

CONSUMPTION, ONLINE SOCIAL NETWORKING, AND SUBJECTIVE WELL-
BEING IN COSMOPOLITAN BANGKOK

Miss Nattaya Prapaipanich



จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
เป็นแฟ้มข้อมูลของนิสิตเจ้าของวิทยานิพนธ์ ที่ส่งผ่านทางบัณฑิตวิทยาลัย

The abstract and full text of theses from the academic year 2011 in Chulalongkorn University Intellectual Repository (CUIR)
are the thesis authors' files submitted through the University Graduate School.

A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Economics

Faculty of Economics

Chulalongkorn University

Academic Year 2014

Copyright of Chulalongkorn University

การบริโภค, เครื่องถ่ายสังคมออนไลน์, และความอยู่ดีมีสุขของคนในตัวเมืองกรุงเทพมหานคร



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาเศรษฐศาสตรดุษฎีบัณฑิต

สาขาวิชาเศรษฐศาสตร์

คณะเศรษฐศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2557

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

Thesis Title	CONSUMPTION, ONLINE SOCIAL NETWORKING, AND SUBJECTIVE WELL-BEING IN COSMOPOLITAN BANGKOK
By	Miss Nattaya Prapaipanich
Field of Study	Economics
Thesis Advisor	Assistant Professor Chantal Herberholz, Ph.D.
Thesis Co-Advisor	Associate Professor Nualnoi Treerat, Ph.D.

Accepted by the Faculty of Economics, Chulalongkorn University in
Partial Fulfillment of the Requirements for the Doctoral Degree

..... Dean of the Faculty of Economics
(Associate Professor Chayodom Sabhasri, Ph.D.)

THESIS COMMITTEE

..... Chairman
(Panutat Satchachai, Ph.D.)

..... Thesis Advisor
(Assistant Professor Chantal Herberholz, Ph.D.)

..... Thesis Co-Advisor
(Associate Professor Nualnoi Treerat, Ph.D.)

..... Examiner
(Associate Professor Worawet Suwanrada, Ph.D.)

..... Examiner
(Assistant Professor Wiraporn Pothisiri, Ph.D.)

..... External Examiner
(Sauwalak Kittiprapas, Ph.D.)

ฉัฐญา ประไพพานิช : การบริโภค,เครือข่ายสังคมออนไลน์,และความอยู่ดีมีสุขของคน
ใน ตัว เมือง กรุงเทพมหานคร (CONSUMPTION, ONLINE SOCIAL
NETWORKING, AND SUBJECTIVE WELL-BEING IN COSMOPOLITAN
BANGKOK) อ.ที่ปริกษาวิทยานิพนธ์หลัก: ศศ. ดร.ชันทาล แสร์เบอร์โฮลส์, อ.ที่
ปริกษาวิทยานิพนธ์ร่วม: รศ. ดร.นวลน้อย ตรีรัตน์, 297 หน้า.

วิทยานิพนธ์นี้ศึกษาปัจจัยที่ส่งผลต่อความอยู่ดีมีสุขเชิงอัตวิสัย โดยมุ่งเน้นประเภทของ
การบริโภคซึ่งรวมถึงสินค้าวัตถุนิยม สินค้าสนทนากการ และสินค้าเครือข่ายสังคมออนไลน์ จาก
การเปลี่ยนแปลงทางสังคมเป็นยุคดิจิทัลในปัจจุบันประเภทของมิตรภาพโดยเฉพาะอย่างยิ่งเพื่อน
เสมือนที่คุยผ่านทางอินเทอร์เน็ตและไม่เคยพบเจอกันในชีวิตจริงจึงเป็นอีกหนึ่งปัจจัยของการศึกษา
นี้ นอกเหนือจากนั้นยังได้นำความรู้สึกมีหนี้สินซึ่งเกิดจากการซื้อสินค้าสังคมออนไลน์มาศึกษาอีก
ด้วย การศึกษานี้ใช้ข้อมูลตัดขวางจากการสำรวจในกรุงเทพมหานคร จำนวนตัวอย่าง 500 คน
ระหว่างเดือนกุมภาพันธ์และมีนาคม 2558 การวิเคราะห์ความอยู่ดีมีสุขเชิงอัตวิสัยใช้สมการถดถอย
ด้วยวิธีกำลังสองน้อยที่สุด (ordinary least squares, OLS) ผลการศึกษาพบว่าการบริโภคสินค้า
ทั้ง 3 ชนิดส่งกระทบเชิงลบและมีนัยสำคัญทางสถิติต่อความอยู่ดีมีสุข โดยการบริโภคสินค้าวัตถุ
นิยมส่งผลกระทบเชิงลบมากที่สุด จำนวนของเพื่อนเสมือนยังส่งผลกระทบเชิงลบและมีนัยสำคัญ
ทางสถิติต่อความอยู่ดีมีสุข ความรู้สึกมีหนี้สินจากการซื้อสินค้าสังคมออนไลน์ส่งผลเชิงลบและมี
นัยสำคัญทางสถิติ การศึกษานี้แสดงโดยนัยให้ตระหนักว่าการบริโภคไม่ได้ส่งผลเชิงบวกต่อความ
อยู่ดีมีสุขโดยเฉพาะการบริโภคสินค้าวัตถุนิยมไม่ได้ทำให้มีความสุขมากขึ้น รัฐบาลอาจใช้การชัก
จูงเป็นเครื่องมือหลักเพื่อส่งอิทธิพลต่อพฤติกรรมของผู้บริโภคในการลดการใช้จ่ายและบริโภค
สินค้านี้ดังกล่าวให้น้อยลง

สาขาวิชา เศรษฐศาสตร์

ปีการศึกษา 2557

ลายมือชื่อนิติ
.....

ลายมือชื่อ อ.ที่ปริกษาหลัก
.....

ลายมือชื่อ อ.ที่ปริกษาร่วม
.....

5285908529 : MAJOR ECONOMICS

KEYWORDS: SUBJECTIVE WELL-BEING / MATERIAL GOODS / EXPERIENTIAL GOODS / ONLINE SOCIAL NETWORK GOODS

NATTAYA PRAPAIPANICH: CONSUMPTION, ONLINE SOCIAL NETWORKING, AND SUBJECTIVE WELL-BEING IN COSMOPOLITAN BANGKOK. ADVISOR: ASST. PROF. CHANTAL HERBERHOLZ, Ph.D., CO-ADVISOR: ASSOC. PROF. NUALNOI TREERAT, Ph.D., 297 pp.

This thesis studies the determinants of subjective well-being, with the main focus on types of consumption, including material, experiential, and online social network (OSN) goods. Friendship types, particularly virtual friends, are also examined, given social changes in today's digital age. In addition, the feeling of debt burden associated with OSN goods is explored. The study uses cross-sectional data from a survey in Bangkok (n=500) collected in February and March 2015. Subjective well-being functions are estimated by ordinary least squares (OLS). The results show that all consumption types are strongly and negatively associated with subjective well-being, with material goods purchased decreasing SWB the most. The number of virtual friends is significantly and negatively correlated with SWB. The feeling of debt burden from OSN goods purchased is negative and statistically significantly associated with SWB, but the magnitude is small though. The implication of the study is to raise awareness that purchasing goods, especially material goods, may not create greater happiness. Exhortation by the government to spend less money on these types of consumption goods may be one tool to influence behaviour.

Field of Study: Economics

Academic Year: 2014

Student's Signature

Advisor's Signature

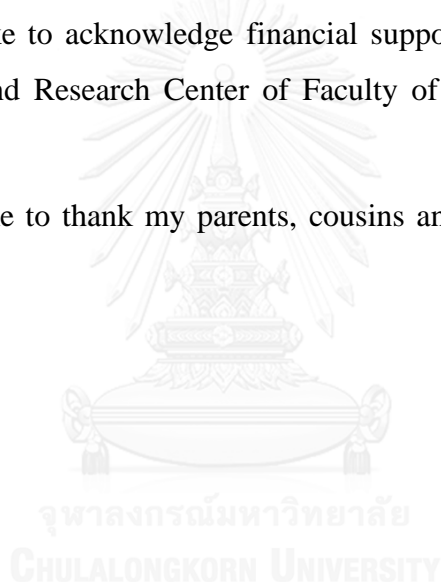
Co-Advisor's Signature

ACKNOWLEDGEMENTS

I am very grateful to my adviser Asst. Prof. Chantal Herberholz, Ph.D. This thesis would never have been completed without her guidance and advice. Her support has been greatly appreciated. I am also thankful to my co-adviser Assoc. Prof. Nualnoi Treerat, Ph.D. whose advice has assisted considerably in the completion of this thesis. My work has also benefited from the comments of Panutat Satchachai, Ph.D, Assoc.Prof. Worawet Suwanrada, Ph.D., Asst. Prof. Wiraporn Pothisiri, Ph.D., and Sauwalak Kittiprapas, Ph.D.

