions. Hence, this research is aimed to study the relationship between personality and impulsive buying behaviour of middle-income class in Peninsular Malaysia after the introduction of GST, by using Big Five Model (BFM) as the theory base.

ABSTRACT

The introduction of Goods and Services Tax (GST) in Malaysia starting from 1st April 2015 has become a new concern to every Malaysian. The middle 40 percent of the household income group (M40) as the major contributor to the national economy is widely believed to be influenced by this new taxation policy especially in their spending habits. The goal of this research is to examine the correlation between Big Five Model and impulsive buying behaviour of middle income families from Peninsular Malaysia after the implementation of GST in the country. Big Five Model is classified according to the personality traits taxonomy: openness to experience (O), conscientiousness (O), extraversion (E), agreeableness (A) and neuroticism (N) (OCEAN). A quantitative research design has been selected as the most appropriate method to collect data from the targeted respondents for this study. A response of 371 sets of questionnaire has been collected and received from the middle-income households living across Wilayah Persekutuan Putrajaya, Wilayah Persekutuan Kuala Lumpur, and Selangor. Descriptive tests such as mean, central tendency, standard deviation, frequency and percentage have been conducted to analyze the demographic characteristics of the target respondents. Using Multiple Linear Regression model, this research is useful to examine the relationship between the five independent variables (OCEAN) to one dependent variable (impulsive buying behaviour; IBB) after meeting all the given assumptions successfully.

Keywords: Big Five Model, OCEAN, Impulsive Buying Behaviour, GST

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This chapter begins the discussion with a research background that provides an introductory to the influences of personality traits towards impulse buying behaviour of an individual and describes the likely impact received by the middle income household in Peninsular Malaysia after being exposed to the implementation of Goods and Services Tax (GST). It then moves on to show the problem statement that brings up the needs and importance to conduct this study. Various objectives and questions that are intended to achieve through this study have been listed out. Last but not least, the significance of study to both practical and managerial side has also been discussed at the end of this chapter.

1.1 Research Background

Personality traits are the grouping of personal emotional, cognitive and motivational characteristics that influence the way individuals make response to decision making (Dole & Schroeder, 2001; Smith, 1999a). According to Brown and Taylor (2014), personality traits may influence the individual and household's financial decision making. Hausman (2000) mentioned that nearly 90% of people do make impulse purchases. There is a solid empirical evidence supports that the role of Big Five

Model is significant in purchasing problems (Mueller, Claes, Mitchell, Wonderlich, Crosby & de Zwann, 2010). Verplanken and Herabadi (2001) have proposed that an individual's personality will affect his tendency to buy on impulse.

Starting from 1st April 2015, Goods and Services Tax (GST) is being introduced in Malaysia as to replace the previous consumption tax, Sales and Services Tax (SST) (Royal Malaysian Customs Department, 2013). Based on Royal Malaysian Customs Department (2013), the implementation of GST promotes fair pricing to consumers as it eliminates double taxation under SST and enables consumers to pay fairer prices for most of the goods and services as compared to the old taxation policy. Ministry of Finance Malaysia (2014) has mentioned that change in consumers' consumption pattern might occurs after the introduction of GST because consumers have to decide on which goods or services to purchase since GST is only incurred when the goods and services are consumed.

According to Prime Minister of Malaysia YAB Dato' Sri Mohd Najib Tun Haji Abdul Razak, the middle class is the driver of national economy as the middle 40 percent of the household income group (M40) is an extremely significant contributor to the nation's well-being in terms of consumption spending and private investments (The Star Online, 2015).

The median monthly household income for Malaysia in 2014 is RM 4,585 (Department of Statistics Malaysia, 2015). During the 2016 Budget Speech, the Prime Minister and Ministry of Finance Malaysia YAB Dato' Sri Mohd Najib Tun Haji Abdul Razak has mentioned that in statistically M40 denotes households with monthly income ranging between RM 3,860 and RM 8,320. However, he added on

that the definition of M40 will be further reviewed from time to time (Ministry of Finance Malaysia, 2015).

Apart from that, the government also proposed to provide a special relief of RM 2,000 to individual tax payers with monthly earnings of RM 8,000 or below for the year of assessment 2015 with the aim to increase the disposable income of middle income group (Ministry of Finance Malaysia, 2016). With the threshold of RM 8,000 or below as stated in this proposal, it provides another supportive evidence to confirm the income level range of middle income group in Malaysia.

1.2 Problem Statement

According to Kacen, Hess and Walker (2012), consumer bought more than 50% of the products without planning. Inman, Winer and Ferraro (2009) suggested that consumer tends to be more sensitive to price during financial difficulties. Although the implementation of GST assured that it was a better tax system to improve the economic in Malaysia, feedbacks from some Malaysian showed that they were facing increment of prices of goods and services as well as higher living expenditure (Lim, 2015). The financial difficulties faced by Malaysian currently were likely to drive them to be more price sensitive. Hence, this study aims to show the impulsivity level of purchasing behaviour among Malaysians after GST implementation.

A previous study conducted by Thompson and Prendergast (2015) has shown how Big Five Model (BFM) would affect the impulsive buying behaviour of undergraduates and postgraduates. Furthermore, the most recent study conducted by

Lee (2013) has examined how gender factor influencing the impulsive buying behaviour of consumers in Malaysia considering that it could benefit the marketers in expanding business. Besides, Kacen and Lee (2002) have also studied how country's culture differences affected the impulsive buying behaviour of people. This particular research is different from previous empirical studies as middle income families are chosen as the participants to analyze how Big Five Model will affect the extent of impulsive buying behaviour of target respondents after the implementation of GST.

Previously, there were some researches have been studying the phenomenon of impulsive buying behaviour in Malaysia before the implementation of GST. However, there is limited research to further the study on this area after the implementation of GST. It is suspected that the spending habits of consumers may vary after the new taxation policy being imposed as it would definitely influence the prices of most of the goods and services. Besides, most of the past GST relevant researches focused on the perspective of individuals or other fields such as manufacturing sector instead of households (middle income families). Furthermore, the past studies on the impact of GST were mainly focus on the macroeconomic issue after the introduction of GST. In this case, former studies never analyze into consumers' psychological deeply and thoroughly. Last but not least, none of the previous research in Malaysia has studied the personality of middle income households together with impulsive buying behaviour after GST. The different personality traits and psychological of the households are speculated as an important factor which will affect the households' attitudes in spending after the GST.

1.3 Research Objectives

The main objective of this research is to examine the relationship existing between Big Five Model (openness to experience, conscientiousness, extraversion, agreeableness and neuroticism) and impulsive buying behaviour.

1.3.1 General Objective

To study whether Big Five Model would affect the impulsive buying behaviour of middle income families after the implementation of GST.

1.3.2 Specific Objectives

Table 1.1: Research Objective

Research Objectives:
To investigate whether openness to experience would affect the impulsive buying behaviour of middle income families after the implementation of GST.
To investigate whether conscientiousness would affect the impulsive buying behaviour of middle income families after the implementation of GST.
To investigate whether extraversion would affect the impulsive buying behaviour of middle income families after the implementation of GST.
To investigate whether agreeableness would affect the impulsive buying behaviour of middle income families after the implementation of GST.
To investigate whether neuroticism would affect the impulsive buying behaviour of middle income families after the implementation of GST.

Source: Developed for the research

Table 1.1 shows the research objectives that aim to be achieved from this study.

1.4 Research Questions

Table 1.2: Research Question

Research Questions:
Will openness to experience affect the impulsive buying behaviour of middle income families after the implementation of GST?
Will conscientiousness affect the impulsive buying behaviour of middle income families after the implementation of GST?
Will extraversion affect the impulsive buying behaviour of middle income families after the implementation of GST?
Will agreeableness affect the impulsive buying behaviour of middle income families after the implementation of GST?
Will neuroticism affect the impulsive buying behaviour of middle income families after the implementation of GST?

Source: Developed for the research

Table 1.2 displays the research questions that aim to be answered through this study.

1.5 Hypotheses of the Study

H₁: There is a negative relationship between openness to experience and impulsive buying behaviour.

H₂: There is a negative relationship between conscientiousness and impulsive buying behaviour.

H₃: There is a positive relationship between extraversion and impulsive buying behaviour.

H₄: There is a positive relationship between agreeableness and impulsive buying behaviour.

H₅: There is a positive relationship between neuroticism and impulsive buying behaviour.

1.6 Significance of the Study

This study is to examine the behavior and traits of families on their spending behaviour after the implementation of GST. Big Five Model (BFM) is chosen for this research as personality is believed to have significant relationship with impulsive buying behaviour of consumer (Verplanken & Herabadi, 2011).

Theoretically, BFM allows the segregation of human personality into five traits, and it enables the readers to predict the extent of their impulsivity in buying behaviour according to different personality. Verplanken & Herabadi (2011) proposed that the personality of each individual have a portion of effect on their behaviour, for which it would affect the impulsive buying behavior of individuals. Hence, it is essential for this research to be conducted to foresee the effect of GST implementation in Malaysia on the impulsive buying behaviour of middle-income households by reviewing the result of past studies conducted by previous researchers. In fact, a number of researchers from different countries have also conducted similar research on the relationship between personality and impulsive buying behaviour using BFM. However, different outcome on its significance was obtained in various countries showing that cultural factor could be a huge influential factor in determining the impulsive buying tendency of individuals with different personality (Kacen & Lee, 2002). This research is to identify the significant relationship(s) of the five personality traits with impulsive buying behaviour after the introduction of GST in Malaysia to examine whether GST implementation would bring any effect to the personality of individuals in tendency of impulse purchase.

The main focus group of this study is the middle income families, for which the target respondents are distinguished in terms of income level to study on the relationship on how BFM affecting the impulsive buying behaviour. From practical aspect, it provides more practical information to retailers and merchandisers as they will able to develop effective marketing strategies to trigger the consumer's impulsive buying behaviour. Malaysia is still on the beginning stage towards GST implementation and this research is significant to encourage more researchers to contribute their knowledge and findings on more research studies after GST. It also contributes in the sense of allowing future researchers to track the growth of Malaysia economy. Besides, it is beneficial for the future researchers to take this study as reference in

accessing the relationship between BFM and impulsive buying behaviour in Asia region.

1.7 Chapter Layout

In chapter 1, the background of current study together with the problems and deficiencies of past studies which arising this research to be conducted have been mentioned. Also, it has displayed the readers with a general overview to understand the likelihood between BFM and impulsive buying behaviour of middle income families after the introduction of GST. Meanwhile in chapter 2, literature review and empirical past studies relevant to this research have been discussed thoroughly, as well as studying the relationship between BFM and impulsive buying behaviour of middle income families. In chapter 3, the adopted data collection method, target respondents, sampling method and sample size, data analysis techniques for this research study have been clearly described. Following by chapter 4, the descriptive analysis, scale measurement and inferential analysis generated from SAS results after the survey being conducted have also been presented systematically. Lastly in chapter 5, it outlined the summarization of descriptive and inferential analysis, discussion of major findings, implications of the study, limitations of the study as well as recommendations for future research.

1.8 Conclusion

In a nutshell, chapter 1 has provided an insight to the research area of this study which was to examine the correlation between Big Five Model and impulsive buying behaviour of middle income families. This chapter was mainly made up of research background, problem statement, research objectives, research questions, hypotheses of the study, significance of the study and chapter layout.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter, the review of past empirical studies and relevant theoretical models for Big Five Model has been described. Furthermore, the conceptual framework and hypotheses development were identified and clarified as well.

2.1 Review of the Literature

Scholars have started to show attention to consumer impulse buying 60 years ago when they were focusing to define impulsive buying behaviour (Li & Jing, 2014). According to Applebaum (1951), impulse purchasing behaviour is viewed as a buying behaviour without prior planning that made by the shoppers who are being triggered by a sale and promotion from a market or store. Impulse buying behaviour has been defined as a shopper who made any purchase which was not being planned in advance (Stern, 1962). Rook (1987) proposed that impulsive buying happens when making sudden and unplanned purchase which is initiated at the moment, the behaviour itself is accompanied by a powerful urge and feelings of excitement and pleasure. Later researchers Bayley and Nancarrow (1998) mentioned that impulse purchasing behaviour is seen as a persuasive, craving, sudden to buy instantaneously without further consider any alternatives. Furthermore, Block and Morwitz (1999) also supported that impulse buying is an outcome of unexpected powerful urge to

purchase, in relation to leading to procure of a product without any planning or with little consideration.

The recent study accounts impulse purchasing as a sudden, unplanned, and powerful temptation to purchase in response to both the internal and external stimulus whereby a consumer will make an instant decision to please his or her desire as a prompt self-reward without considering the actual needs and financial consequences of the procurement (Prashar, Parsad & Vijay, 2015).

2.1.1 Openness to Experience

Based on a study conducted by Badgaiyan and Verma (2014), it supported a significant positive association between openness and impulsive buying behaviour. However, a previous research from Verplanken and Herabadi (2001) reported a negative relationship between openness and impulsive buying behaviour. Moreover, the finding from Gohary and Hanzaee (2014) also found a negative relationship between openness and impulsive behaviour. A person with low degree of openness tends to be influenced by others easily and thus results in high degree of impulsive buying behaviour (Verplanken & Herabadi, 2001). Hence, we hypothesize that:

H₁: There is a negative relationship between openness to experience and impulsive buying behaviour.

2.1.2 Conscientiousness

Donelly, Iyer, and Howell (2012) mentioned that conscientiousness is essential in planning future expenditures and it was associated with Verplanken and Herabadi (2001)'s finding for which conscientiousness was negatively related to impulsive buying. The person with higher degree of conscientiousness compare to others tends to be more self-disciplined and more likely to plan before purchasing any goods or services. Zurawicki (2010) also supported that an individual with conscientiousness characteristic is more likely to plan before purchase rather than buying spontaneously, hence proving both conscientiousness and impulse purchasing behaviour are negatively correlated. Thus, we hypothesize that:

H₂: There is a negative relationship between conscientiousness and impulsive buying behaviour.

2.1.3 Extraversion

Chen (2011) mentioned that individuals scoring high on extraversion indicate their sociability for which they are more possibly to interact with sales persons and the risk-taking propensity is shown to consistent with the extravert's characteristics towards uncertainty preference and excitement-seeking. The percentages where extraverts indulge themselves in impulse purchasing are higher as compared to those who score low in extraversion (Badgaiyan & Verma, 2014). Study has found a significant positive impact between extraversion and impulse buying (Bratko, Butkovic, & Bosnjak, 2013). This

result is in line with the study of Verplanken and Herabadi (2001) that showed a significant positive relationship between impulse purchasing and extraversion. Therefore we have sufficient and reasonable ground to hypothesize that:

H₃: There is a positive relationship between extraversion and impulsive buying behaviour.

2.1.4 Agreeableness

According to Asad, Zeb and Saifullah (2012), a positive relationship between agreeableness and the impulsive buying behaviour is occurred. Besides, the finding from Chen and Lee (2015) showed that the high agreeableness people are more likely to believe others and purchase unreflectively than the low agreeableness people. Turkyilmaz, Erdem and Uslu (2015) also believed that agreeableness is one of the factors that have the most vital roles in explaining the online impulsive buying behaviour and at the same time they found a positive relationship between agreeableness and impulsive buying behaviour. The high agreeableness people are more likely to believe and support other people and therefore purchase more compare to low agreeableness people. Hence, we hypothesize that:

H₄: There is a positive relationship between agreeableness and impulsive buying behaviour.