I would like to acknowledge financial support from the Ph.D. program, Graduate school, and Research Center of Faculty of Economics, Chulalongkorn University.

I would like to thank my parents, cousins and friends for their help and encouragement.



	Page
2.2.3.1.2 Age ²	29
2.2.3.1.3 Health.....	29
2.2.3.1.4 Employment.....	29
2.2.3.1.5 Gender.....	30
2.2.3.1.6 Education	31
2.2.3.1.7 Ethnicity.....	31
2.2.3.1.8 Personality	32
2.2.3.1.9 Income	33
2.2.3.2 Consumption	34
2.2.3.2.1 Material goods	34
2.2.3.2.2 Experiential goods	34
2.2.3.2.3 Online social networking (OSN)	36
2.2.3.3 Social Factors	39
2.2.3.3.1 Marital status	39
2.2.3.3.2 Children	40
2.2.3.3.3 Friendship	40
2.2.3.3.4 Neighborhood effect	42
2.2.3.4 Debt and Feeling debt burdened.....	43
2.2.3.5 Psychological processes	44
2.2.3.5.1 Social Comparison or “Relative Hypothesis”	45
2.2.3.5.2 Adaptation Theory or “Hedonic Treadmill”	46
2.2.3.5.3 Aspiration Theory or “Satisfaction Treadmill”	47
2.2.3.6 Satisfaction with the domains-of-life	47
2.2.4 Conclusion on Literature Review	48
2.3 Methodology.....	49
2.3.1 Conceptual framework	49
2.3.2 Model.....	58
2.3.2.1 Justification for the inclusion of independent variables	61
2.3.2.2 Diagnostic testing	71

	Page
2.3.3 The structure of the questionnaires	72
2.3.4 Sampling Methods.....	74
2.3.4.1 Target Population	74
2.3.4.2 Sample	77
2.3.4.3 Fieldwork Assistant.....	82
2.3.4.4 Ethical Consideration	82
2.3.4.5 Pilot survey results	83
2.4 Descriptive Statistics	86
2.4.1 Personal Factors	86
2.4.2 Social Factors	89
2.4.3 Consumption	91
2.4.3.1 The purchase of material, experiential, and OSN goods.....	92
2.4.3.2 The use of online social networking.....	93
2.4.4 Debt and Feeling debt burdened.....	98
2.4.5 Psychological Processes	99
2.4.6 Subjective well-being (SWB).....	102
2.5 Regression Results.....	106
2.5.1. Personal Factors	106
2.5.2 Social Factors	108
2.5.3 Types of Consumption	109
2.5.4 Psychological processes	113
2.5.5 Feeling debt burden (FDB).....	123
2.5.6 Robustness check	125
3 Consumption, Online Social Networking, and Subjective Well-being in Cosmopolitan Bangkok: A Sub-sample Analysis by Income Groups	128
3.1 Introduction.....	128
3.2 Literature review.....	128
3.3 Data and methods	132
3.4 Results.....	134

	Page
3.5 Conclusion	137
4 An exploratory study of the relationship between online social networking and individuals' subjective well-being: Pilot Analysis	139
4.1 Introduction.....	139
4.2 Literature review.....	141
4.3 Methodology.....	145
4.4 Results.....	148
4.5 Conclusion	154
5 Conclusions.....	155
6 Limitations and Extensions.....	159
REFERENCES	162
APPENDIX 1.....	173
Questionnaire.....	173
APPENDIX 2.....	190
Consumption.....	190
A2.1 Consumption Categories	190
A2.2 Grouping Consumption Items	193
Appendix 3.....	196
Objective Well-being Measurement	196
A3.1 Brainwaves	196
A3.2 The Day Reconstruction Method (DRM).....	197
A3.3 Experience sampling methods (ESM)	199
Appendix 4.....	203
A4.1 Subjective Well-being Measurement.....	203
A4.2 Subjective Well-being Assumption Test	205
Appendix 5.....	211
Sampling.....	211
A5.1 Probability sampling.....	211
A5.2 Bangkok Districts	213

	Page
A5.3 Pilot survey results	215
Appendix 6.....	216
Descriptive Statistics	216
A6.1 The purchase of material goods.....	216
A6.2 The purchase of experiential goods	217
A6.3 The purchase of online social network goods	218
A6.4 Debt, Feel burden Factors.....	219
Appendix 7.....	224
A Cross tabulation between types of consumption and key explanatory variables.....	224
Appendix 8.....	228
A8.1 Regression results: Each Types of Consumption (binary and price purchased).....	228
A8.2 Regression results: All Types of Consumption (binary and price purchased).....	229
A8.3 Regression results: Social Comparison.....	230
A8.4 Regression results: Adaptation	232
A8.5 Regression results: Adaptation (continuous)	234
A8.6 Regression results: Aspiration	236
A8.7 Regression results: Aspiration (continue).....	238
A8.8 Regression results:FDB on OSN goods and SWB	241
A8.9 Regression results:FDB on OSN goods and SWB(Continue 1).....	242
A8.10 Regression results:FDB on OSN goods and SWB(Continue 2).....	243
Appendix 9.....	245
A9.1 Ordered Probit: TMHI recoded.....	245
A9.2 Age sub-groups analysis (by 3 sub-groups).....	270
A9.3 Interaction terms	276
A9.4 Number of temples and movie for neighborhood effects	278
A9.5 Friends squared	279

	Page
Appendix 10.....	280
A10.1 Income Sub-group 1.....	280
A10.2 Income Sub-group 2.....	283
A10.3 Income Sub-group 3.....	286
A10.4 Income Sub-group 4.....	290
A10.5 Income Sub-group 5.....	293
VITA.....	297



LIST OF FIGURES

PAGE

Figure 2.1 Conceptual Framework50



LIST OF TABLES

Table 2.1 Table of explanatory variables.....	51
Table 2.2 Table of Models Explanation in Details	69
Table 2.3 Comparing the increase in cost of living by regions.....	76
Table 2.4 List of sampled EAs.....	81
Table 2.5 Pilot households' responses	84
Table 2.6 Individual and Household Income	89
Table 2.7 Summary of key personal factors	89
Table 2.8 Summary of key social factors.....	91
Table 2.9 The purchase of Mat, Exp, and OSN at price<1,000 to 10,000 baht.....	92
Table 2.10 Internet Mediums (in percent distribution)	94
Table 2.11 Purchase Reasons (in percent distribution).....	94
Table 2.12 The use of OSNs (in percent distribution)	95
Table 2.13 Unnecessary to meet in person (%)	96
Table 2.14 Internet Duration.....	97
Table 2.15 Percentage of debt and feel debt burdened	98
Table 2.16 Percentage of debt for Bangkok resident.....	99
Table 2.17 Social comparison Mat, Exp, and OSN <1,000-10,000 baht.....	100
Table 2.18 Adaptation Mat, Exp, and OSN <1,000-10,000 baht	100
Table 2.19 Aspiration Mat, Exp, and OSN <1000-10,000 baht	101
Table 2.20 SWB single-item scales (WVS).....	102
Table 2.21 SWB multi-item scales (TMHI)	102
Table 2.22 Blood Pressure References	103
Table 2.23 Item-scale analysis of the TMHI-15	104
Table 2.24 Correlations TMHI, WVS and Blood Pressure	105
Table 2.25 Regression results: Personal, Social factors and SWB	108
Table 2.26 Regression results: Each Types of Consumption and SWB	111

Table 2.27 Regression results: All Types of Consumption Simultaneous and SWB	112
Table 2.28 Regression results: Social Comparison.....	113
Table 2.29 Regression results: Adaptation	115
Table 2.30 Regression results: Adaptation (continue).....	117
Table 2.31 Regression results: Aspiration	119
Table 2.32 Regression results: Aspiration(Continue).....	121
Table 2.33 Regression results: FDB on OSN goods and SWB	123
Table 2.34 Regression results: FDB on OSN goods and SWB (Continue 1).....	123
Table 2.35 Regression results: FDB on OSN goods and SWB (Continue 2).....	124
Table 3.1 Summary of significant variable results for all models	136
Table 4.1 Summary of key personal factors	148
Table 4.2 Summary of key social factors.....	149
Table 4.3 Cross tab between global happiness and time spending internet per day..	150
Table 4.4 Regression results from personal and social factors.....	151
Table 4.5 Regression results from adding time spending on OSN	153

1. Introduction

Happiness relates to individuals daily life and naturally it is an ultimate goal of rational individuals to be happy. The pursuit of happiness has interested researchers from many different social scientific disciplines including economics and psychology. Happiness study originated from psychologists. Generally, psychologists aim to study how individuals behave, envisage, and perceive. They are also interested in methods to cope with life problems. Psychologists examine some determinants relating to individuals' mind and behavior such as socio-demographic, and personality. Economists incorporate the studies to include the effect of economic determinants such as income (Powdthavee 2009; Clark, Frijters, and Shields 2008; Oswald 2008; Peiro 2006; Rojas 2006; Di Tella, MacCulloch, and Oswald 2003; Helliwell 2003; Easterlin 1995), consumption (Noll and Weick 2014; Zimmermann 2014; Perez-Truglia 2013; Hudders and Pandelaere 2012; and Deleire and Kalil 2010 Aldridge 2005; Clarke and Islam 2004; Meyer and Sullivan 2003; Diener and Biswas-Diener 2002), and unemployment (Jappelli, Pagano, and Maggio 2008; Frey and Stutzer 2002 2007; Stutzer 2004; Di Tella, MacCulloch, and Oswald 2001; Winkelmann and Winkelmann 1998; Clark and Oswald 1994). In the field of Economics of Happiness, most economists have been interested in determinants of subjective well-being (SWB)¹ and use econometric techniques to explain and to analyze the relationship between SWB and its determinants.

In addition to mainstream economics, happiness economics therefore emerged from an alternative perspective. Happiness economists question issues such as “Does increasing gross domestic products (GDP) actually create greater happiness for a country's population?” Similar to mainstream economics, the study of happiness can be separated into individual and aggregate level. At the individual level, the study is usually conducted using primary data collected through a survey. At the aggregate

¹Throughout this dissertation, the term SWB is used interchangeably with happiness. A discussion of the terms is presented in Chapter 2.

level, secondary data is normally used to analyze the relationship. The latter mostly can be done in developed countries (Blanchflower and Oswald 2008; Frey and Stutzer 2007; Powdthavee 2005), where data are sufficient, but often not in developing countries such as Thailand. Therefore, primary data at individual level is used in this dissertation.

This dissertation focuses on studying the relationship between some determinants and SWB at the individual level. There are three papers included in this dissertation. Two papers are related to consumption, online social networking, and subjective well-being in cosmopolitan Bangkok, which are divided into a full-sample analysis by a whole sample (the first paper) and a sub sample analysis by income groups (the second paper). The second paper divides income into five sub groups to explore whether respondents in different income sub groups have different factors affecting their SWB. The third paper is an exploratory study of the relationship between online social networking and individuals' subjective well-being using data from the pilot survey. The difference between the pilot and the full sample analysis is that the pilot focuses on online social networking (OSN) whereas the full sample analysis focuses on online social networking goods, which are smart phones and tablets. The reason is because OSN goods and OSN are related in a sense that a current trend for OSN such as Facebook is to create mobile application to give their users instant and real time access from users' mobile devices. Exceedingly, the line between OSN goods and OSN is being blurred because applications in OSN goods use existing OSN to create native communities and promote discovery, and OSN takes advantage of mobile features and accessibility. Therefore, this dissertation is interested in both OSN and OSN goods.

The idea is to measure the self-reported SWB of individual, and then correlating those results with economic, social, and personal characteristics and behavior. Therefore, what factors contribute to happiness can be observed directly. One of the most important determinants that happiness economists concentrate on is income. For example, Easterlin (1995) studies the relationship between income and happiness mostly at aggregate level. He is the one who pioneers the Easterlin Paradox. Thereafter, there are several studies confirming the Easterlin Paradox that once individuals have

sufficient level of income, they are not happier when their income increases (Powdthavee 2009; Clark, Frijters, and Shields 2008; Oswald 2008; Peiro 2006; Di Tella, MacCulloch, and Oswald 2003; Helliwell 2003). Furthermore, a study by Gray, Kramanon, and Thapsuwan (2008) on happiness among Thai elderly reveals that a feeling of relative poverty compared to neighbors is the most important predictor of happiness.

With an aim to explore to a relatively new area of happiness economics, the relationship between individual happiness and economic determinants other than income, namely consumption types, is considered. The types of consumption do not gain as much investigation as income and little is known about their relationship with happiness, especially in a developing country context. Specifically material goods, experiential goods, and online social network (OSN) goods are thus the focus of this study. The reason why these consumption types are chosen to study is to provide awareness that purchasing goods may not create greater happiness, especially material goods. Experiential goods may provide happiness to individuals as well as online social network goods. Normally, social interaction creates individuals happier.

Nonetheless, there are some studies which recently consider the relationship between consumption and happiness such as Deleire and Kalil (2010); Meyer and Sullivan (2003), which are conducted in developed countries. Deleire and Kalil (2010), for example, examine the relationship between consumption and happiness for older Americans, over the age of 50. They employ secondary data from the Health and Retirement Study (HRS) and find that only leisure consumption has positively related with happiness. Their leisure consumption includes trips and vacations, tickets to movies, sports events, hobbies and performing arts, sports including gym membership and exercise equipment. They reveal that leisure consumption increases higher happiness level compared to spending on other types of consumption including food, personal care, and vehicles. One of the reasons can be because leisure consumption is related to social connections.

Mainstream economic theory views individuals as highly individualistic and they consume goods in the most efficient way to maximize their utility. Commonly accepted, consumption increases individual utility or well-being. However, consumption does not necessarily bring happiness. One of the main aspects is because there is a psychological process in purchasing. It may be arise from three main issues, (1) adaptation, (2) aspiration, and (3) social comparison. First, adaptation is that individuals are always able to adapt with their new experience and to keep the same level of satisfaction; individuals usually require something better to respond to their higher need (Layard 2005). Second, aspiration is that after some initial period of satisfaction of consuming new things, individuals then accustom to such things. They become to have no pleasure and bore with the things, which imply that happiness is determined by the gap between aspiration and achievement (Frey and Stutzer 2007). As a result, timing of the purchase also matters. It can be stated that purchasing a goods yesterday or a year ago can provide different level of individuals' happiness. Third, social comparison is that individuals usually compare themselves with others enhancing them to desire or needs to have more and consume more. One of the obvious observations is that individuals purchase some goods as symbols of worth in order to upgrade their status such as purchasing luxury brand name watches that others can admire, and contemporary clothes and bags that convey attractiveness. These are material goods; however, there are costs of materialism. A high level of material consumption may not only be necessary for happiness and well-being, but also can bring personal harm. For example, psychologists (Kasser 2003; Diener 1984) believe that placing a high value on material goods can lead individuals to have higher levels of anxiety, depression, and low life satisfaction. Beyond psychology, research aimed to consider this aspect from an economic point of view. In a theoretical study, Duesenberry (1949) introduces the concept of "Keeping Up with Joneses (KUJ)" and consumption externality. He states that the utility of an individual's level of consumption depends not only on the absolute level of consumption but also on the relative one. He also suggests that aggregate consumption increases but an individual's happiness does not increase because an individual's consumption affects another individual's well-being (Duesenberry 1949).