2.1.5 Neuroticism

Studies have been made to identify the correlation between neuroticism and impulsive buying behaviour. Bratko, Butovic and Bosnjak (2013) found a presence of positive association between neuroticism and impulsive buying behaviour. By using the NEO-PI-R (Costa & McCrae, 1992), Herabadi (2003) investigated that both impulsive consumption behaviour and neuroticism are positively associated with each other. On the other hand, there are several studies found out that the negative traits are most likely to increase impulse purchasing. (Billieux, Rochat, Rebetex, & Van der Linden, 2008; Mueller, Claes, Mitchell, Faber, Fischer, & de Zwaan, 2011). The study from Shahjehan, Qureshi, Zeb and Saifullah (2011) have also determined a positive correlation between neuroticism and impulsive buying behaviour. The neuroticism person is more likely to purchase impulsively because they are easily feeling stressful, nervous and moodiness. In relation with the past studies found, we suspect that the presence of positive association among both factors is valid, therefore hypothesizing that:

H₅: There is a positive relationship between neuroticism and impulsive buying behaviour.

2.2 Review of Relevant Theoretical Models

This study adopts Big Five Model (BFM), which was also known as Five Factor Model (FFM), it is a theoretical framework to assess the personality of human into five major traits, which are openness to experience (O), conscientiousness (C), extraversion (E), agreeableness (A) and neuroticism (N). This theory was founded by Fiske in year 1949, and was developed by various researchers into various personality theories, such as Cattell's System, Eysenck's System, Guilford's System, Murray's Need System, The Interpersonal Cycle and lastly, FFM (Digman, 1990). However, in year 1985, Costa and McCrae re-purposed this theory into five basic traits, OCEAN, which is the FFM that has been used widely until today. Since the theory was proposed by Fiske, it sticks to five and at most six dimensions of personality, which they found it reflects the basic dimensions of personality factor (Cattell, 1943; John, 1989; Goldberg 1983; Digman & Inouye 1986).

Openness to experience is one of the personality traits in BFM. It characterized someone by looking at the tendency and curiosity of seeking new experience and exploring new ideas (Zhao & Seibert, 2006). An individual with higher degree of openness is seen as someone who is very imaginative, creative and tends to have curiosity (George & Zhou, 2001). These individuals are very flexible in making decision (Robie, Brown, & Bly, 2005). Moreover, they are more likely to engage in new organization easily as they are open-minded to seek information and feedbacks from other people and make adjustments quickly (Wanberg & Kammeyer-Mueller, 2000). In opposite, the person with low openness shows lower interest to new things and conventional (Lakhal, Frenette, S éigny, & Khechine, 2012).

Conscientiousness defines individual with high self-disciplined, high competent and involved active decision making (Gunkel, Schlaegel, Langella, & Peluchette, 2010). A conscientious person is good in formulating long term-goals, plan and strive to achieve the goals (Certo & Certo, 2005; Zhao & Seibert, 2006). A high conscientious person is meticulous, well organized and obedient whereas low conscientious person are easily distracted from the main focus (Thompson & Prendergast, 2015).

Extraversion is an aspect which underlying a vast group of characteristics which include initiative, sociality and also tendency to undergo positive emotions such as joyfulness and pleasure (Costa, Jr, & McCrae, 1992b). John and Srivastava (1999) also supported that extravert persons are lively to the social and material world at the same time they are sociable, energetic, assertiveness and positive emotionality. In addition, extraversion is also in corresponding to “ambitiousness”, “gregariousness” “high excitement” and “optimism” (Robie et al., 2005; McCrae & Costa, 1997). Extraversion delineates a person’s comfort level with relationships (Wong, Said, Paim, & Osman, 2014). Extroverts tend to be externally oriented and are easy to socialize in a large group (Leary, Reilly, & Brown, 2009). Mowen and Spears (1999) stated that introversion and social insulation can be viewed as the opposite of extraversion.

Agreeableness refers to the individual’s interpersonal direction. It involves the propensity to favour positive interpersonal relationships and people with higher agreeableness is said to be more cooperative (Zhao & Seibert, 2006). People who practice agreeableness are more accord with social tradition and tend to be forgiving, trustful, tolerating, and tender hearted. Moreover, they have also been proven to be participative and having high quality interpersonal communications with others (Barrick & Mount, 1991). Furthermore, agreeableness shows a person’s “friendliness”, “warmness” and “cooperativeness in social interaction” (McCrae &

Costa, 1997). A person who practices high agreeableness tends to be more modest and straightforward in his decision making approach (McCrae & Costa, 1997). In other words, agreeableness deals with the intention to retain positive relationships with others (McCrae & Costa, 2008).

Neuroticism is often characterized with anxiety, moody and tense feelings, which are more to a negatively biased trait (Ozer & Benet-Martinez, 2006). According to Pervin (1989), a person with low neuroticism is associated with stability and low nervousness whereas a high neuroticism is always unstable and has high anxiety level. Besides, neuroticism is stated as the diverse outcome of human's negative emotion, including depression (Clark, Watson, & Mineka, 1994) and anxiety disorders (Hettema, Neale, Myers, Prescott, & Kendler, 2006) as well as the motivator of anger (Wilkowski & Robinson, 2008).

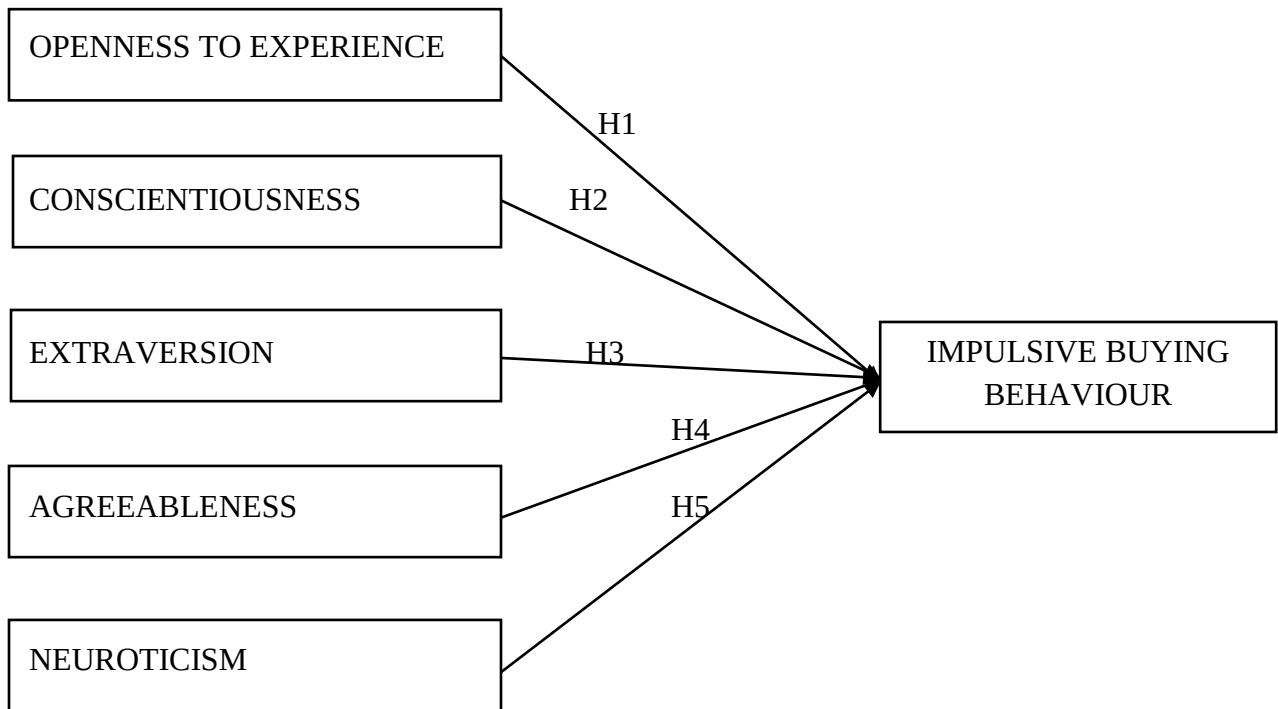
2.2.1 Application of Theory in Research

The BFM has also been applied in many other research areas. One of the research areas that has been studied by using BFM is in relation to household finance (Brown & Taylor, 2014). Besides, a recent study also advocates the relationship between Big Five personality and how a person experiences and copes with stress (Berg & Hilde, 2011). Furthermore, the relationship exists between BFM has also been mentioned in a research study relevant to the perceived effectiveness of executive coaching (Jones, Woods, & Hutchinson, 2014). BFM has also investigated in the education research area which interpreted the predictive relationship between Big Five personality traits as

well as learning and study strategies (Kokkinos, Kargiotidis, & Markos, 2015). Last but not least, BFM is also used in the area of sports to determine the risky behaviour of participants and non-participants in participating risky sports (Tok, 2011). For this study, BFM will be applied to analyze how personality traits can influence the impulsive buying behaviour of middle-income households after the GST implementation.

2.3 Proposed Theoretical Framework

Figure 2.1: Theoretical Framework between BFM and Impulsive Buying Behaviour



Adopted from: Badgaiyan & Verma (2014)

Figure 2.1 demonstrates the relationship between Big Five Model (BFM) and impulsive buying behaviour (IBB). This study will apply the exactly five independent variables from the original BFM, namely openness to experience (O), conscientiousness (C), extraversion (E), agreeableness (A) and neuroticism (N) while the dependent variable is impulsive buying behaviour. Openness to experience and conscientiousness are proposed to have negative relationship with IBB whereas extraversion, agreeableness and neuroticism are presumed to have positive relationship with IBB.

2.4 Hypotheses Development

H₁: There is a negative relationship between openness to experience and impulsive buying behaviour.

H₂: There is a negative relationship between conscientiousness and impulsive buying behaviour.

H₃: There is a positive relationship between extraversion and impulsive buying behaviour.

H₄: There is a positive relationship between agreeableness and impulsive buying behaviour.

H₅: There is a positive relationship between neuroticism and impulsive buying behaviour.

2.5 Conclusion

Basically, this chapter presented a review of the literature on BFM from past empirical studies and its relevant theoretical model. Furthermore, the theoretical framework and five hypotheses that stated the relationship among the IVs and DV have been developed.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter will specifically describe what sort of research methodology is being employed in this study from the aspects of research design, data collection methods, sampling design, research instrument, scale and operational definitions, data processing and last but not least data analysis.

3.1 Research Design

The objective to conduct this study was to investigate the relationship between Big Five Model (openness to experience, conscientiousness, extraversion, agreeableness and neuroticism; OCEAN) and impulsive buying behaviour (IBB) of middle income families after the introduction of GST since April 2015. Conducting of survey research was selected due to cost effectiveness and efficiency in data collection (Kelley, Clark, Brown, & Sitzia, 2003). Survey research accessed a wide range of unit analysis, it was a way to retrieve respondents' past experiences (Mathiyazhagan & Nandan, 2010). A cross-sectional survey was preferred for this research as it involved at a single point in time from a population whilst convenient to assess the relation of different variables at the same time. The unit of analysis of this research was middle income families from Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya. A self-administered questionnaire would be collected in both

self-collection and online methods. This was because self-administered questionnaire was a cheaper mode of data collection method as compare to others such as telephone interview (Blumberg, Cooper, & Schindler, 2014). Meanwhile, it was a set of standardized questionnaire which considered a reliable tool to collect data (Bryman & Bell, 2007). In addition, it was an anonymous way for respondents to preserve confidentiality when answering the questionnaires and completing the questionnaires at respondent's convenience (Leung, 2001).

3.2 Data Collection Methods

3.2.1 Primary Data

Primary data was employed as the method to gather data in this study. Thus, survey being one of the alternatives under primary data has been selected in data collecting process. An aggregate of 500 sets of survey questionnaires have been distributed randomly to middle income families from Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya in various hypermarkets and shopping malls within the states. Furthermore, an electronic survey questionnaire has also been generated through Google Form and relatives and friends that fulfilled the requirements have been invited through Internet to participate in the survey in the effort to obtain sufficient number of samples.

Out of the 530 questionnaires received physically and electronically, 36 questionnaires were unreturned while the remaining 123 questionnaires have been discarded due to omission and inconsistency of data. Therefore, the final usable questionnaires were 371.

Through the surveying process, it was observed that physical distribution was a better alternative in conducting survey as compare to online method. This was because the response rate and percentage of receiving proper and complete questionnaires through physical distribution were much higher than it could achieve through online invitation. The reason is likely due to the target respondents are more willing to fill up the questionnaire when the sender is around them to provide assistance and explanation. In opposite, when the questionnaire is being sent to the target audiences through online method, the respondents may tend to ignore the request and it is hardly for them to answer the questions accurately if they do not understand any of the statement or instruction contain in the questionnaire under the situation of lacking assistance.

3.3 Sampling Design

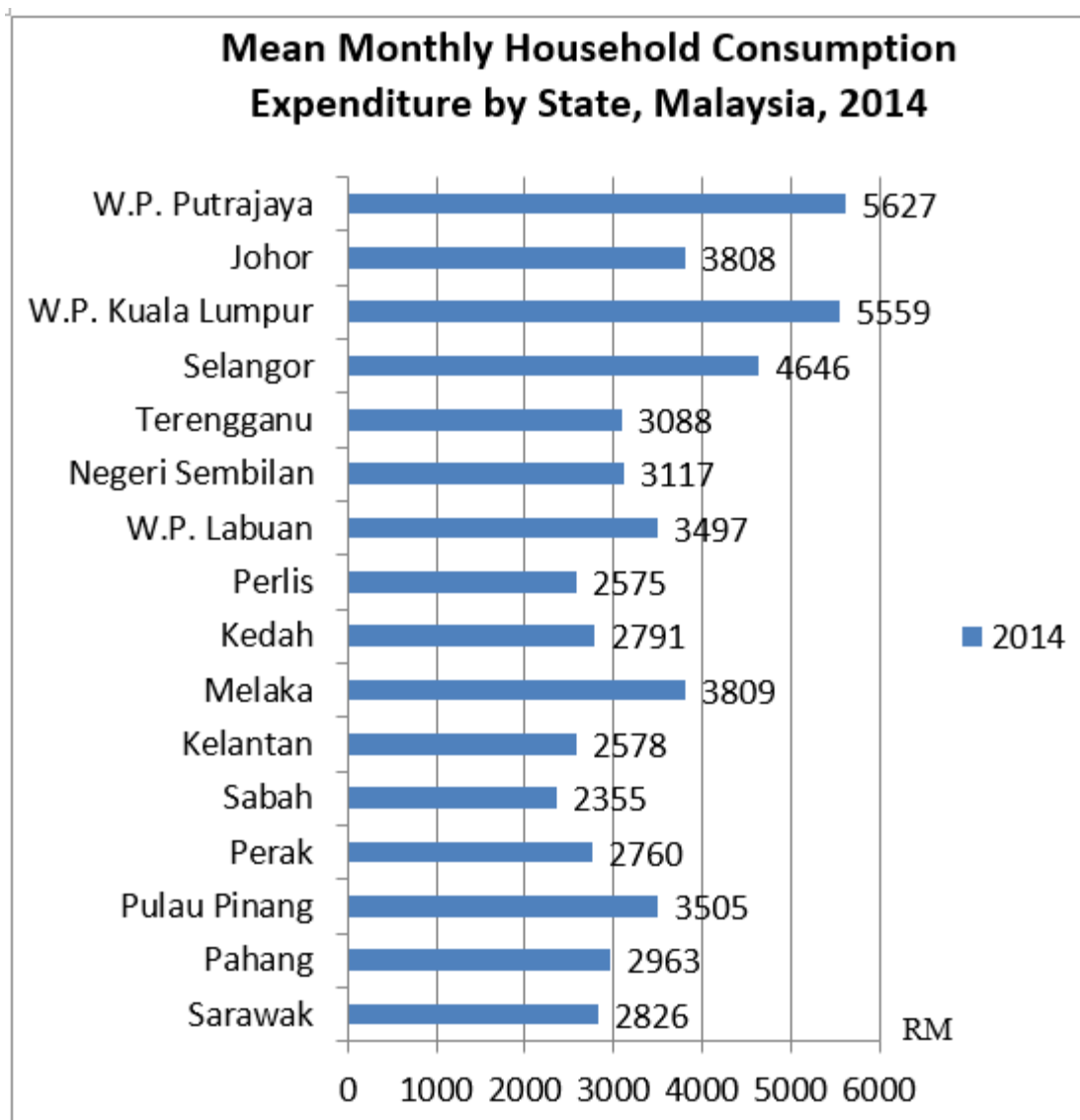
3.3.1 Target Population

This study was targeting on the middle-income household in Peninsular Malaysia. Based on Prime Minister of Malaysia YAB Dato' Sri Mohd Najib Tun Haji Abdul Razak, the middle income earners were a major and essential group of individuals to Malaysia's economy due to the contribution from middle 40 percent of the household income group (M40) towards consumption expenditure and private investment (The Star Online, 2015).