Online social network goods, if they are associated with debt, however, may not make individuals happy if they feel debt burdened. Too much debt may lead to reduced happiness. In general, individuals incur debt by consuming more than they earn. Individuals seek to smooth their consumption over time and highly indebted individuals are more financially fragile than individuals who are not; and that make those individuals more likely to failure to pay back their debt when affected by adverse shocks such as unemployment or interest rates increases (Jappelli, Pagano, and Maggio 2008). This raises an interesting issue to investigate, namely the relationship between purchasing and related debt and individuals' happiness. In recent times, mobile phone service providers, including Advanced Info Services Public Company Limited (AIS), Total Access Communication Public Company Limited (DTAC), and True Corporation Public Company Limited (True), initiated agreements with a range of banks, for example, Citibank, Siam Commercial Bank (SCB), KasikornBank (Kbank), and Krung Thai Bank (KTB), to offer zero percent interest installment loans for up to ten months. This can be for purchases of tablets and smart phones through a credit card of the agreeing banks. The campaign attracts many individuals. Because of the wants of possession, individuals take on debt. This may create stress and negative effect on subjective well-being when they are unable to meet the debt service obligation. Therefore, assessing the relationship between debt for online social network goods and subjective well-being is also studied. Why individuals willingly borrow to increase their social networks consumption even though this may reduce their subjective well-being from the increase in debt.

Drawing on and extending the empirical study of Deleire and Kalil (2010) and especially on their result that social connectedness increases SWB of individuals. In addition, Kasser (2003) supports that a happy life comes from spending less money and spending more time with family, friends and community. Bormans (2010) also believes that the most important determinant of a satisfied life is that social and individuals should spend their money on activities associated with other individuals.

In this dissertation, the three papers have interconnected contributions. Specifically, the main contribution of the full-sample analysis to the existing literatures

is the focus on friendship types, online social network goods related with debt. The contribution to the literature on the economics of happiness of this paper is the emphasis on the consumption of online social networking in the sense that it extends traditional social components to cover online social networking, namely through the use of tablets and smart phones. In doing so, it explores the new pattern of social relationships which have changed into the digital age. It considers not only friends in an usual form² but also friends in a digital form³. As a result, one of the objectives is to extend the focus of the social relationship to online social network goods as mentioned above. The subsample analysis by income groups also contribute to knowledge by exploring on factors affecting SWB in different income groups. In addition, the pilot paper extends further to focus on OSN. The reason is because at present the role of social network becomes individuals' way of living and many digital technologies such as smart phones and tablets have been developed rapidly in order to suit the growth of social network usage. Although former literatures use to focus on online social network, none of them recently captures the consumption of smart phone and tablet. Therefore, the study focuses on the usage of smart phone and tablet in order to explore the new pattern of economic consumption and also social relationships. This study expects that an objective takes on online social network goods can capture a new generation of individual consumption, economic decision as well as some factors associated with happiness.

In addition, the aim is to make individuals have greater happiness by providing evidence regarding what conditions generate and increase their subjective well-being. This study expects to provide some useful evidence for individuals to consider their personal consumption.

²Friends in usual form are friends whom are met in real life, face-to-face.

³Friends in digital form are friends whom are met in the digital world such as Facebook, Twitter, and not ever met in real life at any time.

2. Consumption, Online Social Networking, and Subjective Well-being in Cosmopolitan Bangkok: A Full-sample Analysis

Recent years, happiness economics began to investigate the influence of economic factors on subjective well-being. Emerging field in happiness economics explore the relationship between subjective well-being with aspects of life such as income, financial and job situation of individual. Many happiness literatures have pointed to the conclusion that only income does not substantially affect individual happiness. However, consumption and happiness has not yet been much explored especially in Thailand even though it is critical. Therefore, this is what this paper aims to focus.

2.1 Statement of the problem

Mainly four determinants of happiness are emphasized in this study, which are types of consumption, friendship types, debt/feeling debt burdened, and psychological processes. First, types of consumption include material, experiential, and OSN goods. Material goods might have negative relationship with SWB while experiential and OSN goods might have positive association with SWB. Second, friendship types comprise close, casual, and virtual friends. Only close friends might have a positive relationship with SWB. Third, having debt and feeling debt burdened as these relate to OSN goods might have a negative relationship with SWB. Fourth, psychological processes, which include social comparison, adaptation, and aspiration, are considered in this context. All the processes might be associated with the decrease in SWB. The anticipated results can be concluded in two possibilities. First, a positive relationship with SWB might be found for some types of consumption and friends. Second, a negative relationship with SWB might be revealed from having debt and feeling debt burdened (resulting from the purchase of OSN goods) and/or the psychological processes.

The main research question raised is “Does consumption increase an individual’s subjective well-being?” There are three sub-questions to allow answering the main research question. First, “Does consumption of material goods versus

experiential goods increase an individual's subjective well-being?" Second, "Do social relationships on online social networks increase an individual's subjective well-being?" Third, "How does incurred debt from online social network goods affect an individual's subjective well-being?"

2.1.1 Objectives of the Study

The main objective is to study if consumption of goods increases an individual's subjective well-being. There are three sub-objectives as follows.

2.1.1.1 To study if types of consumption matter for individuals' subjective well-being, the focus being on material goods and experiential goods.

2.1.1.2 To explore possible linkages between type of social relationships and individuals' subjective well-being, the focus being on online social network goods and friendship types.

2.1.1.3 To examine the relationship between debts associated with online social network goods and individuals' subjective well-being.

2.1.2 Scope of the Study

The linkages among subjective well-being and material goods, experiential goods, and online social networking are analyzed, using individual-level data. This study focuses on the types of consumption (and related debt) and their relationship with subjective well-being of individuals, who live in Bangkok. In addition, social relationships especially through OSN are examined.

The inclusion criteria are age and residential areas. Participants should be aged between 20 to 59 years old. The reason to select this group is to ensure relevance. Individuals, whose age is in this range, tend to have a huge impact on online social network goods, specifically tablets and smart phones; and these individuals are able to

apply for credit card and create debt. Further details are discussed section 2.3.4.1. The survey was conducted during February to March 2015 and contains 500 samples.

2.1.3 Benefits of the Study

Examining happiness in contemporary society in views of globalization and the rapid use of new and emerging technologies are aimed at. In particular, the study extends to consider online social network goods, namely tablets and smart phones since online social network goods have become an important part of lifestyle for many individuals nowadays. The author believes that these movements exert significant impact on the subjective well-being of individuals living today, and this study seeks to provide a better understanding of their purchasing consequences.

Generally, there are several researches concerned with the relationship between happiness and its determinants but most early studies and existing research primarily focus on developed countries. However, there are not many of happiness studies in developing countries including Thailand (Pantasen2011; Mongkol et al. 2009; Sachayansrisakul 2009; Bunnag 2008; Gray et al. 2008; Nitnitiphрут2007; Mills1997; Nilchaikovitet al. 1996).

In Thailand, there are some studies relating happiness issues to the concept of Buddhism and expand their interest into Buddhist Economics. However, there has not been an exploration of happiness studies on the relationship between type of consumption and happiness.

The central purpose of this study is to extend the context of happiness literatures, especially in Thailand, to relate types of consumption mainly on how particular purchases affect happiness. Also, it has an incentive to increase awareness of the consumption patterns on OSN of nowadays social changes into digital ages. As a result, it extends the concept of social relationship into OSN goods. In addition, the relationship of happiness and personal debt, which related to OSN goods that play the important role in lifestyle for Bangkok individuals these days, is attempted to consider in the study.

In addition, it hopes to be beneficial in term of assisting to support the national development plan. This is because since the Eighth National Economic and Social Development plan, Thailand has shifted from a growth-oriented approach to the new model of holistic individuals-centered development. The development involves both physical and mental well-being. In addition, the current National Economic and Social Development plan, the Eleventh plan (2012-2016) attempts to lead the country toward sustainable development and a happiness society.

2.1.4 Terms and Definitions

This section aims to discuss the definitions of specific terms. Material goods is introduced first, follows by experiential goods, online social network goods, and subjective well-being (SWB).

Material goods are defined as objects that are tangible and physical retained in one's possession (Van Boven 2005). They may be carried from one location to another. They occupy physical space and are not perishable (Nicolao, Irwin and Goodman 2009). Many individuals purchase material objects as carriers of meaning, typically serving as markers of social status (Aldridge 2005). Fashionable clothing, jewelry, stereos, fancy cars are examples of material goods (Nicolao, Irwin and Goodman 2009). Material goods is used as a "consumption of sign" to add value of oneself (Baudrillard 1993). Consumption of sign is used as a term to express one's investment in the material objects for a need for difference.

Experiential goods are defined as objects that are not tangible (Van Boven 2005). Individuals purchase to acquire a life experience which is an event or series of events that one encounters and has finite in time, for example, movies, amusement parks, and restaurant dinners (Van Boven 2005; Nicolao, Irwin and Goodman 2009). In addition, the experiential goods are creative consumption by referring to Scitovsky (1992).