3.3.2 Sampling Frame and Sampling Location

Since there was no available sampling frame for this research, sampling procedure was used in this study due to impossibility and illogically to study every individual in the target population (Korb, 2012). Sampling procedure would reduce the cost and it could improve the speed of data collection (Mugo, 2002). Another reason of using sampling procedure was because of carefully obtained sample may provide more reliable information compare to sloppily conducted consensus (Mugo, 2002).

Figure 3.1: Mean Monthly Household Consumption Expenditure by State
2014



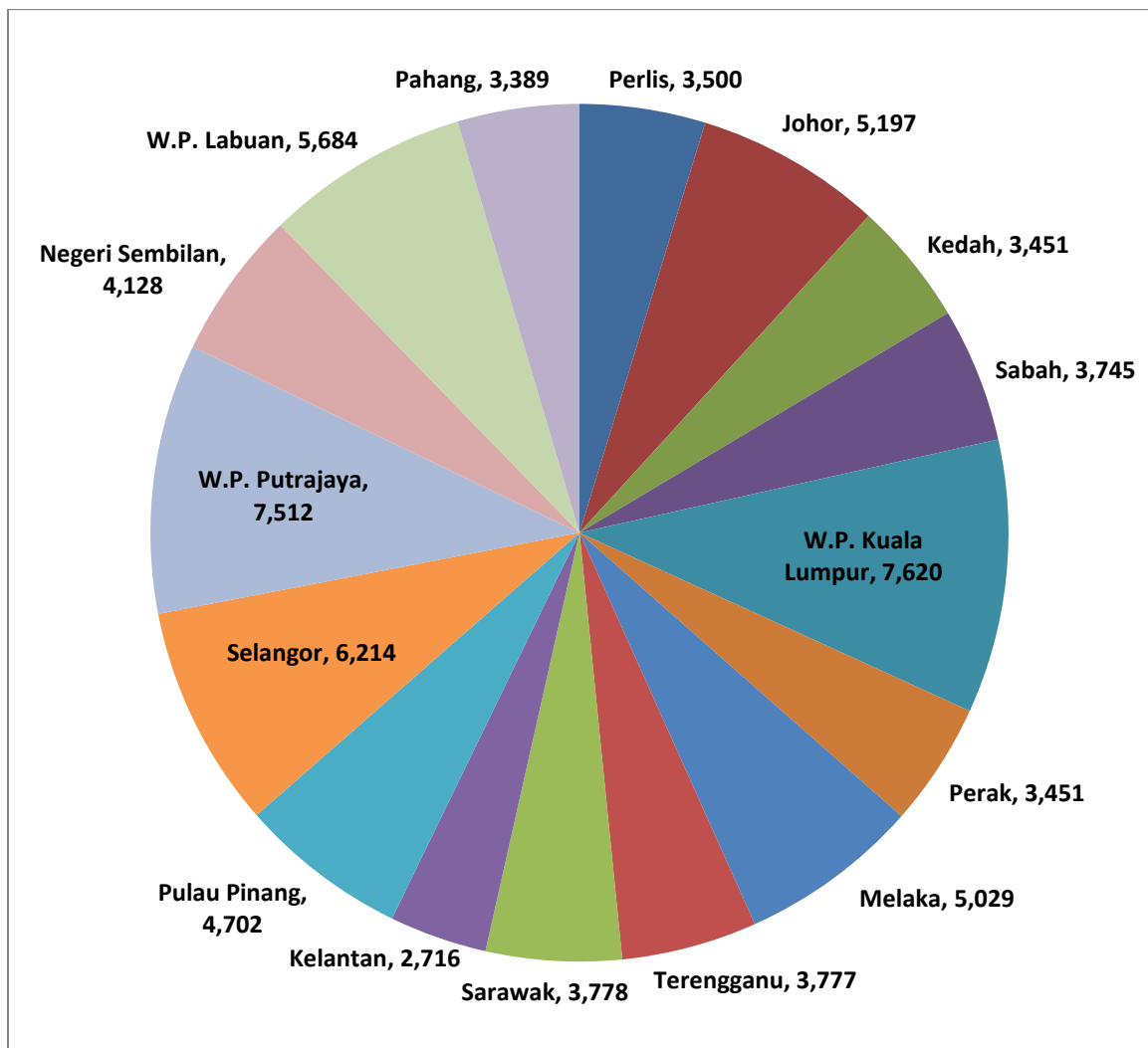
Source: Department of Statistics Malaysia (2015)

From figure 3.1, it presented the findings from Department of Statistics Malaysia (2015) in 2014 which revealed that Wilayah Persekutuan Putrajaya, Wilayah Persekutuan Kuala Lumpur and Selangor were among the top three

states that recorded the highest mean monthly household consumption expenditure in Peninsular Malaysia for which Wilayah Persekutuan Putrajaya has recorded for RM 5,627 per month followed by Wilayah Persekutuan Kuala Lumpur that had absorbed RM 5,559 whilst the mean monthly household spending expenditure for Selangor was RM 4,646.

Median Monthly Household Income (RM) by State, Malaysia, 2014

Figure 3.2: Median Monthly Household Income by State 2014



Source: Department of Statistics Malaysia (2015)

As shown in figure 3.2, according to Department of Statistics Malaysia (2015), Wilayah Persekutuan Kuala Lumpur was the state that recorded the highest median monthly household income (RM 7,620). On the other hand, Wilayah Persekutuan Putrajaya and Selangor were the two states that recorded the second and third highest median monthly median household income with an amount of RM 7,512 and RM 6,214 respectively.

Thus, it was realized that the three states that absorbed the highest mean monthly household consumption expenditure were overlapped with the top three states that recorded the highest median monthly household income. With this, it was assumed and suspected that the middle-income household may have more incentives to spend or having different spending habits from the household in other states. Hence, the three above mentioned states that recorded high mean monthly household consumption expenditure and high median monthly household income had been employed as a benchmark to determine the most appropriate targeted population areas.

3.3.3 Sampling Elements

The sampling element of this study was the middle-income households from Wilayah Persekutuan Putrajaya, Wilayah Persekutuan Kuala Lumpur and Selangor. The questionnaires were distributed and filled up by a representative

from each household such as the head of family, the major financial planner or controller of the family.

3.3.4 Sampling Technique

Non probability sampling has always been used in under the situation where actual sampling frame cannot be obtained accurately (Leong, Ooi, Chong, & Lin, 2013a). Quota sampling was believed to be competent to generate results equivalent to the results produced by probability sampling that employed in this study (Brick, 2011).

Quota sampling was a sampling strategy which will involve a same numbers of participants from different socio demographic group due to the well-intentioned movement to enhance the representation of underrepresented groups in development research (Bornstein, Jager, & Putnick, 2013). The step of employing quota sampling technique was to select the potential household respondents based on their criteria of residence and municipality (Peshevska, Markovik, Sethi, & Serafinovska, 2014).

In this study, a total of 500 sets of physical and a duplicable electronic questionnaire have been distributed within the three targeted places according to the population distribution by state. Based on the statistics from Department of Statistics Malaysia (2015), Selangor was the most populous state (5.46 million) out of the total population of Malaysia (28.3 million) followed by

Wilayah Persekutuan Kuala Lumpur (1.67 million) whereas Wilayah Persekutuan Putrajaya was the least populated states in Malaysia (0.07 million). Therefore, the questionnaires were distributed among the target respondents within these three states based on the ratio of 76:23:1 which derived by considering the population of each state out of the total population of three states.

3.3.5 Sampling Size

According to Hinkin (1995), the preferable sample size can be determined by using item-to-response 1:4 to at least 1:10 for each set of the survey. Since the questionnaire contained 53 items, the item-to- response 1:7 was adopted and thus it would need to generate 371 respondents. To ensure sufficient questionnaires could be returned in order to meet the established sample size, 500 questionnaires and a duplicable electronic form of questionnaire have been distributed to the respondents.

3.4 Research Instrument

Structured questionnaire has been constructed before conducting survey. A total of 500 questionnaires and a duplicable electronic form of questionnaire have been distributed physically and sent out through online starting from 13 May 2016 to 29 May 2016. Several hypermarkets and shopping malls with huge crowd and large number of visitors located in Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya have been identified before undergone the actual survey to increase the possibility to obtain enough data from the target participants.

Prior to the survey, a pilot test has been carried out to ensure that the survey items were able to measure the domains of interest reliably and validly when adapted to the real situation (Etchegaray & Fischer, 2011). According to Johanson and Brooks (2010), 30 was deemed to be a good rule of thumb for the number of participants to be included in a pilot study. Therefore, a total of 30 questionnaires have been randomly distributed to the middle income families from Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya.

3.5 Constructs Measurement (Scale and Operational Definitions)

Table 3.1: Definition of Variables

Variables	Definition	Citation
Independent Variables		
Openness to Experience	Describes someone who is flexible in making decisions and may rely on self-emotional factors when performing an action	(Robie et al., 2005); (McCrae & Costa, 1997)
Conscientiousness	Describes an individual who is high in self-disciplinary, high competent and involves actively in decision making	(Gunkel et al., 2010)
Extraversion	Indicate a person who is active, sociable, assertiveness, positive emotionality and energetic to the social and material world	(John & Srivastava, 1999)
Agreeableness	Individuals which are more to practice social conventions, forgiving, trusting, soft-hearted, compliance, and tolerance as well as being more cooperative and having higher quality interpersonal interactions	(Barrick & Mount, 1991); (Costa & McCrae, 1992)

Neuroticism	Negative biased traits with anxious, moody and tensed feelings	(Ozer & Benet-Martinez, 2006)
Variable	Definition	Citation
Dependent Variable		
Impulsive Buying Behaviour	Where individuals make buying decision without advance planning, or the sudden purchase on spot followed by the individual's behavior of powerful urge as well as pleasure and excitement feelings	Rook (1987)

Source: Developed for the research

Table 3.1 shows the definition of five independent variables (i.e. openness to experience, conscientiousness, extraversion, agreeableness and neuroticism; OCEAN) and dependent variable (i.e. impulsive buying behaviour).

The independent variables of this research were examined based on the Big Five Inventory (BFI) facet scales developed by Soto and John (2009) which were openness to experience(O), conscientiousness(C), extraversion(E), agreeableness(A) and neuroticism(N) in order to describe how the individuals can be characterized by different personality traits. To suit the characteristics of the IVs in this research, a full 44 questions have been extracted from the comprehensive BFI-44 framework proposed by John, Donahue, and Kentle (1991), whereby openness to experience comprised 10 questions, conscientiousness comprised 9 questions, extraversion

consisted 8 questions, agreeableness contained 9 questions and lastly neuroticism comprised 8 questions. Furthermore, an aggregate of 9 questions in corresponding to dependent variables has been adopted from the model proposed by Rook and Fisher (1995).

All the variables including independent variables and dependent variable used the measure of interval scale as measurement method with the five-point Likert scale ranging from 1=strongly disagree to 5=strongly agree. The items in related to independent variables were rated based on a five-step scale approach as stated in the standard BFI proposed by John et al. (1991). The domain scales of BFI have been found to display high reliability, clear factor structure and strong convergence with longer Big Five measures in previous studies (Benet-Martínez & John, 1998; John, Naumann, & Soto, 2008; Soto, John, Gosling, & Potter, 2008). Hence, since BFI-44 was applied in this research, the same measurement from John et al. (1991) has been adopted. On the other hand, the items for dependent variable were employed from the 9-item impulse buying scale developed by Rook et al. (1995) because the authors have confirmed that this scale was uni-dimensional and very reliable (0.88).

3.6 Data Processing

The survey questionnaires that have been collected and received from the target respondents were being checked and filtered to select only the useable data to proceed in the subsequent data generation process. The entire raw data has been keyed in to the Statistical Analysis System 9.3 (SAS 9.3) in order to generate an analysis of outcome for this study. By using SAS, it functioned to analyze how well the results

have met the presumed hypotheses of the current study through various analyses such as Pearson Correlation Test, Multiple Linear Regression and so on.

3.7 Data Analysis

3.7.1 Descriptive Analysis

Frequency and percentage have been used in this study to analyze the descriptive data such as gender, age, educational level, household aggregate monthly income level, number of children supported and household's understanding about GST. The analysis on the understanding of GST of the household was essential in examining whether their buying behaviour were affected by the implementation of GST. Mean was used to measure the average of each independent and dependent variable whilst standard deviation showed the gap difference between the findings and mean. The presentation of data by using descriptive statistics was meaningful as it would ease the users or any external parties in understanding the hidden meaning of each data. Hence, mean and standard deviation have been used to describe the statistical characteristics of BFM and IBB of middle-income household.

3.7.2 Scale Measurement

3.7.2.1 Normality Test

To capture the characteristics of P-values for coefficients of Skewness and Kurtosis, Pearson correlation coefficient was computed for each of the variables between their P-values and these coefficients. Prior to the analysis of the data, the normality assumption satisfies the acceptable Skewness, ± 2 and Kurtosis, ± 3 as proposed by Garson (2007). Normality was attained through Skewness, ± 2 and Kurtosis, ± 7 (Byrne, 2010), which repudiated the criteria of Skewness, ± 3 and Kurtosis, ± 10 proposed by Hair, Black, Babin, and Anderson (2010) and Kline (2011).

3.7.2.2 Reliability Test

According to Nunnally (1978), 0.70 was the acceptable reliability coefficient which means when the Cronbach' Alpha was more than or equal to 0.70, the questionnaire was then considered reliable and consistent. Cronbach' Alpha was one of the assumptions that need to be fulfilled prior to conduct a parametric test (Hatcher, 1994). If the Cronbach' Alpha was not exceeding 0.70, a non-parametric test would be replaced instead. The data was needed to be reliable and normal as it helped to make sure that the way of data gathering would lead to consistent results (Eslake, 2006).

3.7.3 Inferential Analysis

3.7.3.1 Multicollinearity Problem

A Pearson Correlation test has been conducted to examine whether multicollinearity problem exists in this research. Based on the rule of thumb, there was a presence of high correlations among the predictor variables if the correlation between each variable appears to show a value of 0.90 and above for which it indicated a substantial collinearity (Hair, Black, Babin, Anderson, & Tatham, 2006). When multicollinearity was being detected and predictors that cause it have been identified, the initial available remedy was to remove one or more predictors that have high correlation with other predictors in the model (Yu, Jiang, & Land, 2015). It was essential to ensure that no multicollinearity problem existed in the research data because a high correlation was likely to cause the individual P-values to be misleading at the same time the confidence intervals on the regression coefficients would be wide (Paul, n.d.).

3.7.3.2 Linearity Test

According to Hill and Lewicki (2007), the assumption of linearity can virtually never be confirmed. However, it was prudent to always look at bivariate scatterplot of the variables of interest. The reason of doing so was to

ensure there was no under-estimation of the real relationship in the research (Osborne & Waters, 2002).

3.7.3.3 Pearson's Correlation Analysis

According to Zou, Tuncali, and Silverman (2003), Pearson correlation coefficient helped to assess the strength and measures the linear relationship of two random variables for predicting each other. The coefficient of the relation between pairs of variables were said to be valid when the value of Pearson's Correlation Analysis was greater than -1 and smaller than 1 with a 0.05 significant level (Sensuse, Cahyaningsih, & Wibowa, 2015). This study has applied Pearson Correlation Analysis since the five independent variables (OCEAN) contained numerical data (Saunder, Lewis, & Thornhill, 2012; Sensuse et al., 2015).

3.7.3.4 Multiple Linear Regression Analysis (MLR)

All the statistical analysis has been performed by using SAS 9.3, while multiple linear regression (MLR) was chosen as the analysis method to test the hypotheses of this research. This study was designated to analyze the directional relationship between five independent variables (OCEAN) and one dependent variable (impulsive buying behaviour), which perfectly suited the purpose of MLR that used several independent variables to model a single dependent variable (Weisberg, 1980). The equation of this model was

formulated as $Y_i = \beta_0 + \sum_{k=1}^K \beta_k x_{ki} + e_i$, $i = 1, 2, \dots, n$. (Davison & Davenport, 2002). According to Brown (2009), models which involved variables more than two were considered complex, which was best measured using MLR. The four assumption test (normality, reliability, multicollinearity and linearity) have been conducted according to the assumptions focused by Osborne and Waters (2002) to obtain higher credible results.

Figure 3.3: Multiple Linear Regression Equation

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + e, \text{ whereby:}$$

Y = Impulsive buying behaviour

x_1 = Openness to experience

x_2 = Conscientiousness

x_3 = Extraversion

x_4 = Agreeableness

x_5 = Neuroticism

e = Error term

Source: Developed for the research

3.8 Conclusion

This chapter has explained the research design and the methodology being used to obtain data. The following chapter will specifically describe the result of analysis for the data obtained.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

This chapter will present the result of both the pilot test and actual test. Besides, the outcomes of descriptive analysis, inferential analysis and scale measurement which generated from SAS will be discussed in this chapter.

4.1 Descriptive Analysis

4.1.1 Demographic Profile of the Respondents

Table 4.1: Characteristics of Respondents

		Frequency	Percentage (%)
Gender	Male	153	41.24
	Female	218	58.76
Age	21-25 years old	48	12.94
	26-35 years old	96	25.88
	36-45 years old	136	36.66
	46 years old and above	91	24.53

Education Level	High School	90	24.26
	Diploma	104	28.03
	Degree	123	33.15
	Master	51	13.75
	PhD	3	0.81
Household Aggregate Monthly Income	RM 3,801- RM 5,000	166	44.74
	RM 5,001 – RM 6,500	91	24.53
	RM6,501 – RM 8,300	114	30.73
No. Of Child Supported	0	79	21.29
	1-2	196	52.83
	3-4	84	22.64
	5-6	11	2.96
	More than 6	1	0.27
Basic Concept of GST	Yes	309	83.29
	No	62	16.71

Source: Developed for the research

Table 4.1 shows the distribution of respondents by gender, age, highest education completed, the household aggregate monthly income, number of children supported and the knowledge on basic concept of GST. Out of the 371 respondents from middle-income families, 218 respondents with 58.76% were female and 153 male respondents with 41.24%. Majority of the respondents were aged between 36 to 45 years old carried 36.66% and those aged between 21 to 25 years old formed the minority of 48 respondents (12.94%). Besides, among all the respondents, 123 respondents (33.15%) have completed their degree, only 3 respondents were PhD holders. A total of 500 respondents took part in the survey, 371 respondents were from middle-income families, 166 of them with 44.74% were from the household monthly earning of RM 3,801 to RM 5,000 and the income group between RM 5,001 to RM 6,500 made up the minority of 24.53%. Moreover, the families supported 1 or 2 children made up the highest frequency of 196 with 52.83%. Only 1 respondent supported more than 6 children. On the other hand, 309 of the respondents understand the basic concept of GST carries 83.29%, the remaining 62 respondents did not have the basic concept of GST.

4.1.2 Central Tendencies Measurement of Constructs

Table 4.2: Mean and Standard Deviation

	Openness to Experience	Mean	Standard Deviation
O1	I see myself as someone who is original, comes up with new ideas.	3.5334	0.9591
O2	I am curious about many different things	3.7358	0.9272
O3	I see myself as someone who is ingenious, a deep thinker.	3.5202	0.9899
O4	I am a person who has an active imagination.	3.4825	0.9623
O5	I see myself as someone who is inventive.	3.3235	0.9518
O6	I see myself as someone who values artistic, aesthetic experiences.	3.3073	1.0539
O7	I see myself as an individual who likes to reflect, play with ideas.	3.5499	0.9971
O8	I am sophisticated in art, music or literature.	3.0485	1.0202
O9	I do not prefer work that is routine.	3.3046	1.0327
O10	I have much artistic interests.	3.1671	1.0700
	Conscientiousness		
C1	I see myself as someone who does a thorough job.	3.9272	0.7868
C2	I am a reliable worker.	4.0916	0.7069
C3	I see myself as someone who perseveres until the task is finished.	4.0863	0.7189

C4	I would do things efficiently.	3.9838	0.7239
C5	I am a person who will make plans and follow through with them.	3.8868	0.7837
C6	I am not a careless person.	3.7978	0.7638
C7	I see myself as someone who is organized.	3.8922	0.7383
C8	I don't see myself as a lazy person.	3.8868	0.7802
C9	I am a person who is not easily distracted.	3.7493	0.8313
	Extraversion		
E1	I see myself as someone who is talkative.	3.5984	0.9403
E2	I am someone who is full of energy.	3.6496	0.8981
E3	I am a person who generates a lot of enthusiasm.	3.6442	0.8746
E4	I have an assertive personality.	3.6658	0.8770
E5	I am an outgoing, sociable individual.	3.6038	0.9397
E6	I am not a reserved person.	3.5984	0.9111
E7	I don't see myself as a quiet person.	3.6819	0.9190
E8	I seldom feel shy, inhibited.	3.5741	0.8925
	Agreeableness		
A1	I see myself as a helpful and unselfish person with other.	3.9919	0.7587
A2	I tend to forgive easily.	3.7682	0.8669
A3	I trust others easily.	3.4124	0.9999
A4	I see myself as a considerate person and kind to almost everyone.	3.8518	0.8068
A5	I like to cooperate with others.	3.8518	0.8034
A6	I do not like to find fault with others.	3.8302	0.8452
A7	I do not like to quarrel with others.	4.0189	0.7477

A8	I don't see myself as someone who can be cold and aloof.	3.9569	0.8176
A9	I am a friendly person and tend to treat people around nicely.	3.9784	0.7708
	Neuroticism		
N1	I am easily depressed.	2.5202	1.0712
N2	I see myself as someone who can be tense.	2.8895	1.0533
N3	I get worried a lot.	2.8032	1.0380
N4	I see myself as someone who can be moody.	2.7008	1.0290
N5	I get nervous easily.	2.7547	1.0889
N6	I am someone who is not relaxed and I do not handle stress well.	2.6092	1.0376
N7	I am emotionally unstable, easily get upset.	2.4528	1.0653
N8	I find it hard to get calm, especially in tense situation.	2.5957	1.0544
	Impulsive Buying Behaviour		
	<i>After GST</i>		
IB1	I often buy things spontaneously.	2.9137	1.0846
IB2	I often buy things without thinking.	2.6577	1.0774
IB3	I ended up spending more money than I originally set out to spend.	2.9434	1.0395
IB4	I buy things according to the way how I feel at that moment.	2.8598	1.1303
IB5	I bought more than what I had planned to buy.	2.9380	1.0900
IB6	I do not plan carefully on most of my purchase.	2.7871	1.1128
IB7	"Just do it" describes the way I buy things.	2.6038	1.1423

IB8	"I see it, I buy it" describes me.	2.5795	1.1323
IB9	"Buy now, think about it later" describes me.	2.5660	1.2337

Source: Developed for the research

Table 4.2 shows the mean and standard deviation of all 53 survey items which derived from five IVs and one DV. From the survey conducted, majority respondent are either neutral and agree to the personality of openness to experience, conscientiousness and agreeableness while disagree with the neuroticism and impulsive buying behaviour. Basically, most of the items have mean higher than 3 except the neuroticism and impulsive buying behaviour are below 3 which means the respondents are disagree with that statements. This implies target respondents that possess openness to experience, conscientiousness, extraversion, agreeableness will react in low neuroticism and impulsive buying behaviour. Most of the mean between 3 to 4 implies that respondents are 'neutral' and slightly agree with most of the statements.

In general, the standard deviation of items in neuroticism, impulsive buying behaviours and some of the items in openness to experience are more than 1. The other items ranging between 0.70 to 1. Standard deviation ranges between 0 to 1 indicates the result is consistent. The highest standard deviation is 1.2337 while the lowest is 0.7069. The figures show that the majority data are consistent. Although the choice of answer ranges from 1 (Strongly Disagree) to 5 (Strongly Agree), most of the data collected ranges between 2 (Disagree) to 4 (Agree).

4.2 Scale Measurement

4.2.1 Reliability

As mentioned in chapter three, it is believed that 0.7 was the acceptable reliability coefficient. According to Nunnally (1978), the questionnaire is said to be reliable and consistent when the Cronbach's Alpha is more than or equal to 0.7.

Table 4.3: Reliability Test for Pilot Test

Independent variable	Cronbach's Alpha	Dependent variable	Cronbach's Alpha
Openness to Experience	0.878529	Impulsive Buying Behaviour	0.904997
Conscientiousness	0.895052		
Extraversion	0.890986		
Agreeableness	0.825180		
Neuroticism	0.926176		

Source: Developed for the research

Table 4.3 shows the results of reliability test for pilot test. The Cronbach's Alpha ranging from 0.825180 to 0.926176. Therefore, all the variables in the questionnaires are reliable and consistent as all the Cronbach's Alpha value are more than 0.7.

Table 4.4: Reliability Test for Actual Test

Independent variable	Cronbach's Alpha	Dependent variable	Cronbach's Alpha
Openness to Experience	0.920326	Impulsive Buying Behaviour	0.949347
Conscientiousness	0.868568		
Extraversion	0.911327		
Agreeableness	0.869620		
Neuroticism	0.931278		

Source: Developed for the research

Table 4.4 shows the results of reliability test for the actual test. The Cronbach's Alpha ranging from 0.868568 to 0.949347. Therefore, all the variables in the questionnaires are reliable and consistent as all the Cronbach's Alpha value are more than 0.7.

4.2.2 Normality

As mentioned in chapter three, the normality test is met when the Skewness is within ± 2 and Kurtosis is within ± 3 as proposed by Garson (2007).

Table 4.5: Normality Test for Pilot Test

Independent Variables (IVs)	Item	Skewness	Kurtosis	Independent Variables (IVs)	Item	Skewness	Kurtosis
Openness to Experience	O1	0.51070743	-0.2372052	Agreeableness	A1	0.31617261	-0.9112201
	O2	-0.3549741	0.29325739		A2	0.23644297	-0.2066731
	O3	-0.4797596	-0.4030815		A3	-0.3555046	-0.1382079
	O4	-0.1140527	-0.3274871		A4	-0.3851599	0.5562421
	O5	0.33752099	-0.1695812		A5	0.0539492	-0.3517323
	O6	0.10780258	-0.8858427		A6	0.2220922	-0.0852858
	O7	-0.4839716	0.33247364		A7	0.09483116	1.74417122
	O8	-0.0713272	-0.7511488		A8	-0.8420674	1.26909568
	O9	0.47864198	-0.3604856		A9	-0.6860825	0.28557047
	O10	0.02759403	-1.0829004	Neuroticism	N1	-0.3026431	-1.1484748
Conscientiousness	C1	0.0539492	-0.3517323		N2	-0.5233866	-0.1205681
	C2	-0.4265702	-0.5938248		N3	-0.2818595	-0.6787931
	C3	-0.5427041	-0.1401695		N4	-0.3301658	0.01683471
	C4	-0.4377492	0.15494878		N5	-0.1096269	-0.662076
	C5	0.0926862	-0.5938248		N6	-0.1368433	-1.1076389
	C6	-0.3836374	-0.9313065		N7	-0.015972	-1.3098133
	C7	-0.3353176	-0.3694277		N8	0.15773689	0.49663755
	C8	-0.8351908	1.11724018	Dependent Variable (DV)	Item	Skewness	Kurtosis

	C9	-0.17722	-0.4210837	Impulsive	IB1	0.4323064	-0.4414712
Extraversion	E1	-0.2634872	-0.3805173	Buying	IB2	1.11269692	1.3003822
	E2	0.10011683	-0.8771697	Behaviour	IB3	-0.1518216	-0.6051671
	E3	-0.1589826	-0.2430758		IB4	0.53280399	-0.7912338
	E4	-1.0524799	0.92492346		IB5	0.08762726	-0.9516817
	E5	-0.6208438	0.25916829		IB6	0.47781939	-0.7622023
	E6	0.23051822	-0.3004369		IB7	1.3048064	1.26131969
	E7	-0.1112422	-1.1876781		IB8	1.41535025	1.87594426
	E8	-0.6182754	-0.4431184		IB9	1.07192075	0.95190469

Source: Developed for the research

Table 4.5 shows the result of normality test for pilot test. The Skewness values ranging from -1.0524799 to 1.41535025 while Kurtosis values ranging from -1.3098133 to 1.87594426. The Skewness is within ± 2 and Kurtosis is within ± 3 . Therefore, the assumption of normality has been fulfilled.