Online social network (OSN) goods are an internet-capable mobile device, including smartphones, tablet computers, which provide prompt access to all kinds of

online activities such as social networking, reading news and communication such as emails (Salehanand Negahban 2013; Petrovcic et al. 2015). They are carried by human users and are a users' mode of access to online social networks wherever they are. Individuals can converse and connect with one another using the mobile devices, which give instant or real-time assess. These social networks are connected through mobile browsers and/or smartphone applications.

Subjective well-being (SWB) is defined as the ability to solve problems in life and the capability to improve oneself to have good quality of life. This includes the good mind set under these days social and environmental changed (Kahneman and Deaton 2010; Mongkol et al. 2009; Sachayansrisakul 2009). The term SWB is used interchangeably with happiness (Deleire and Kalil 2010; Diener 2009). The happiness definition is further discussed in literature review section 2.2.1.

2.2 Literature Review

The literature review focuses on papers, which have been published in international journals since 1990 both in the area of economics and psychology. The methods to search for the literature – key words “happiness”, “subjective well-being”, “consumption”, “material goods”, “experiential goods”, and “online social network goods” are used. The first, section 2.2.1, covers the common debates of happiness topic, which is a happiness definition. This section includes (1) explanation of the terms happiness and discussion of utility as used in Happiness Economics and Mainstream Economics, and (2) various happiness terms being used. It follows by the review of general happiness methodology in section 2.2.2. Happiness determinants are examined in section 2.2.3. The last, section 2.2.4, is a conclusion of the literature review.

2.2.1 Happiness Definitions

One of the common debates of this topic is the definition of the term “happiness”. The word happiness is often used in different meanings. To clarify the term, this section will begin with the review of the main connotations and select one of these to be used.

2.2.1.1 Explanation of utility terms as used in happiness economics and mainstream economics

The foremost debate is on the definition of happiness and utility. The concept of utility, which has carried in a long history, is discussed. The most prominent contributors of utility concept begin from Bentham, during 1748 to 1832. Bentham is recognized among philosophers as the originator of utilitarianism, and among economists as an ancestor of rational choice theory. He brings the concept of the happiness and incorporates it in his work. He suggests that the utility of individuals' actions is the sum of all such actions reflecting pleasures and pains, which represents happiness (Bentham 1789). In happiness economics, utility can be called as four terms, which are (1) decision utility or wantability (Kahneman, Wakker and Sarin 1997), (2) outcome utility (Frey, Benz and Stutzer 2004), (3) experienced utility (Kahneman, Wakker and Sarin 1997), and (4) procedural utility (Frey, Benz and Stutzer 2004; Powdthavee 2007). Each term is discussed in details in the following paragraphs.

Happiness economists cover utility in a broader area than mainstream economics, which denote utility as (1) decision utility or wantability (Kahneman, Wakker and Sarin 1997), or as (2) outcome utility (Frey, Benz and Stutzer 2004). The concept of these terms is similar to utility in mainstream economics, which is revealed preferences and based on observable choices made by individuals (Nicholson and Snyder 2010). Specifically, outcome utility is perceived as a result of benefits and costs related with the outcome (Frey, Benz and Stutzer 2004).

Utility from happiness economics point of view is a complementary of mainstream economics. Happiness economics incorporates experienced and procedural utility. Experienced utility is based on an individual's experiences or life events in the past (Powdthavee 2007). Experienced utility is also referred to hedonic experience or hedonic quality (Bentham 1789), which is the desirability of the experience of an outcome. Experienced utility can be reported in real time (instant utility) deriving from current subjective experience or in retrospective evaluations of past episodes (remembered utility). According to Kahneman, Wakker and Sarin (1997), mainstream economists generally assume experienced utility is equal to decision utility and

experienced utility happens at the same period of time as decision utility. On the other hand, Kahneman, Wakker and Sarin (1997) believe that experienced utility does not equate to decision utility and the extent to which decision utility corresponds to experienced utility varies across situations. This is supported by empirical research indicating that there are cases in which an individual chooses A over B though they are certain that the experience of B would have been more desirable than the experience of A. Additionally, they emphasize there is no plausible requirement for experience utility and decision utility to coincide and that if the two utilities differ in their meanings; they favor experienced utility.

Procedural utility is later on introduced and reviewed as a relevant concept for happiness economics. Powdthavee (2007) suggest that procedural utility is the utility derived from the mere act of engaging in an activity preferred by the individual. Frey, Benz and Stutzer (2004) explain the concept of procedural utility into their work. They suggest that procedural utility are the preferences about processes and conditions that lead to the outcomes. For example, from participating in the political decision-making process, an individual gains both procedural and outcome utility. Procedural utility achieves in terms of a feeling of actual participation and outcome utility benefits from the corresponding outcome (Frey, Benz and Stutzer 2004).

To conclude, the utility term for mainstream economists covers smaller aspects than the term used by happiness economists. For example, mainstream economics develops models where held all other determinants affecting a person's feelings of satisfaction as constant and are not specifically analyzed. However, the concept of utility in happiness economics covers more aspects of individuals than in mainstream economics. They incorporate the subjective notion of utility. As a result, the utility meaning applied in happiness economics is used as it is more appropriated.

2.2.1.2 Various happiness terms being used

The term of happiness has not been defined in a uniform way, which is sometimes combined into one and multiplicity of meanings. The happiness terms can be meant SWB, life satisfaction, positive emotions, a meaningful life, or a feeling of

contentment (Diener 2009). The main definitions of happiness are discussed in this section including SWB, experienced happiness, life satisfaction, and quality of life.

Bentham (1789) believes that happiness is the sum of pleasures and pains. Allardt (1976) suggests happiness is based on subjective perceptions and experiences. The magnitude of happiness is defined by the level to which individuals feel they are happy. The individuals themselves are the ones who utmost determine their own happiness. Diener (2009) states that subjective well-being is often called happiness, which is composed of positive feelings, negative feelings, and life satisfaction.

According to Kahneman and Deaton (2010), subjective well-being can be separated into two concepts, which are emotional well-being and life evaluation. For emotional well-being, they refer it to *“the emotional quality of an individual’s everyday experience – the frequency and intensity of experiences of joy, stress, sadness, anger, and affection that make one’s life pleasant or unpleasant, and sometimes it is called as hedonic well-being or experienced happiness”* (Kahneman and Deaton 2010, 1). For life evaluation, they refer it to *“the thoughts that individuals have about their life when they think about it”* (Kahneman and Deaton 2010, 1). By applying data from the Gallup-Healthways Well-Being Index (GHWBI), they suggest that the two aspects are different. In particular, they observe that health, care giving, loneliness, and smoking are more closely related to emotional well-being. However, income and education are associated with life evaluation. Agree by Diener (2009), he suggests that subjective well-being can be separated into two entities which are an affective and a cognitive element. First, an affective element includes momentary moods, which is an immediate situation to realize the feeling (Diener 2009). Second, a cognitive element is global judgments of life satisfaction (Diener 2009). According to Diener (1984), life satisfaction is the balanced satisfaction of an individual’s desires and goals.

Some believe that happiness is emotional experience. For example, Layard (2005) suggests that happiness is feeling good, enjoying life, feeling that it is wonderful; while not happiness is meant feeling bad and wishing for things. Kahneman, Wakker and Sarin (1997) also agree that happiness is the overall goodness or badness of an

individual's felt experience. According to Vermunt, Spaans and Zorge (1989), they believe that happiness is an emotional state which is sensitive to sudden mood changes.

As discussed above, emotional well-being and life evaluation are distinct (Kahneman and Deaton 2010). However, others believe that there are some correlations between emotional well-being and life evaluation. For example, Veenhoven (1988) reveals that one has a good mood does not always mean he has life satisfaction since mood is in a short term basis; however, these singularities are closely related as he emphasizes that the more satisfied one is with life, the more often one is in a good mood. Veenhoven (2000) discloses that happiness is similar to life satisfaction, which denotes the degree to which an individual judges the overall quality of one's life-as-a-whole favorably, which is subjective appreciation of life. In line with Lu (2001), he suggests that, as a part of cognitive, happiness is generally used in term of positive effect and absence of negative effect; and it can be defined as life satisfaction. Besides, Nozick (1990) suggests that happiness is similar to satisfaction. It contains three elements: a cognitive assumption, an evaluation, and a positive feeling based on the first two.