Table 4.6: Normality Test for Actual Test

Independent Variables (IVs)	Item	Skewness	Kurtosis	Independent Variables (IVs)	Item	Skewness	Kurtosis
Openness to Experience	O1	-0.6323623	0.15906206	Agreeableness	A1	-0.7331978	1.09680357
	O2	-0.9239765	0.7012219		A2	-0.7341105	0.80838714
	O3	-0.5689304	-0.0220867		A3	-0.2790837	-0.523059
	O4	-0.4165751	-0.4427912		A4	-0.438127	0.15761087
	O5	-0.2136799	-0.2287576		A5	-0.5740442	0.57700192
	O6	-0.110517	-0.716956		A6	-0.668557	0.70109505
	O7	-0.6482087	-0.059216		A7	-0.5376222	0.42719805
	O8	-0.1128411	-0.4863017		A8	-0.7258707	0.91084198

Conscientiousness	O9	-0.1333174	-0.6285062	Neuroticism	A9	-0.6039058	0.66882963
	O10	-0.0047062	-0.5768342		N1	0.49098839	-0.3833784
	C1	-0.4734322	0.12265597		N2	-0.0428226	-0.6569941
	C2	-0.5471013	0.67996383		N3	0.109684	-0.8204731
	C3	-0.5244947	0.24720881		N4	0.28079795	-0.5002796
	C4	-0.4483135	0.19254738		N5	0.25948273	-0.6282403
	C5	-0.5435764	0.49177302		N6	0.32644765	-0.5428802
	C6	-0.2258794	-0.2839291		N7	0.50137911	-0.4831636
	C7	-0.5151701	0.55296575		N8	0.23984154	-0.6288687
	C8	-0.623369	0.6761402	Dependent Variable (DV)	Item	Skewness	Kurtosis
Extraversion	C9	-0.5244611	0.41505594	Impulsive Buying Behaviour	IB1	0.13388601	-0.7927279
	E1	-0.4143722	-0.153868		IB2	0.46706073	-0.594257
	E2	-0.4212608	0.05384221		IB3	-0.0460615	-0.8389848
	E3	-0.6059075	0.32139723		IB4	0.19906628	-0.8174752
	E4	-0.5512719	0.41091596		IB5	0.03534238	-0.8466505
	E5	-0.4895542	-0.2804363		IB6	0.22731234	-0.825133
	E6	-0.52051	0.16151389		IB7	0.48120374	-0.5792537
	E7	-0.5038888	-0.0763291		IB8	0.49790094	-0.5907227
	E8	-0.2018751	-0.3785635		IB9	0.49849931	-0.8123557

Source: Developed for the research

Table 4.3 shows the result of normality test for actual test. The Skewness values ranging from -0.9239765 to 0.50137911 while Kurtosis values ranging from -0.8466505 to 1.09680357. The Skewness is within ± 2 and Kurtosis is within ± 3 . Therefore, the assumption of normality was fulfilled.

4.3 Inferential Analysis

4.3.1 Pearson Correlation Analysis

As proposed by Hair et al. (2006), a high correlation between the variables exists if the correlation between each variable shows a value of 0.90 and above. Table 4.7 presents the correlation between the five IVs.

Table 4.7: Pearson Correlation Matrix

Pearson Correlation Coefficients (n=371)					
Variables	Openness to Experience (O)	Conscientiousness (C)	Extraversion (E)	Agreeableness (A)	Neuroticism (N)
Openness to Experience	1.00000	0.42432	0.37877	0.26568	-0.26952
		Sig.= <.0001	Sig.= <.0001	Sig.= <.0001	Sig.= <.0001
Conscientiousness	0.42432	1.00000	0.40318	0.40262	-0.27825
	Sig.= <.0001		Sig.= <.0001	Sig.= <.0001	Sig.= <.0001
Extraversion	0.37877	0.40318	1.00000	0.40890	-0.35783
	Sig.= <.0001	Sig.= <.0001		Sig.= <.0001	Sig.= <.0001
Agreeableness	0.26568	0.40262	0.40890	1.00000	-0.23285
	Sig.= <.0001	Sig.= <.0001	Sig.= <.0001		Sig.= <.0001
Neuroticism	-0.26952	-0.27825	-0.35783	-0.23285	1.00000
	Sig.= <.0001	Sig.= <.0001	Sig.= <.0001	Sig.= <.0001	

Source: Developed for the research

From table 4.7, it shows that the highest coefficient value is 0.42432, which is lower than 0.90 and all independent variables (openness, conscientiousness, extraversion, agreeableness and neuroticism) appear to have low correlation to each other. Hence, it is proven that no multicollinearity problem has existed in this research.

The P-value of all the independent variables are less than 0.0001 and therefore have met the standardized requirement (P-value less than 0.05). It is concluded that all the five independent variables (openness, conscientiousness,

extraversion, agreeableness and neuroticism) have significant correlation among each other.

4.3.2 Multiple Linear Regression Analysis

Table 4.8: Model Summary

Root MSE	Dependent Mean	Coefficient Variation	R-Square	Adjusted R-Square
0.89442	2.76101	32.39455	0.1113	0.0991

Source: Developed for the research

Table 4.8 shows that the value of R-square is 0.1113, which indicates that 11.13% of the variation in DV (IBB) can be explained by the five independent variables (OCEAN). The remaining 88.87% changes in DV might due to other uncontrollably or unforeseen factors such as nation's economic condition, pricing mechanism, government's policy and so forth.

Table 4.9: ANOVA

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	5	36.56994	7.31399	9.14	<.0001
Error	365	291.99237	0.79998		
Corrected Total	370	328.56231			

Source: Developed for the research

From table 4.9, it shows that the P-value is less than 0.0001, which is less than 0.05 and the F-value is 9.14. Hence, it indicates that this model is perfectly fit and at least one of the five independent variables (OCEAN) can be used to model impulsive buying behaviour (IBB).

Table 4.10: Coefficients

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	Standardized Estimate	Tolerance	Variation Inflation
Intercept	1	2.09720	0.50304	4.17	<.0001	0	.	0
O	1	-0.17163	0.07018	-2.45	0.0149	-0.13863	0.75774	1.31972
C	1	-0.01277	0.10511	-0.12	0.9034	-0.00719	0.69461	1.43965
E	1	0.09463	0.07867	1.20	0.2298	0.07153	0.68841	1.45263
A	1	0.02443	0.09207	0.27	0.7909	0.01500	0.76146	1.31327
N	1	0.32248	0.05863	5.50	<.0001	0.29663	0.83726	1.19437

Source: Developed for the research

Table 4.11: Summary of Multiple Linear Regression Results

Hypotheses	Parameter Estimate	Pr > t 	Hypotheses Findings
H ₁ : There is a negative relationship between openness to experience and impulsive buying behaviour.	-0.17163	0.0149	Supported
H ₂ : There is a negative relationship between conscientiousness and impulsive buying behaviour.	-0.01277	0.9034 (p>0.05)	Not Supported
H ₃ : There is a positive relationship between extraversion and impulsive buying behaviour.	0.09463	0.2298 (p>0.05)	Not Supported
H ₄ : There is a positive relationship between agreeableness and impulsive buying behaviour.	0.02443	0.7909 (p>0.05)	Not Supported
H ₅ : There is a positive relationship between neuroticism and impulsive buying behaviour.	0.32248	<.0001	Supported

Source: Developed for the research

The relationships between the independent variables (OCEAN) and dependent variable (IBB) has been presented in table 4.11. It is proven that neuroticism has a positive and most significant impact on impulsive buying behaviour as its P-value is less than 0.0001, which fulfills the requirement of significance value less than 0.05. This indicates that impulsive buying behaviour will increase by 0.32248 for every increase in neuroticism, provided the other four independent variables remain constant. Openness is found to be another IV that supports the hypotheses testing as it shows a negative and significant relationship towards impulsive buying behaviour with a P-value of 0.0149, which has also met the requirement. Hence, impulsive buying behaviour will reduce by -0.17163 with the condition that the other four IVs remain unchanged.

Meanwhile, both extraversion and agreeableness show a positive relationship with impulsive buying behaviour. However, their P-value has greater than 0.05, which means that these two IVs have succeeded to meet partial of the hypotheses testing. In other words, they do not support the hypotheses. In addition, conscientiousness is another IV that does not support the hypotheses. Although it has proven an existence of negative relationship with impulsive buying behaviour, its P-value is more than 0.05 which lead to the rejection of hypotheses.

Subsequently, the multiple linear equation is derived.

$$IBB = 2.09720 - 0.17163(O) - 0.01277(C) + 0.09463(E) + 0.02443(A) + 0.32248(N)$$

From the values of standardized estimate, it can be concluded that neuroticism is the dominant independent variable in this model as it carries the highest standardized estimate value (0.29663) among the other IVs. Therefore, neuroticism can be said as the most influential independent variable in affecting impulsive buying behaviour.

4.4 Conclusion

This chapter included the clarification of the demographic profile of the respondents, at the same time it showed the statistic results generated from the data collected. The further discussion of the major findings, implication, limitations, recommendation will be described in the next chapter.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

The major finding and statistical analysis which have been discussed in chapter 4 will be summarized and discussed in this chapter. The implication of the study which includes theoretical and practical implication will be discussed further after the result was observed. Besides, the limitations of study, recommendation for future research and conclusion of this research will be concluded at the end of this chapter.

5.1 Summary of Statistical Analysis

The data showed that most of the respondents were females with the age from 36 to 45; they completed bachelor degree as their highest education. Majority of them earned between RM 3,801 to RM 5,000 per month. They need to support 1 or 2 children and have the basic understanding on GST.

The mean of the data mainly sort between 3 to 4, only 17 items including neuroticism and IBB were below 3. Most of the standard deviation falls between 0 to 1, this

implies the consistency of data. The highest mean was 4.0916 and lowest was 2.4528 whereas highest standard deviation was 1.2337 while the lowest was 0.7069.

The Cronbach' Alpha of the all the variables in this study including both independent variables and dependent variable were more than or equal to 0.7. It indicated that the items stated in the questionnaire were reliable and consistent (Nunnally, 1987). In another words, the questionnaire used in this study was valid at the same time it was a reliable instrument. Furthermore, the data in this study also fulfilled the assumption of normality as all of their skewness was within ± 2 and kurtosis was within ± 3 . It was also believed that the data was normally distributed and therefore the parametric test could be conducted.

In Pearson Correlation Analysis, openness and conscientiousness appeared to have the strongest interrelation as they shared the highest coefficient value of 0.42432 among all the other independent variables. It has been confirmed that there is no multicollinearity problem as none of the IV shows a correlation exceeding the value of 0.90. For multiple linear regression analysis, the R-square value of 0.1113 indicates that 11.13% of the DV (IBB) could be explained by the five IVs (OCEAN). In a nutshell, all the five IVs were found to have either positive or negative relationship with the DV. However, there were only two IVs that have significant relationship with the DV, which are neuroticism and openness in respectively.

5.2 Discussions of Major Findings

5.2.1 Openness to Experience

The research showed a negative relationship between openness to experience and impulsive buying behaviour, which in line with the result obtained in the study of Verplanken and Herabadi (2001), Gohary and Hanzaee (2014) and Verplanken and Sato (2011). The hypotheses was supported as it showed a significant negative relationship between openness and impulsive buying behaviour of middle-income households after GST implementation.

The person with high degree of openness is imaginative and tends to seek new experiences and idea. On the opposite point of view, a person with low degree of openness tends to be influenced by other easily as they have lower curiosity to seek for information related to products, thus result in higher degree of impulsive buying behaviour. (Verplanken & Herabadi, 2001). In this study that used Malaysian as research samples, it showed that openness was significantly related to impulsive buying behaviour after GST implementation among middle income families. Hence, it was assumed that there were possibilities where individuals with higher degree of openness tends to be more open minded in receiving new knowledge and more aggregate in searching for the information about a product, which led to lower tendency of impulsivity in purchasing.

5.2.2 Conscientiousness

Result indicated that there was a presence of negative relationship between conscientiousness and impulsive buying after GST implementation. However, the hypotheses in this variable was not supported as the result was insignificant. It aligned with the findings of Delafrooz, Taleghani and Farahzad (2013), which has indicated that conscientiousness was found to have negative influence with impulsive buying behaviour, with a non-significant result.

Conscientiousness is often explained by the personality of self-disciplined, well-structured and organized. An individual with low conscientiousness tends to have lesser autonomy whereas they would be easily being influenced by others (Verplanken & Herabadi, 2001), and this would cause higher possibility of impulsive purchasing. Also, the study of Donnelly et al. (2012) also stated that conscientious individuals have higher planning ability, which was more likely to have lower impulsive behaviour. However, result showed that there might have existence of stronger factors which could influence both IV and DV, such as situational factor (confidence level in shopping and peer influence) (Wong et al., 2014), or the enjoyment inclination in shopping experience (Badgaiyan & Verma, 2014). The study of Kacen and Lee (2002) indicated that culture could be a factor affecting the impulsive buying behaviour of an individual, even though there is still lack of researches regarding the relationship between personality and impulsive buying behaviour with cultural factor as a mediator.

5.2.3 Extraversion

The result of the findings was in line with the study of Badgaiyan and Verma (2014), Bratko et al. (2013) and Verplanken and Herabadi (2001) which found a presence of positive relationship between extraversion and impulsive buying behaviour. However, the result was slightly varies with the previous researchers, where an insignificant relationship was found in the study of extraversion and impulsive buying behaviour in Malaysia after GST implementation.

The high extraversion personality is often described as active, outgoing and talkative. Hence, they have higher chance of being targeted by the sales people as they are more likely to communicate freely with others. With this, it opens an opportunity for the salespersons to invite them for a higher possibility of buying impulsively. (Badgaiyan & Verma, 2014) Also, it was found in the research of Verplanken and Herabadi (2001) that an extrovert, which is an action oriented person, is more likely to decide and act without much consideration, showing a positive relationship between extraversion and impulsive buying behaviour. By comparing the association between the result of extraversion and conscientiousness clearly shows that impulsive purchasing behaviour could be rooted in personality.

5.2.4 Agreeableness

Agreeableness aligned with the outcome of study conducted by Asad et al. (2012) and Chen and Lee (2015) which mentioned that agreeableness have positive effect with impulsive buying behaviour. Individuals with

agreeableness personality tend to trust others and they are often categorized as an interpersonal oriented person. An individual with high agreeableness tends to trust others easily. Thus, they are more likely to trust all the promises and information available on the product itself, leading to a positive relationship between impulsive buying behaviour.

However, this hypotheses was rejected as the result generated shows that agreeableness has an insignificant relationship with impulsive buying behaviour. In fact, the study conducted by Badgaiyan and Verma (2014), Verplanken and Herabadi (2001) and Asad et al. (2012) also displayed a non-significant relationship between agreeableness and impulse purchasing behaviour. Therefore, it was believed that there were other external significant factors which have higher effect to the impulsivity in purchasing of individuals with agreeableness personality such as social factors as well as recommendation from friends and families rather than personality factor alone. They might have higher trust level towards their families and friends around rather than believing solely on the product information.

5.2.5 Neuroticism

As expected, the result of the analysis shows that neuroticism was positively correlated with impulsive buying behaviour of middle-income households after GST implementation. This result aligned with the finding of Bratko et al. (2013), Herabadi (2003), Billieux et al. (2008) and Mueller et al. (2011) which stated that neuroticism was positively related to the impulsive buying behaviour; their result supported current hypotheses with P-value lower than 0.0001.

Neuroticism is often explained as stress, anxious, and nervous feelings, which is considered as a negative trait. Result showed that neuroticism has a positive effect with impulsive buying behaviour, which was also supported with the finding of Badgaiyan and Verma (2014). The study of Gohary and Hanzaee (2014) also showed that individuals with neuroticism personality tend to purchase impulsively as a way to relieve stress temporary. Therefore, the result of this research with Malaysian samples proved that even though it was still in the early introduction stage of GST, middle income earners would still likely to purchase according to their feelings especially in negative mood. With the supporting from various researchers confirmed that neuroticism has significant positive relationship with impulsive buying behaviour, it proved that neuroticism has a significant influence in impulsive purchasing behaviour, which aligned with the study of Verplanken and Sato (2011) stating that the tendency of impulsive behaviour in purchasing was strongly rooted in personality.

5.3 Implications of the Study

This research found some important theoretical implication on the significant trait of relationship between impulsive buying behaviour and BFM after GST implementation. As discussed in the part of 5.2, it was stated that only openness and neuroticism are significantly related with the DV, whereby openness is negatively correlated and neuroticism has a positive relationship with impulsive buying behaviour. It was believed that economic factor could bring impact towards the spending behaviour of individuals. According to Datuk Liaw Choon Liang, the

president of Malaysia Retail Chain Association (MRCA), the market performance has been affected by 10% to 30% compared to the condition before GST. Consumers are still in the state of being a careful spender as Malaysia is still in the beginning stage of GST implementation. This research allows future Malaysian researcher to identify the changes in significant directional relationship between BFM and impulsive buying behaviour as the economy condition in Malaysia starts to develop on track, and the acceptance of GST starts to increase in order to obtain a more reliable study. Besides, it also contributes the future researchers to have a better visualization on the impulsive buying behaviour condition in Malaysia at the early implementation of GST.

There are also some practical implication found in this research, which is useful for the marketers and retailers to trigger the consumers' tendency of impulsive in purchasing. From the research we found that although conscientiousness, agreeableness and extraversion are not significant to impulsive buying behaviour, but the hypothesis was supported. Hence, by using the result obtained the marketers and retailers could design appropriate strategies to trigger the individuals with these personalities to purchase impulsively. For example, Darlie has recently come out with a promotion of purchasing two Darlie toothpastes to get a free Marvel mug (Darlie, 2015). The Marvel character was designed not only for Marvel fans, but also to trigger the impulse buying of consumer based on the characters of Marvel which reflects on the personality of themselves. Another marketing strategy could be developed to trigger the individual with agreeableness personality is by creating social welfare. As agreeableness was proven by previous researchers to have less significant effect on impulsive buying behaviour (Shahjehan et al., 2011), marketers and retailers could create social welfare activities whereby partial revenue will be contributed for charity purpose, as agreeableness individuals are helpful and nice. For example, Malaysian AEON Foundation (MAF) in With All Our Heart (WAOH) programme had contributed RM1.7 million of its revenue for charitable causes to

build its social image and also encouraging customers to buy more as partial of their money spent will be used for charity purpose (Aeon Credit Service, 2011).

5.4 Limitations of the Study

However, there are some limitations in this study which needs to be improvised in future. During the process of distributing questionnaires, most people rejected to answer as the number of questions were too much, even though it took not less than 10 minutes for them to fill up in details. Most of the families which came to buy groceries in supermarket brought along their children, and it made them inconvenient to fill up the questionnaires in a disturbed situation.

Meanwhile, the research and information about GST is still shallow in Malaysia as it was just implemented for a year, whereby the research on GST in the Asian countries were also lesser compared to the European and Western region. As this research is the study on the relationship between BFM and impulsive buying behaviour, we faced difficulties and obstacles such as less of information and reference from home country as well as in Asia. Besides, in a volatile economic condition in Malaysia due to the depreciation of Ringgit Malaysia and implementation of GST, the significance of relationship between BFM and impulsive buying behaviour turns out to be weaker as there might be a stronger factor influencing both relationships.

It was aware that there are a lot of participants who answered the questionnaires was still unsure and confuse about the questions as it does not provide detail explanation

on each questions of their personality assessment even though they were familiar with the language of the questionnaires.

The relationship between BFM and impulsive buying behaviour is worth for further study in future as it was believed by Verplanken and Sato (2011) that the behaviour of an individual is rooted on its personality. It was suggested that further studies can be done to access the relationship of BFM and impulsive buying behaviour some years after the GST implementation, when it started to gain more acceptance from the public.

5.5 Recommendations for Future Research

Firstly, the future researchers may consider reducing the items of questionnaire in order to improve target respondents' willingness to assist in surveying. Based on the observation, most target respondents were not interested to answer the questionnaire as the survey contained 53 questions, which was quite lengthy compare to normal ones. It was considered time consuming and inconvenience as most of the families brought along their children and thus directly increased the difficulty in answering questionnaire. On the other hand, there were great possibilities where the respondents may not able to answer all the questions prudentially and it would lead to different results compare to similar studies.

To obtain a higher accuracy of result, the future researchers should consider conducting a proper interview instead of doing survey questionnaire in order to gain

detail assessment on the personality of each person in their tendency of impulsive buying behaviour. During interview session, the researchers able to have direct communication with the target respondents, it will help the researchers to assess the respondent personality effectively as well as allowing respondents to have better understanding on each questions asked. Moreover, by interviewing the respondents allowing them to express their true opinion on each questions asked compare to survey. The limitation of conducting survey questionnaires is where the target respondents are being left alone while answering the questions, and they might have possibilities where they will answer without reading carefully or giving any random answer if they do not understand the question. Thus, conducting proper interview will help to improve the reliability of the result.

The future researchers are also encouraged to conduct longitudinal study on how GST affects impulsive buying behaviour after GST implementation. The future researchers may study how GST implementation changes consumer's impulsive buying behaviour precisely by conducting research in the early stage of GST implementation and at maturity stage of GST implementation to know whether it gives positive or negative contribution. A thorough study is essential to oversee the influence of GST towards consumer buying behavior in a microeconomic view rather than as a whole country.

5.6 Conclusion

BFM theoretical framework has been developed to examine how five personality traits (OCEAN) affect the impulsive buying behaviour of middle-income households after GST implementation. A cross-sectional survey has been used in this research

and the unit of analysis of our research is middle-income family from Selangor, Wilayah Persekutuan Kuala Lumpur and Wilayah Persekutuan Putrajaya. Based on the MLR result, the hypothesis of openness to experience and neuroticism are supported with P-value less than 0.05. Although the R^2 value of 0.1113 determines that there are no strong significance relationship between BFM and impulsive buying behaviour, this research successfully found some implications which fulfill the significance of study such as it is useful for market and retailers to determine the tendency of consumer in impulsive purchase, as well as allowing the researchers have a better visualization on the impulsive buying behaviour condition in Malaysia at the early implementation of GST. However, there are also some limitations found in this study such as lengthy research question, instability of economic condition and respondent confusion on research question to produce high quality of report. The future researchers are encouraged to reduce the number of questions, conduct proper interview with target respondent and conducting longitudinal study for the research. The research objective and research questions which intended to investigate how the big five personality affect the impulsive buying behaviour of middle-income households have been fulfilled. Result showed that all the IVs (OCEAN) will affect impulsive buying behaviour of middle income families after GST implementation.

References

- Aeon Credit Service. (2011). Welcome to AEON Credit Service. Retrieved June 29, 2016, from <http://www.aeonmalaysia.com.my/acs/af/aeon/content/csrContent.do;jsessionid=B5E3D02835843F7E373C43C020A569AB.bvserver1?channelId=-9576&selectedChannels=-9154&rootChannelId=-9154&contentType=2&contentId=22432>
- Applebaum, W. (1951). Studying customer behavior in retail stores. *Journal of Marketing*, 16(2), 172–178.
- Asad, S., Zeb, F., & Saifullah, K. (2012). The effect of personality on impulsive and compulsive buying behaviors. *African Journal of Business Management*, 6(6), 2187-2194.
- Badgaiyan, A. J., & Verma, A. (2014). Intrinsic factors affecting impulsive buying behaviour—Evidence from India. *Journal of Retailing And Consumer Services*, 21, 537-549.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.
- Bayley, G., & Nancarrow, C. (1998). Impulse purchasing: A qualitative exploration of the phenomenon. *Qualitative Market Research: An International Journal*, 1(2), 99–114.

- Benet-Martínez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology*, 75, 729–750.
- Berg, S. I., & Hilde, H. (2011). The role of personality in stress perception across different vocational types. *Journal of Employment Counselling*, 48(1), 3-16.
- Billieux, J., Rochat, L., Rebetez, M. M. L., & Van der Linden, M. (2008). Are all facets of impulsivity related to self-reported compulsive buying behavior? *Personality and Individual Differences*, 44, 1432–1442.
- Blumberg, B., Cooper, D. R., & Schindler, P. S. (2014). *Business research methods* (4th ed.). London: McGraw-Hill Education.
- Block, L. G., & Morwitz, V. G. (1999). Shopping lists as an external memory aid for grocery shopping: Influences on list writing and list fulfillment. *Journal of Consumer Psychology*, 8(4), 343–375.
- Bornstein, M. H., Jager, J., & Putnick, D. L. (2013). Sampling in developmental science: Situations, shortcomings, solutions and standards. *Developmental review*, 33(4), 357-370.
- Bratko, D., Butkovic, A., & Bosnjak, M. (2013). Twin study of impulsive buying and its overlap with personality. *Journal of Individual Differences*, 34(1), 8-14.
- Brick, M. (2011). Public opinion quarterly. *The future of survey sampling*, 75(5), 872-888.

- Brown, S., & Taylor, K. (2014). Household finances and the 'Big Five' personality traits. *Journal of Economic Psychology*, 45, 197-212.
- Brown, S. H., (2009). Multiple linear regression analysis: A matrix approach with MATLAB. *Alabama Journal of Mathematics*, 1-3.
- Bryman, A., & Bell, E. (2007). *Business research methods* (2nd ed.). Oxford: Oxford University Press.
- Byrne, B. M. (2010). *Structural equation modeling with amos: Basic concepts, applications, and programming* (2nd ed.). New York.
- Caliendo, M., Fossen, F. M., & Kritikos, A. S. (2011). Trust, positive reciprocity, and negative reciprocity: Do these traits impact entrepreneurial dynamics? *Journal of Economic Psychology*, 33, 394-409.
- Cattell, R. B. (1943). The description of personality: Basic traits resolved into clusters. *Journal of Abnormality Social Psychology*, 38, 476-506.
- Certo, S. T., & Certo, S. C. (2005). Spotlight on entrepreneurship. *Business Horizons*, 48, 271-274.
- Chen, T. (2011). Personality traits hierarchy of online shoppers. *International Journal of Marketing Studies*, 3(4), 23-39.
- Chen, T., & Lee, M. C. (2015). Personality antecedents of online buying impulsiveness. *Journal of economics, business and management*, 3(4), 425-429.

- Clark, L. A., Watson, D., & Mineka, S. (1994). Temperament, personality, and the mood and anxiety disorders. *Journal of Abnormal Psychology, 103*, 103–116.
- Costa, Jr, P. T., & McCrae, R. R. (1992b). Normal personality assessment in clinical practice: The NEO personality inventory. *Psychological Assessment, 4*(1), 5-13.
- Costa, P. T., & McCrae, R. R. (1992). *NEO-PI-R. The revised NEO personality inventory*. Odessa, FL: Psychological Assessment Resources.
- Darlie. (2015). Darlie free marvel kawaii art collection mug promotion 2015. Retrieved June 29, 2016, from <http://www.malaysiafreebies.com/darlie-free-marvel-kawaii-art-collection-mug-promotion-2015>
- Davison, M. L., & Davenport, E. C. Jr. (2002). Identifying criterion-related patterns of predictor scores using multiple regression. *Psychological Methods, 7*(4), 468-484.
- Delafrouz, N., Taleghani, M., & Farahzad, M. (2013). The effect of personality on compulsive buying and impulsive buying behavior. *International Journal of Science Innovations and Discoveries, 3*(3), 413-422.
- Denissen, J. J. A., & Penke, L. (2008). Neuroticism predicts reaction to cues of social illusion. *European Journal of Personality, 22*, 497-517.
- Department of Statistics Malaysia. (2015). *Population Distribution and Basic Demographic Characteristic Report 2010*. Retrieved July 1, 2016, from https://www.statistics.gov.my/index.php?r=column/cthem&menu_id=L0phe

U43NWJwRWVSZklWdzQ4TlhUUT09&bul_id=MDMxdHZjWTk1SjFzTz
NkRXYzcVZjdz09

Department of Statistics Malaysia. (2015). *Press release report of household income and basic amenities survey 2014*. The Office of Chief Statistician Malaysia: Department of Statistics Malaysia.

Department of Statistics Malaysia. (2015). *Press release report on household expenditure 2014*. The Office of Chief Statistician Malaysia: Department of Statistics Malaysia.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review Psychology*, 41, 417-440.

Digman, J. M., & Inouye, J. (1986). Further specification of the five robust factors of personality. *Journal of Personality and Social Psychology*, 50(1), 16-23.

Dole, C., & Schroeder, R. G. (2001). The impact of various factors of personality, job satisfaction and turnover intentions of professional accountants. *Managerial Auditing Journal*, 16(4), 234-245.

Donelly, G., Iyer, R., & Howell, R. T. (2012). The big five personality traits, material values, and financial well-being of self-described money managers. *Journal of Economic Psychology*, 33, 1129–1142.

Eslake, S. (2006). The importance of accurate, reliable and timely data. Unpublished manuscript, Rumbalara Football Netball Club Shepparton, Victoria.

- Etchegaray, J. M., & Fischer, W. G. (2011). Understanding evidence-based research methods: Pilot testing surveys. *Health Environments Research & Design Journal*, 4(4), 143-147.
- Fiske, D. W. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal of Abnormal and Social Psychology*, 44, 329-444.
- Garson, D. (2007). *Testing of assumptions, key concepts and terms*. Retrieved April 14, 2016, from www2.chass.ncsu.edu/garson/pa765/assumpt.htm.
- George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*, 86(3), 513-524.
- Gohary, A., & Hanzae, K. H. (2014). Personality traits as predictors of shopping motivators and behaviors: A Canonical correlation analysis. *Arab Economics and Business Journal*, 9, 166-174.
- Goldberg, L. R. (1983). *The magical number five, plus or minus two: some conjectures on the dimensionality of personality descriptors*. Paper presented at a Research Seminar, Geronto. Research Centre, Baltimore City Hospitals.
- Gunkel, M., Schlaegel, C., Langella, I. A., & Peluchette, J. V. (2010). Personality and career decisiveness: An international empirical comparison of business students' career planning. *Personnel Review*, 39(4), 503-524.

Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2006).

Multivariate data analysis (6th ed.). Harlow: Pearson Education.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). New Jersey: Prentice-Hall, Englewood Cliffs.

Hatcher, L. (1994). *A step-by-step approach to using the SAS(R) system for factor analysis and structural equation modeling* (2nd ed.). Cary, NC: SAS Institute.

Hausman, A. (2000). A multi-method investigation of consumer motivations in impulse buying behavior. *Journal of Consumer Marketing*, 17, 403-419.

Herabadi, A. G. (2003). *Buying impulses: A study on impulsive consumption*. Unpublished doctoral dissertation, University of Tromso, Norway.

Hettema, J. M., Neale, M. C., Myers, J. M., Prescott, C. A., & Kendler, K. S. (2006). A population-based twin study of the relationship between neuroticism and internalizing disorders. *American Journal of Psychiatry*, 163, 857–864.

Hill, T., & Lewicki, P. (2007). *Statistics: Methods and application*. Tulsa: Statsoft, Inc.

Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, 21(5), 967-988.

- Inman, J. J., Winer, R. S., & Ferraro, R. (2009). The interplay among category characteristics, customer characteristics, and customer activities on in-store decision making. *Journal of Marketing*, 73, 19-29.
- Johanson, G. A., & Brooks, G. P. (2010). Initial scale development: Sample size for pilot studies. *Educational and Psychological Measurement*, 70(3), 394-400.
- John, O. P. (1989). Towards a taxonomy of personality descriptors. In D. Buss and N. Cantor (Ed.), *Personality Psychology: Recent Trends and Emerging Directions*. New York: Springer-Verlag.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory—Versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York, NY: Guilford.
- John, O. P., & Srivastava, S. (1999). The big-five trait taxonomy: History, measurement, and theoretical perspectives. In Pervin, L. and John, O.P. (Eds), *Handbook of Personality: Theory and research* (pp. 102-139). New York: Guilford.
- Jones, R. J., Woods, S. A., & Hutchinson, E. (2014). The influence of the five factor model of personality on the perceived effectiveness of executive coaching.