Happiness can also be regarded as quality of life. Veenhoven (2000) suggests that there are four qualities of life denoted by the word "happiness". This includes livability of the environment, life-ability of the person, utility of life, and satisfaction with life (Veenhoven 2000). First, the livability of the environment is good living conditions, which is condition for happiness and is similarly to quality-of-life or well-being; and is usually used by ecologists and sociologists. Second, life-ability of the person is how well an individual is able to cope with the problem of life. Veenhoven (2000) implies that it is a prerequisite condition for happiness. Life-ability is normally used by doctors and psychologists. Third, utility of life is referred as a good life. Life must be good for something more than itself or it can be regarded as a usefulness of life, which is used with ecological preservation and cultural development. Fourth, satisfaction with life is the quality in the eye of the beholder, which is subjective appreciation of life and enduring satisfaction with one's life -as-a-whole. Satisfaction with life is denoted as subjective well-being, life-satisfaction, and happiness.

Veenhoven (2000) prefers to use the satisfaction with life meaning to be a definition of his happiness term. Similar to Shin and Johnson (1978), happiness is regarded as a global assessment of a person's quality of life according to his chosen criteria.

In fact, happiness term for economists is not generally defined. For example, Easterlin (2003) takes the terms of happiness as mixed definitions of utility, well-being, life satisfaction, and welfare; and exploits them interchangeably. Deleire and Kalil (2010) use happiness term colloquial with subjective well-being. They refer it as individuals' cognitive and affective evaluations of their lives. However, the most useful concepts will be those that can express interesting relationships of happiness to other determinants. Happiness economists focus more on determinants affecting the SWB and empirically measured. It can be concluded that the definition of happiness is inconclusive. The next section, thus, will discuss on happiness measurement and determinants respectively.

2.2.2 General Happiness Methodology Review

There are literatures confirming that happiness is measurable and comparable with validity and reliability (Bentham 1789; Diener 1984; Easterlin 2003; Frey and Stutzer 2007; Layard 2005). For example, Bentham (1789) argues that utility is measurable in a cardinal quantity which can be compared between individuals. Layard (2005) also agrees that happiness can be measured and compared by asking individuals how they feel. This is because individuals are able to be aware their feeling. They smile when they are happy. Alternatively, they are frown or weep when they are sad. Layard (2005,13) also states that *“in fact most individuals find it easy to say how good they are feeling, and in social surveys such questions get very high response rates, much higher than the average survey question”*. Not many individuals answers “Don't know” how they feel in the surveys. This means that individuals do know their feeling and be aware of the validity of the survey question. This section discusses methods of happiness measurement leading empirical research on happiness possible.

2.2.2.1 Types of data collection

Psychologists enlighten economists about a number of different measurement methods for approximating SWB. There are some psychological literatures which study a well-defined correlation between SWB responses and various SWB measures such as Myers (1993), and Pavot and Diener (1993). According to them, it can be stated that SWB research does not aim to compare an individual's SWB at absolute levels but rather the genuinely aim of the study is to seek for the determinants that bring an individual happiness. To assess an individual's SWB, there are mainly two types of data collection, namely subjective and objective data.

2.2.2.1.1 Subjective Measurement

Happiness study is usually in a form of a survey. Most often researchers typically measure SWB by asking individuals how happy they are or how happy they are with a particular situation. This is a self-rated method. To gain validity and reliability of self-rating questions, Kahneman et al. (2004) suggest two popular methods. There are mainly two ways to reduce recall biases, which are the day reconstruction method (DRM) and experience sampling methods (ESM). For DRM, participants are systematically asked to reconstruct their activities and experiences of the preceding day with procedures of filling out a structured self-administered questionnaire. The respondents are asked in a set of questions to carefully split their past day into episodes and the questions assist them to reconsider carefully on how they felt at each time period. For ESM, it does not require participants to recall. Participants are prompted to fill out several brief questionnaires about their current activities and feelings by responding to alerts or delivery mechanisms. The brief questionnaires ask for example where they are, what they are doing, and how they feel several times throughout the day. There are two types of delivery mechanisms of this approach, which are audible and tactile. The alert of audible deliver through hearing such as a beeper while tactile delivers by feeling such as telephone vibrating alert. They both have drawbacks, for example, the audible mechanism may not be appropriate in a movie theater or meeting. For tactile, participants may not feel the alert. In addition, it is not possible to apply on a large scale sampling.

In general, survey respondents are asked to rate their own personal feeling of happiness or subjective well-being onto a numerical scale. Generally, there are two ways to set SWB survey questions which are single and multi-item scales.

- *Single-item happiness measures*

A single-item survey question is widely used in this field. Two types of single-item survey questions can be found, which are (1) imagination needed from respondents, and (2) respondents asked how they feel.

First, questions which imaginations needed from respondents are, for example, Gallup World Poll and Indonesia Family Life Survey (IFLS).

To assess individuals' experienced well-being or how well individuals' life is going, Gallup World Poll use a question called the “Ladder of Life”. The question asks respondents to imagine a ladder, where 0 represents the worst possible life and 10 the best possible life, and report the step of the ladder they feel they currently stand on (Gallup World Poll 2012).

In Indonesia, the Indonesia Family Life Survey (IFLS) contains Economic Welfare Question (EWQ). The EWQ is not a well-being measure as the life satisfaction or happiness question. However, it attempts to overview an individual’s perceived wealth and income. As a proxy for subjective economic welfare, the EWQ asks the respondents, “Please imagine a six-step ladder where on the bottom (the first step), stand the poorest individuals, and on the highest step (the sixth step), stand the richest individuals. On which step are you today?” (IFLS 2012).

Second, type of questions asking respondents how they feel are, for example, World Values Survey (WVS), General Social Surveys (GSS), Russian Longitudinal Monitoring Survey (RLMS), Eurobarometer Survey, British Household Panel Survey (BHPS) and Southern Africa Labour and Development Research Unit (SALDRU).

World Values Survey (WVS) asks respondents to assess happiness, “Taken all together, how happy would you say you are: very happy, rather happy, not very happy, and not at all happy?” This is a single-item survey because there is only a single question. The answers are scored from one to four points, ranging from 1 not at all happy to 4 very happy. To assess life satisfaction, WVS asks “All things considered, how satisfied are you with your life as a whole these days?” The answers are scored from one to ten points, ranging from 1 completely dissatisfied to 10 completely satisfied (WVS 2012).

The General Social Surveys (GSS) of the United States asks respondents, “Taken all together, how would you say things are these days - would you say that you are very happy, pretty happy, or not too happy?” The answers are scored from one to three points (GSS 2012).

Moreover, Russian Longitudinal Monitoring Survey (RLMS) has a question on life satisfaction. RLMS asks respondents, “To what extent are you satisfied with your life in general at the present time?” The answers are scored from one to four, ranging from 1 not at all satisfied to 4 fully satisfied (RLMS 2012).

Similarly to RLMS, Eurobarometer Survey also has the standard life satisfaction question. Euro barometer Survey asks respondents, “On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the life you lead?” The answers are scored from one to four, ranging from 1 very satisfied to 4 not at all satisfied (European Commission Eurobarometer Survey 2012).

The life satisfaction question of British Household Panel Survey (BHPS) uses a single-item survey question. The life satisfaction question asks respondents, “How dissatisfied or satisfied are you with your life overall?” The answers are 1 not satisfied at all to 7 completely satisfied (Institute for Social and Economic Research 2012).

In South Africa, Southern Africa Labour and Development Research Unit (SALDRU) survey has a single-item life satisfaction question at the household level scale, which is the Perceived Quality of Life (PQOL). It asks the respondents, “Taking everything into account, how satisfied is this household with the way it lives today?” The answers are scored from 1 very satisfied, 2 satisfied, 3 neither satisfied nor dissatisfied, 4 dissatisfied, and 5 very dissatisfied (SALDRU 2012).

The single item questions are used worldwide, which is because they have the advantage of simplicity and brevity in term of the ease of interpretation. By having single item questions, it helps reduce costs and the length of the survey. Different type of questions and response options among these single item questions are possible raised from different objectives and scopes of each survey being studied. For example, WVS asks about satisfaction, and GSS asks about happiness. RLMS, BHPS, SALDRU and Eurobarometer survey ask about life satisfaction.