International Journal of Evidence Based Coaching & Mentoring, 12(2), 109-118.

Kacen, J. J., Hess, J. D., & Walker, D. (2012). Spontaneous selection: The influence of product and retailing factors on consumer impulse purchases. *Journal of Retailing and Consumer Service*, 19, 578–588.

Kacen, J. J., & Lee, J. A. (2002). The influence of culture on consumer impulsive buying behavior. *Journal of Consumer Psychology*, 12(2), 163-176.

Kelly, K., Clark, B., Brown, V., & Sitzia, J. (2003). Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care*, 15(3), 261-266.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York: Guilford Press.

Kokkinos, C. M., Kargiotidis, A., & Markos, A. (2015). The relationship between learning and study strategies and big five personality traits among junior university student teachers. *Learning and Individual Difference*, 43, 39-47.

Korb, K. A. (2012). *Select sampling technique*. Retrieved April 17, 2016, from <http://korbedpsych.com/R06Sample.html>

Lakhal, S., Frenette, É., Sévigny, S., & Khechine, H. (2012). Relationship between choice of a business major type (thing-oriented versus person-oriented) and Big Five personality traits. *The International Journal of Management Education*, 10(2), 88–100.

- Leary, M. M., Reilly, M. D., & Brown, F. W. (2009). A study of personality preferences and emotional intelligence. *Leadership and Organization*, 30(5), 421-434.
- Lee, I. L. (2013). *External and internal factors of impulse buying behavior in reference to gender*. Unpublished master's dissertation, University Malaysia Sabah, Sabah.
- Leong, L. Y., Ooi, K. B., Chong, A. Y. L., & Lin, B. (2013a). Modeling the stimulators of the behavioural intention to use mobile entertainment: Does gender really matter? *Computer in Human Behaviour*, 29(5), 2109-2121.
- Leung, W. C. (2001). *How to conduct a survey*. Retrieved March 18, 2016, from http://mail.cochrane.es/files/Recursos/How_to_design_a_questionnaire.pdf
- Li, Y. L., & Jing, F. J. (2014). The effect of promotion stimulation on post-impulsive buying satisfaction [In Chinese]. *Management Review*, 26, 81-88.
- Lim, I. (2015, August17). Months after GST, families feeling the pinch ask 'what's in it for us? *Malay Mail Online*. Retrieved March 19, 2016, from <http://www.themalaymailonline.com/malaysia/article/months-after-gst-families-feeling-the-pinch-ask-whats-in-it-for-us>
- Mathiyazhagan, T., & Nandan, D. (2010). *Survey research method*. Retrieved March 20, 2016, from <http://www.mediamimansa.com/>
- McCrae, R., & Costa, P.T. (1997). Personality trait structure as a human universal. *American Psychologist*, 52(5), 509-516.

- McCrae, R. R., & Costa, P.T. (2008). Empirical and theoretical status of the five-factor model of personality traits. *Sage Handbook of Personality Theory and Assessment*, 1, 273-294.
- Ministry of Finance Malaysia. (2014). *Goods & services tax (GST)*. Retrieved April 6, 2016, from http://www.treasury.gov.my/index.php?option=com_content&view=article&id=2761:what-is-the-impact-of-gst-on-economy-consumption-stimulates-the-economy-but-people-may-not-want-to-consume-spend-as-much-if-they-are-taxed-for-it&catid=506&Itemid=2493&lang=en
- Ministry of Finance Malaysia. (2015). *2016 Budget*. Federal Government Administrative Centre: Ministry of Finance
- Ministry of Finance Malaysia. (2016). *2016 Budget recalibration*. Retrieved March 29, 2016, from http://www.treasury.gov.my/pdf/ucapan/2016/Budget2016_Recalibration.pdf
- Mowen, J. C., & Spears, N. (1999). Understanding compulsive buying among college students: A hierarchical approach. *Journal of Consumer Psychology*, 8(4), 407-430.
- Mueller, A., Claes, L., Mitchell, J. E., Wonderlich, S. A., Crosby, R. D., & de Zwaan, M. (2010). Personality prototypes in individuals with compulsive buying based on the big five model. *Behaviour Research and Therapy*, 48, 930-935.

- Mueller, A., Claes, L., Mitchell, J. E., Faber, R. J., Fischer, J., & de Zwaan, M. (2011). Does compulsive buying differ between male and female students? *Personality and Individual Differences*, 50, 1309–1312.
- Mugo, F. W. (2002). *Sampling in research*. Retrieved April 21, 2016, from http://www.indiana.edu/~educy520/sec5982/week_2/mugo02sampling.pdf
- Nunnally, J. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Osborne, J. W., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research, and Evaluation*, 8(2), 1-5.
- Otero-Lopez, J.M., & Villardefrancos, E. (2013). Five-factor model personality traits, materialism, and excessive buying: A mediational analysis. *Personality and Individual Differences*, 54(6), 767-772.
- Ozer, D. J., & Benet-Martí'nez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology*, 57, 401–421.
- Paul, R. K. (n.d.). Multicollinearity: Causes, effects and remedies. Unpublished manuscript, Indian Agricultural Statistics Research Institute, India.
- Pervin, L. A. (1989). *Personality: Theory and research* (5th ed.). New York: Wiley
- Peshevska, D. J., Markovik, M., Sethi, D., & Serafinovska, E. (2014). Relationships and community risk factors for elder abuse and neglect: Findings from the first national prevalence study on elder maltreatment. *Open Access Macedonian Journal of Medical Sciences*, 2(2), 367-372.

- Prashar, S., Parsad, C., & Sai Vijay, T. (2015). Application of neural networks technique in predicting impulse buying among shoppers in India. *Decision (0304-0941)*, 42(4), 403-417.
- Rai, S., & Kumar, A. V. V. (2012). Five factor model of personality & role stress. *The Indian Journal of Industrial Relations*, 48(2), 341-353.
- Robie, C., Brown, D. J., & Bly, P. R. (2005). The big five in USA and Japan. *Journal of Management Development*, 24(8), 720-737.
- Rook, D. W. (1987). The buying impulse. *The Journal of Consumer Research*, 14(2), 189-199.
- Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22(December), 305-313.
- Royal Malaysian Customs Department. (2013). *About GST*. Retrieved April 5, 2016, from http://gst.customs.gov.my/en/gst/Pages/gst_wy.aspx
- Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students* (6th ed.). England: Pearson Education Limited.
- Sensuse, D. I., Cahyaningsih, E., & Wibowa, W. C. (2015). Identifying knowledge management process of Indonesian government human capital management using analytical hierarchy process and pearson correlation analysis. *Procedia Computer Science*, 72, 233-243.

- Shahjehan, A., Qureshi, J. A., Zeb, F., & Saifullah, K. (2011). The effect of personality on impulsive and compulsive buying behaviors. *African Journal of Business Management*, 6 (6), 2187–2194.
- Smith, M. (1999a). Personality issues and their impact on accounting and auditing. *Managerial Audit Journal*, 14(9), 453-460.
- Soto, C. J., & John, O. P. (2009). Ten facet scales for the big five inventory: Convergence with NEO PI-R facets, self-peer agreement, and discriminant validity. *Journal of Research in Personality* 43, 84-90.
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2008). The developmental psychometrics of Big Five self-reports: Acquiescence, factor structure, coherence, and differentiation from ages 10 to 20. *Journal of Personality and Social Psychology*, 94, 718–737.
- Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing*, 26, 59-62.
- The Star Online. (2015). *Najib: Middle-income group vital to economic growth*. Retrieved March 8, 2016, from <http://www.thestar.com.my/news/nation/2015/11/16/najib-middle-income-group-statement/>
- Turkyilmaz, C. A., Erdem, S., & Uslu, A. (2015). The effect of personality traits and website quality on online impulsive buying. *Procedia Social and Behavioural Sciences*, 175, 98-105.

- Thompson, E. R., & Prendergast, G. P. (2015). The influence of traits affect and the five-factor personality model on impulse buying. *Personality and Individual Differences*, 76, 216-221.
- Tok, S. (2011). The big five personality traits and risky sport participation. *Social Behavior and Personality*, 39(8), 1105-1112.
- Verplanken, B., & Herabadi, A. (2001). Individual differences in impulse buying tendency: Feeling and no thinking. *European Journal of Personality*, 15(1), S71-S83.
- Verplanken, B., & Sato, A. (2011). The psychology of impulse buying: An integrative self-regulation approach. *Journal of Consumer Policy*, 34(2), 197-210.
- Wanberg, C. R., & Kammeyer-Mueller, J. D. (2000). Predictors and outcomes of proactivity in the socialization process. *Journal of Applied Psychology*, 85(3), 373-385.
- Weisberg, S. (1980). *Applied linear regression* (3rd ed.). Minnesota: Wiley Interscience.
- Wilkowski, B. M., & Robinson, M. D. (2008). The cognitive basis of trait anger and reactive aggression: An integrative analysis. *Personality and Social Psychology Review*, 12, 3-21.
- Wong, Y. T., Said, A., Paim, L., & Osman, S. (2014). A typology of personal factor attributes among shoppers. *Journal of Fashion Marketing And Management*,

18(4), 394-412. Yu, H., Jiang, S., & Land, K. C. (2015). Multicollinearity in hierarchical linear models. *Social Science Research*, 53, 118-136.

Yu, H., Jiang, S., & Land, K. C. (2015). Multicollinearity in hierarchical linear models. *Social Science Research*, 53, 118-136.

Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of Applied Psychology*. 91(2), 259-271.

Zou, K. H., Tuncali, K., & Silverman, S. G. (2003). Correlation and simple linear regression. *Statistical Concepts Series*, 227(3).

Zurawicki, L. (2010). Neural bases for segmentation and positioning. In *Neuromarketing* (pp. 163-178). New York: Springer.

Appendix A: Summary of Past Empirical Studies

i) Openness to Experience

Study	Country	Data	Major Findings
Badgaiyan & Verma, 2014	India	The researchers took data collection personally and convenience sampling had been used.	The researchers found out that individuals will purchase products to suit their personality needs. The researchers also found that the effect of the intrinsic variables on impulsive behaviour is the same among the gender.
Gohary & Hanzaee, 2014	Iran	The researchers distributed self-report questionnaire to 247 college students in Qazvin and Urmia in Iran.	The result showed that the individual procedures will significantly affect the shopping procedures. Their findings also showed that the impulsive buying behavior will drive people to compulsive buying behaviour.
Verplanken & Herabadi, 2001	Norway	The researchers used convenient sampling method to assess 144 individual in Norway. There were 51 local civil servants, 81 travelers and 12 undergraduates had been assessed with an open question.	The researchers found out that cognitive aspect and affective aspect have significant relationship with recent purchase number and purchase frequency of specific impulse products. They also found that big five personality has significantly correlated with impulsive buying behaviour.

ii) Conscientiousness

Study	Country	Data	Major Findings
Donelly, Iyer, & Howell, 2012	US	Four online surveys questionnaires examined the Big Five personality traits and material values and the independent effects of money management on wealth, debt, and compulsive buying.	Individuals who believe that material possessions can provide happiness manage their money less and highly conscientious individuals manage their money more because they have positive financial attitudes as well as a future orientation.
Verplanken & Herabadi, 2001	UK	A 20-item scale to measure general impulse buying tendency was developed and validated in two studies.	Impulse buying tendency was found to be related to personality-based individual difference measures, including the Big Five. The results suggest that impulse buying tendency has a strong basis in personality.
Zurawicki, 2010	New York	Self-report questionnaire was distributed randomly among 247 college students at Qazvin and Urmia in Iran.	There is a significant difference between males and females on conscientiousness, neuroticism, openness, compulsive buying and hedonic shopping value. There is no sufficient evidence to prove sex as moderator between Big Five personality traits and shopping variables.

iii) Extraversion

Study	Country	Data	Major Findings
Chen, 2011	Taiwan	Posted questionnaire on one of the leading academic online survey websites in Taiwan and distributed paper-based questionnaires among friends, colleagues, and fellow students. A total of 626 responses have been collected through convenience sampling.	Extrovert being an individual with the character of seeking excitement and prefer uncertainty are more likely to come in contact with sales people. They have a positive correlation with impulsive buying behaviour.
Badgaiyan & Verma, 2014	India	Convenience sampling method has been used to select the respondents and the data was personally undertaken by the authors themselves. The authors targeted a sample size of 525. However, the final usable responses are only 508.	There is a positive association between extraversion and impulsive buying.
Bratko, Butkovic, & Bosnjak, 2013	Croatia	Collected through mail for 339 twin pairs.	There is a significant positive impact between extraversion and impulse buying.
Verplanken & Herabadi, 2001	The Netherlands	Invited 106 undergraduate students from University of Nijmegen to visit the laboratory twice to complete the questionnaire.	There is a significant correlation between extraversion and impulse buying.

iv) Agreeableness

Study	Country	Data	Major Findings
Turkyilmaz, Erdem, & Uslu, 2015	Turkey	A three different scales and demographic questionnaire survey of 2500 registered members of online shopping.	Extraversion, openness to change and agreeableness have positive effects; while conscientiousness and neuroticism have negative effects on online impulse buying.
Asad, Zeb, & Saifullah, 2012	Pakistan	Questionnaire survey of 640 students in the university.	Positive relationship between impulsive and compulsive buying. Big Five personality traits are also positively correlated with impulsive and compulsive buying.
Chen & Lee, 2015	Taiwan	Both online and paper-based surveys of 540 online buying respondents.	Consciousness is negatively related to online buying impulsiveness and agreeableness is positively related to online buying impulsive.

v) Neuroticism

Study	Country	Data	Major Findings
Herabadi, 2003	Netherlands	Two sessions of questionnaire survey distributed to 106 undergraduate students in Universiti of Nijmegen.	Impulsive buying behaviour is positively driven by emotional urge; impulsive buying behaviour is different according to cultural context; impulsive buying is a psychological meaningful behavioral syndrome; a negative relationship is found between age and

			impulsive buying behaviour; female has higher impulsiveness in purchasing than males;
Costa & McCrae, 1992	US	Developed a 240-item inventory, NEO-PI-R with 5-point likert scale that measured five dimensions of personalities based on Five Factor Model.	There is cross-validity between NEO-PI-R and FFFI (Developed by Goldberg) and it was validated, therefore in turn replaced FFFI to be chosen as the measure of personality dimensions.
Shahjehan, Qureshi, Zeb, & Saifullah, 2011	Pakistan	Questionnaire survey to 640 students in public sector university of Pakistan.	It was found that impulsive and compulsive buying is positively correlated; A positive relationship was found between impulsive and compulsive buying with the big five personality traits; age and level of education are both negatively correlated with impulsive and compulsive buying behaviour.
Billieux, Rochat, Rebetez, & Van der Linden, 2008	Switzerland	Survey questionnaire to 150 volunteer participant from community to access compulsive buying, using French version of UPPS Impulsive Behavior Scale	Positive relationship was shown between three facet of impulsivity which are urgency, lack of perseverance and lack of premeditation with compulsive buying behaviour; urgency is the only significant factor of compulsive buying behaviour.
Bratko, Butkovic, & Bosnjak, 2013	Croctia	Mail survey of 339 twin pairs	Impulsivity, neuroticism, and extraversion have significant effect with the influence of overlapping genetic, explaining a rate o 25% of individual differences in impulsive buying behaviour.
Mueller, Claes, Mitchell, Faber, Fischer, & de Zwaan, 2010	Germany	Cluster analysis of 68 respondent with compulsive buying using NEO-FFI.	Cluster II scored significantly higher in neuroticism than other four traits, including comparison result with cluster I; Cluster II have higher compulsive buying.