- *Multiple-item happiness measures*

Multi-item scale questions have one attribute consisting of a number of questions. Each question has its own score, which can be summed up into a single value, to represent each attribute. A multi-item scale is usually used to characterize complex psychological surveys that unable to summarize in a single question, such as attitude of happiness and life satisfaction (Pavot and Diener 1993).

The General Health Questionnaire (GHQ) in the British Household Panel Survey (BHPS) is an example of using multiple-item survey questions to assess the individual’s subjective well-being. The GHQ has four types of item selection, including GHQ-60, GHQ-30, GHQ-28, and GHQ-12 (Goldberg 1972 in Department of Mental Health (DMH) 2012; Yusoff, Rahim and Yaacob 2010). The GHQ is used as a screening instrument to detect four main problems, which are unhappiness, anxiety, social impairment, and hypochondria (DMH 2012). With the ability to produce similar results of GHQ-12 compared to those of the longer versions, GHQ-12 is selected to be used widely. In addition, GHQ-12 has the goodness on its preciseness and shortness,

and it is more practical than the others (DMH 2012). Thus, the details of the GHQ-12 are presented. To assess SWB precisely, the GHQ-12 is separated into two sets. Half of the questions are asked for positive effect and the other half are asked for negative effect. For positive effect, the questions are: have you recently: a) been able to concentrate on whatever you are doing? b) felt that you were playing a useful part in things? c) felt capable of making decisions about things? d) been able to enjoy your normal day-to-day activities? e) been able to face up to problems? f) been feeling reasonably happy, all things considered? For negative effect, the questions are: have you recently: g) lost much sleep over worry? h) felt constantly under strain? i) felt you could not overcome your difficulties? j) been feeling unhappy or depressed? k) been losing confidence in yourself? l) been thinking of yourself as a worthless person? For the GHQ-12, an internal consistency is reported by using Cronbach's alpha. Their correlations range from 0.77 to 0.93 (Nilchaikovit, Sukying, and Silpakit 1996). Moreover, in term of the reliability of the GHQ-12, the questionnaire is split-half and test-retest correlations are carried out with good results.

In addition, the GHQs are translated into Thai version called as the Thai GHQs (Thai GHQ-60, Thai GHQ-30, Thai GHQ-28, and Thai GHQ-12) and used in Thai context. According to Nilchaikovit, Sukying, and Silpakit (1996), the Thai GHQs are translated by psychiatrists. They test the reliability and validity of the Thai GHQs by using a sample of 100 individuals who visit a mobile primary health care unit in Nongchok district, Bangkok. After the patients finish answering the questionnaire, psychiatrists use their psychiatric interview as a gold standard to compare the results. They find that the Thai GHQs have good reliability and validity. For reliability, internal consistencies (Cronbach's alpha) of the Thai GHQs (Thai GHQ-60, Thai GHQ-30, Thai GHQ-28, and Thai GHQ-12) are 0.96, 0.92, 0.91, and 0.84 respectively. For validity, their specificities are 84.4%, 89.7%, 88.2%, and 85.3% respectively. Their misclassification values are 15%, 13%, 14% and 17%, and sensitivities are 85.3%, 81.8%, 81.3%, and 78.1% respectively. Nilchaikovit, Sukying, and Silpakit (1996) conclude that the Thai GHQs can be used as an instrument to screen the mental health problem for Thai population.

Department of Mental Health, Ministry of Public Health Thailand also develops an indicator to assess Thai mental health. The mental health in this context means happy life, which results from the ability to solve problems in life and the capability to improve oneself to have good quality of life. This includes the good mind set under these days social and environmental changed (Mongkol et al. 2009). The Thai Mental Health Indicator (TMHI) is a questionnaire, which contains multi-item scale questions. The first TMHI's version is initiated by applying North East Thailand as their sampling. The achievement is the TMHI-66 and TMHI-15. The indicator is revised three years later, which five regions in Thailand are applied as a sampling. These include North, North East, Central, East, and South. The achievement is the TMHI-54 and TMHI-15. The latest TMHI is version 2007. This version is improved the TMHI's content validity and construct reliability, which has two versions. The full version contains TMHI-55 items and the short version contains TMHI-15 items. Both versions are ensured that they are compatible in their results. The substantial agreement is found between the full and the short version TMHI (Kappa statistics 0.66, $p < 0.001$). The TMHI's answers contain 4-point Likert's scale. The questionnaire asks respondents to consider their mental health in the past month. The scores for the TMHI-55 are divided into 3 groups: better than average mental health (179-220), average mental health (158-178), and below average mental health (≤ 157). The compatible TMHI-15 scores are also divided into 3 groups: better than average mental health (51-60), average mental health (44-50), and below average mental health (≤ 43).

The difference between GHQ (Thai version) and TMHI is that GHQ (Thai version) is adopted to be used in Thailand; however, the TMHI is created and aimed for Thai. Conversely to a single-item, a multi-item scale is more reliable and less volatile than a single-item question. For example, in a case that a respondent misinterprets one survey's question, it does not affect the whole evaluation. This is because there are other questions combining to represent the attribute. In consequence of this enhanced reliability, a multi-item scale is a better benchmark than a single-item scale (Powdthavee 2007).

It can be stated that almost all of happiness researches have applied self-rating questionnaire by asking personal feeling of happiness or subjective well-being. The criticisms regarding these SWB measures are concerned, for example, their validity and reliability. Therefore, some concerned issues of SWB measures and ways to enhance their validity and reliability are discussed accordingly.

Validity may refer to a case such that individuals do not give any opinion or they do not answer happiness questions from their true inner feelings. For example, individuals may overstate or understate their happiness level over an interviewer to maintain their self-esteem or because of ego-defense mechanisms (Powdthavee 2007).

According to Powdthavee (2007), one of the ways to make SWB questionnaire valid is to use multi-item scales questions. Several sub-questions can be used to represent one domain. Multi-item scales are less volatile than a single-item scale. For example, TMHI contains four domains which are mental state, mental capacity, mental quality, and supporting factor. Mental state comprises general well-being positive and negative effect. Mental capacity comprises confidence in coping. Mental quality comprises kindness and altruism, and self-esteem. Supporting factor comprises family support (Mongkol et al. 2009).

Reliability may refer to a concern on the measures undertaken can be reproduced and have right dimensions captured. For example, multicollinearity may cause lack of reliability.

To enhance reliability, the TMHI applies factor analysis which can improve each factor to have internal consistency.

In term of domains reliability of the TMHI, the Cronbach's alpha coefficient is used (Mongkol et al. 2009). The Cronbach's alpha coefficient of mental state equals to 0.86. Mental capacity equals to 0.83. Mental quality equals to 0.77. Supporting factor equals to 0.80. The results represent that the TMHI has good domains reliability as the Cronbach's alpha coefficient is closed to 1.

In addition, the empirical studies of Pavot and Diener (1993) support that a self-rating questionnaire is valid and reliable. They test the reliability of the self-rating with the respondents' friends and relatives. They reveal that friends and relatives or spouses report a person's happiness scores in the same ways as the person rates scores by one self. Pavot and Diener (1993) thus conclude that individuals can recognize their own feeling and be able to rate their feeling truthfully and appropriately. It can be concurred that empirical research on happiness possible.

To conclude, one of the good things of subjective measurement is that it can be applied with a large number of populations. Also, applying the subjective measurement to assess an individual's happiness has lower cost and it can be conducted simpler than objective methods. There are validity and reliability issues, which are needed to concern in empirical research on happiness. Applying the ways suggested might be able to enhance the validity and reliability of the empirical studies. The objective measurements are discussed as follows.

2.2.2.1.2 Objective Measurement

Psychologists disclose that there is a positive correlation between the self-reported well-being and various physical measures. For example, the time-span of "Duchenne" smile is a real smile from inside. It reveals the consistency that happy individuals are often smile during social interactions (Powdthavee 2005).

The way to measure happiness can be physically conducted by Neuro-science. There is positive correlation between SWB ratings and the physical measures of responses to stress such as heart rate and blood pressure, and the risk of getting coronary heart disease (Blanchflower and Oswald 2008). Happy persons are also unlikely to commit suicide (Frey and Stutzer 2007). The physical measures can be done through, for example, biomarkers, which include brainwaves and blood pressures. Because of the popularity of these two physical methods as regard in happiness filed, the following paragraphs thus discuss the two methods in details.