Appendix B: Variables and Measurement

Variable	Item	Description	Measurement	Source
<i>Openness to Experience</i>	O1	I see myself as someone who is original, comes up with new ideas.	Interval scale (5-point Likert scale) 1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Soto & John (2009)
	O2	I am curious about many different things		
	O3	I see myself as someone who is ingenious, a deep thinker		
	O4	I am a person who has an active imagination		
	O5	I see myself as someone who is inventive		
	O6	I see myself as someone who values artistic, aesthetic experiences.		
	O7	I see myself as an individual who likes to reflect, play with ideas.		
	O8	I am sophisticated in art, music or literature.		
	O9	I do not prefer work that is routine		
	O10	I have much artistic interests.		

<i>Conscientiousness</i>	C1	I see myself as someone who does a thorough job.	Interval scale (5-point Likert scale) 1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Soto & John (2009)
	C2	I am a reliable worker.		
	C3	I see myself as someone who perseveres until the task is finished.		
	C4	I would do things efficiently.		
	C5	I am a person who will make plans and follow through with them.		
	C6	I am not a careless person.		
	C7	I see myself as someone who is organized.		
	C8	I don't see myself as a lazy person.		
	C9	I am a person who is not easily distracted.		
<i>Extraversion</i>	E1	I see myself as someone who is talkative		
	E2	I am someone who is full of energy		

	E3	I am a person who generates a lot of enthusiasm	Interval scale (5-point Likert scale) 1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Soto & John (2009)
	E4	I have an assertive personality		
	E5	I am an outgoing, sociable individual		
	E6	I am not a reserved person		
	E7	I don't see myself as a quiet person		
	E8	I seldom feel shy, inhibited		
<i>Agreeableness</i>	A1	I see myself as a helpful and unselfish person with other.	Interval scale (5-point Likert scale) 1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Soto & John (2009)
	A2	I tend to forgive easily.		
	A3	I trust others easily.		
	A4	I see myself as a considerate person and kind to almost everyone.		

	A5	I like to cooperate with others.		Soto & John (2009)
	A6	I do not like to find fault with others.		
	A7	I do not like to quarrel with others.		
	A8	I am a friendly person and tend to treat people around nicely.		
	A9	I am seldom being rude to others.		
<i>Neuroticism</i>	N1	I am easily depressed.	Interval scale (5-point Likert scale) 1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Soto & John (2009)
	N2	I see myself as someone who can be tense.		
	N3	I get worried a lot.		
	N4	I see myself as someone who can be moody.		
	N5	I get nervous easily.		

	N6	I am someone who is not relaxed and I do not handle stress well.		
	N7	I am emotionally unstable, easily get upset.		
	N8	I find it hard to get calm, especially in tense situation.		

Dependent Variable-Impulsive Buying Behaviour			
Items	Description	Measurement	Source
<i>After GST</i>			
IB1	I often buy things spontaneously.	Interval scale (5-point Likert scale) 1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree	Rook & Fisher (1995)
IB2	I often buy things without thinking.		
IB3	I ended up spending more money than I originally set out to spend.		
IB4	I buy things according to the way how I feel at that moment.		
IB5	I bought more than what I had planned to buy.		
IB6	I do not plan carefully on most of my purchase.		
IB7	“Just do it” describes the way I buy things.		
IB8	“I see it, I buy it” describes me.		
IB9	“Buy now, think about it later” describes me.		

APPENDIX C: PERMISSION LETTER TO CONDUCT SURVEY

UNIVERSITI TUNKU ABDUL RAHMAN



Wholly Owned by UTAR Education Foundation (Company No. 578227-M)

11th April 2016

To Whom It May Concern

Dear Sir/Madam

Permission to Conduct Survey

This is to confirm that the following students are currently pursuing their *Bachelor of Commerce (Hons) Accounting* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

I would be most grateful if you could assist them by allowing them to conduct their research at your institution. All information collected will be kept confidential and used only for academic purposes.

The students are as follows:

Name of Student

Looi Khai Yeen

Lee Sha Ni

Low Ying Ying

Tey Ee Ern

Yeo Khai Wen

Student ID

13ABB07951

12ABB05970

13ABB00510

13ABB00686

14ABB00573

If you need further verification, please do not hesitate to contact me. Thank you.

Yours sincerely,

Ms Ching Suet Ling (Head of Department)
Faculty of Business and Finance
Email: chingsl@utar.edu.my

Mr Loo Thin Tuck (Supervisor)
Faculty of Business and Finance
Email: loott@utar.edu.my

Address: Jalan Sg. Long, Bandar Sg. Long, Cheras, 43000 Kajang, Selangor D.E. **Postal Address:** P O Box 11384,
50744 Kuala Lumpur, Malaysia. **Tel:** (603) 9086 0288 **Fax:** (603) 9019 8868 **Homepage:** <http://www.utar.edu.my>

APPENDIX D: SURVEY QUESTIONNAIRE

The Relationship between Big Five Model and Impulsive Buying Behavior of Middle Income Families in Peninsula Malaysia: A Study on Post GST Implementation

Survey Questionnaire

The purpose of this survey is to conduct a research to investigate the relationship between Big Five Model and impulsive buying behaviour of middle income families in Peninsula Malaysia after GST. Please answer all questions correctly. All responses will be kept in confidential and used for academic purposes only.

We appreciate your kind participation and your precious time as well.

Instructions:

- 1) This questionnaire consists of THREE (3) sections. Please answer ALL questions in ALL sections.
- 2) Completion of this form will take you less than 10 minutes.
- 3) The entire contents of this questionnaire will be kept confidential.

Section A: Demographic Profile

In this section, we would like you to fill in some of your personal details. Please tick whichever answer that is relevant to you and all your answers will be kept strictly confidential.

QA 1: Gender: ☐ Male ☐ Female

QA 2: Age:

- ☐ 21 to 25-year-old
- ☐ 26 to 35-year-old
- ☐ 36 to 45-year-old
- ☐ 46-year-old or above

QA 3: Highest education completed:

- ☐ High School
- ☐ Diploma
- ☐ Degree
- ☐ Master
- ☐ PhD
- ☐ Others: _____

QA 4: Household aggregate monthly income level:

- ☐ Less than RM 3,800
- ☐ RM 3,801 to RM 5,000
- ☐ RM 5,001 to RM 6,500
- ☐ RM 6,501 to RM 8,300
- ☐ RM 8,300 and above

QA 6: Number of children supported:

- ☐ 0
- ☐ 1-2
- ☐ 3-4
- ☐ 5-6
- ☐ More than 6

QA 7: Do you understand the basic concept of Goods and Services Tax (GST)?

- ☐ Yes
- ☐ No

Section B: Big Five Personality Traits

This section is seeking your opinion in categorizing your own personality traits. Respondents are required to indicate the extent to which they agree or disagree with each statement using 5 point Likert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree] response framework. Please circle one number per line to indicate the extent to which you agree or disagree with the following statements.

No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
B1	Openness to Experience					
O1	I see myself as someone who is original, comes up with new ideas.	1	2	3	4	5
O2	I am curious about many different things	1	2	3	4	5
O3	I see myself as someone who is ingenious, a deep thinker.	1	2	3	4	5
O4	I am a person who has an active imagination.	1	2	3	4	5
O5	I see myself as someone who is inventive.	1	2	3	4	5
O6	I see myself as someone who values artistic, aesthetic experiences.	1	2	3	4	5
O7	I see myself as an individual who likes to reflect, play with ideas.	1	2	3	4	5
O8	I am sophisticated in art, music or literature.	1	2	3	4	5
O9	I do not prefer work that is routine.	1	2	3	4	5
O10	I have much artistic interests.	1	2	3	4	5

No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
B2	Conscientiousness					
C1	I see myself as someone who does a thorough job.	1	2	3	4	5
C2	I am a reliable worker.	1	2	3	4	5
C3	I see myself as someone who perseveres until the task is finished.	1	2	3	4	5
C4	I would do things efficiently.	1	2	3	4	5
C5	I am a person who will make plans and follow through with them.	1	2	3	4	5
C6	I am not a careless person.	1	2	3	4	5
C7	I see myself as someone who is organized.	1	2	3	4	5
C8	I don't see myself as a lazy person.	1	2	3	4	5
C9	I am a person who is not easily distracted.	1	2	3	4	5
No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
B3	Extraversion					
E1	I see myself as someone who is talkative.	1	2	3	4	5
E2	I am someone who is full of energy.	1	2	3	4	5

E3	I am a person who generates a lot of enthusiasm.	1	2	3	4	5
E4	I have an assertive personality.	1	2	3	4	5
E5	I am an outgoing, sociable individual.	1	2	3	4	5
E6	I am not a reserved person.	1	2	3	4	5
E7	I don't see myself as a quiet person.	1	2	3	4	5
E8	I seldom feel shy, inhibited.	1	2	3	4	5
No	Questions	Strongly	Disagree	Neutral	Agree	Strongly Agree
B4	Agreeableness					
A1	I see myself as a helpful and unselfish person with other.	1	2	3	4	5
A2	I tend to forgive easily.	1	2	3	4	5
A3	I trust others easily.	1	2	3	4	5
A4	I see myself as a considerate person and kind to almost everyone.	1	2	3	4	5
A5	I like to cooperate with others.	1	2	3	4	5
A6	I do not like to find fault with others.	1	2	3	4	5

A7	I do not like to quarrel with others.	1	2	3	4	5
A8	I am a friendly person and tend to treat people around nicely.	1	2	3	4	5
A9	I am seldom being rude to others.	1	2	3	4	5
B5	Neuroticism					
N1	I am easily depressed.	1	2	3	4	5
N2	I see myself as someone who can be tense.	1	2	3	4	5
N3	I get worried a lot.	1	2	3	4	5
N4	I see myself as someone who can be moody.	1	2	3	4	5
N5	I get nervous easily.	1	2	3	4	5
N6	I am someone who is not relaxed and I do not handle stress well.	1	2	3	4	5
N7	I am emotionally unstable, easily get upset.	1	2	3	4	5
N8	I find it hard to get calm, especially in tense situation.	1	2	3	4	5

Section C: Impulsive Buying Behaviour

This section is seeking your opinion regarding the buying behaviour style. Respondents are required to indicate the extent to which they agree or disagree with each statement using 5 point Likert scale [(1) = strongly disagree; (2) = disagree; (3) = neutral; (4) = agree and (5) = strongly agree] response framework. Please circle one number per line to indicate the extent to which you agree or disagree with the following statements.

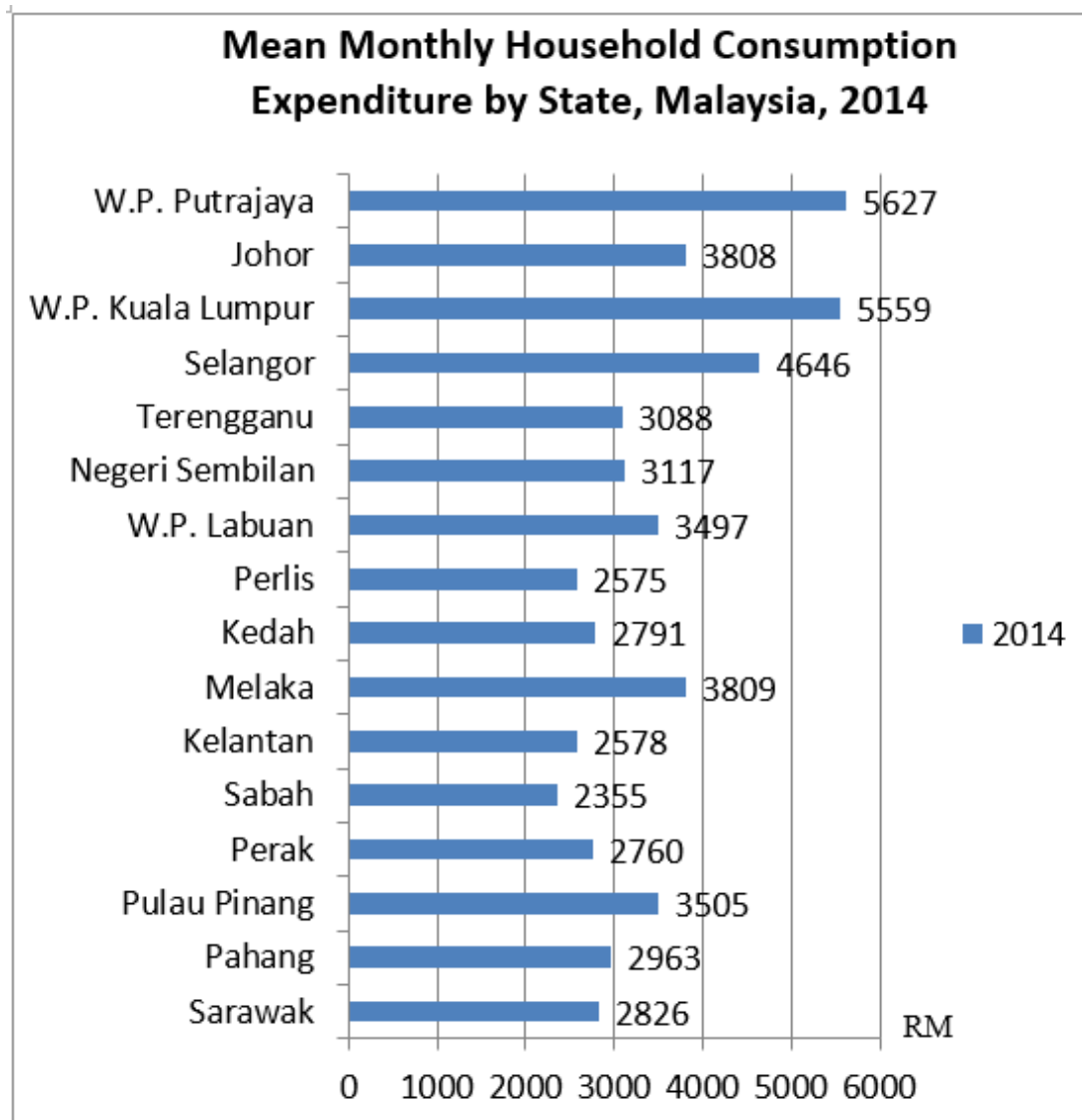
No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
C1	Impulsive Buying Behaviour					
After GST						
IB1	I often buy things spontaneously.	1	2	3	4	5
IB2	I often buy things without thinking.	1	2	3	4	5
IB3	I ended up spending more money than I originally set out to spend.	1	2	3	4	5
IB4	I buy things according to the way how I feel at that moment.	1	2	3	4	5
IB5	I bought more than what I had planned to buy.	1	2	3	4	5
IB6	I do not plan carefully on most of my purchase.	1	2	3	4	5
IB7	“Just do it” describes the way I buy things.	1	2	3	4	5
IB8	“I see it, I buy it” describes me.	1	2	3	4	5
IB9	“Buy now, think about it later” describes me.	1	2	3	4	5

☺ THANK YOU FOR YOUR PARTICIPATION AND HAVE A NICE DAY ☺

Appendix E: Other Relevant Materials

Appendix 3.1: Mean Monthly Household Consumption Expenditure by State

2014



Appendix 3.2: Median Monthly Household Income by State 2014