According to Layard (2005), brainwaves can be measured by putting electrodes over the scalp and reading the feelings of an individual in the electrical activity. This method is called as EEG measurements. It directly scans inside the brain to observe which side is active. The left front of the brain is sent electrical activity when an individual feels happy. On the other hand, the right front of the brain is sent the activity when an individual feels unhappy. The way its scan is similar to Magnetic Resonance Imaging (MRI) or Positron Emission Tomography (PET) scanner. The advantage of brainwave is that it can measure happiness in physical way by verifying the result of measurement as a shaded of light inside the brain. However, it has some disadvantages. Brain scanning captures mostly in short term positive and negative effects. Moreover, it is expensive and thus some may be unaffordable to use it.

According to Blanchflower and Oswald (2004), they suggest that differences in blood pressure are also associated with different level of reported happiness. They reveal that happier nations have a report of lower blood pressure problems. Blood pressure has advantages in that it is quick and the observer can know the result immediately after the test. Blood pressure is also cheaper than brainwaves. The results are comparable among a person. In addition, nowadays a digital blood pressure is available for individuals to use promptly and easily by themselves. Besides, the incorrect blood pressure reading is aware of. Some affects may make the read too high, for example, exercise, and use of nicotine, alcohol, or caffeine within 30 minutes prior to the test.

2.2.2.2 Longitudinal versus Cross-sectional Data

There are mainly two types of data generally applied to analyze subjective well-being, which are longitudinal and cross-sectional data. Longitudinal data is usually applied in developed countries, where data is available and accessible (Easterlin 1995; Powdthavee 2007; Hagerty and Veenhoven 2003; Blanchflower and Oswald 2008; and Frey and Stutzer 2007). The benefit of applying longitudinal data is realized. For example, it assists to prevent causality bias because of the repeated observation of the same individual over time.

However, a happiness study in developing countries, especially in Thailand, is an emerging field. Longitudinal data is hardly available. A cross sectional study is as a result selected to apply. A cross sectional study is useful in generating hypotheses for exploratory research when there is no secondary data available. There are many advantages of a cross-sectional data. A cross-section does not need to follow up. As a result, less resource and time are required to conduct a cross-sectional study, compared to a longitudinal study. Comparing consumption through cross sectional data is possible because prices can be presumed constant for all observations. However, it may be more difficult to compare consumption through longitudinal data, which is because the price levels do change through time due to inflation (Di Tella, MacCulloch, and Oswald 2001; Gray et al. 2008).

2.2.2.3. Empirical Methods for analyzing SWB

Many literatures use an ordinary least square (OLS) to analyze the relationship of SWB and other explanatory variables under the cardinality assumption (Noll and Weick 2014; Zimmermann 2014; Perez-Truglia 2013; Sabatini 2011; Linssen et al. 2011; Heffetz, 2011; Powdthavee 2009 2008 2007 2005; Frey and Stutzer 2007 2002; Ferrer-i-Carbonell and Frijters 2004) , which is given by

$$SWB_i = \alpha + X_i\beta + u_i$$

where

SWB_i denotes as subjective well-being,

X_i denotes as a vector of control variables

u_i denotes as an error term that subsumes the inability of individuals to communicate accurately their well-being levels

The additive form of the relationship between SWB and its determinants is assumed in most of the studies. However, Rojas (2006) argues with the restriction of the use of an additive relationship. He then investigates empirically on other forms of the relationships including a semi-logarithm relationship, a logarithm-logarithm relationship, and a constant elasticity of substitution (CES) relationship. After applying a database from Mexico, he reveals the result that an additive form provides a goodness of fit similar to the other specifications.

In addition, several studies use the ordered choice model under ordinal comparable assumption (Oswald and Zimmermann 2014; Sabatini 2011; Powdthavee 2009 2008 2007 2005; Oswald and Powdthavee 2006; Blanchflower and Oswald 2004b; Ferrer-i-Carbonell and Frijters 2004; Stutzer 2004; Frey and Stutzer 2002, which is given by

$$\Pr(SWB_i \leq y | Z_i; \phi) = \Psi(-Z_i' \phi) \quad y = 1, \dots, J-1$$

where

$\Pr(SWB_i)$ is the probability of SWB taking on a certain value, conditional on the independent variables, Z_i

ϕ is the corresponding coefficients vector

Ψ is cumulative density of the standard normal distribution

J is the number of outcomes that the dependent variable (SWB) can take on

Interpreting ordered response models is to determine marginal probability effects, which is how a marginal change in a regressor changes the distribution of the outcome variable, i.e. all the outcome probabilities. In general, the magnitude of these probability changes depends on the specific values of the i th observation's covariates.

After taking expectation with respect to Z , average marginal probability effects can be obtained and estimated consistently.

2.2.3 Happiness Determinants

Recently, there are increasing numbers of happiness literatures, which investigate the relationship between happiness and its determinants. The review of happiness determinants from the previous researches are discussed in this section. Moreover, it aims to explain each category in details, which includes personal factors, income, social relationship, consumption, debt, psychological processes, and satisfaction with the domains of life.

2.2.3.1 *Personal factors*

Personal factors are used in different terms. Some studies define personal factors as socio-demographic (Frey and Stutzer 2002; Thoits and Hewitt 2001), individual characteristics (Haller and Hadler 2006; Di Tella, Haisken-De New, and MacCulloch 2010), domains-of-life (van Praag, Frijters, and Ferrer-i-Carbonell 2003). Main variables in the personal factors include age, age², health, employment, gender, education, ethnicity and personality.

2.2.3.1.1 Age

According to many studies, age are grouped as personal factors (Frey and Stutzer 2002; Thoits and Hewitt 2001; Haller and Hadler 2006; Di Tella, Haisken-De New, and MacCulloch 2010; Powdthavee 2005; van Praag, Frijters, and Ferrer-i-Carbonell 2003; Luttmer 2004; Ferrer-i-Carbonell and Frijters 2004). However, some studies use age as one of independent variable (Luttmer 2004; Ferrer-i-Carbonell and Frijters 2004).

The result of “age” is consistent in many studies that it has negative relationship with SWB since older people are less healthy, and more likely to be living alone (Frey and Stutzer 2002; Blanchflower and Oswald 2004a; Ferrer-i-Carbonell and Gowdy 2007). In addition, Frey and Stutzer (2002) and Easterlin (2006) find that age has a U-

shaped pattern. The young and the old appear to be happier than the middle aged (between about 32 and 50 years), when other determinants are controlled.

2.2.3.1.2 Age²

The relationship between age and SWB may not be linear (Blanchflower and Oswald 2004a; Ferrer-i-Carbonell and Gowdy 2007). As a result, age² has been used. The result of “age²” is consistent in many studies that it has positive relationship with SWB (Blanchflower and Oswald 2004a; Ferrer-i-Carbonell and Gowdy 2007).

2.2.3.1.3 Health

According to many studies, health is in personal factors (Powdthavee 2005; Haller and Hadler 2006; van Praag et al. 2003). However, some studies do not group “health” into any set of factors (Graham, Eggers, and Sukhtankar 2004; Ferrer-i-Carbonell and Frijters 2004; Diener, Lucas, Oishi, and Suh 2002).

Studies consistently reveal a strong relationship between health and SWB (Diener 1984; Peiro 2006). They reveal that individuals who have poor health are negatively associated with SWB and good health has positive relationship.

Health questions can be asked in term of physical health or subjective health. Physical health is asked, for example, whether the respondent has recently been in hospital (Di Tella, Haisken-De New, and MacCulloch 2010).

For physical health, individuals who exercise are prone to have higher levels of SWB. In addition, Ferrer-i-Carbonell and Gowdy (2007) suggest that even simple types of exercise, such as gardening, also increase SWB.

2.2.3.1.4 Employment

According to many studies, employment is personal factors (Thoits and Hewitt 2001; Powdthavee 2005; Di Tella, Haisken-De New, and MacCulloch 2010). The term

employment is sometimes used as employment state, which includes military, self-employed or a public servant (Di Tella, Haisken-De New, and MacCulloch 2010).

Many studies consistently reveal that unemployment has a strong negative effect with SWB (Di Tella, MacCulloch, and Oswald 2001; Winkelmann and Winkelmann 1998; Frey and Stutzer 2002 2007; Stutzer 2004). They find that unemployed individuals report lower SWB scores than employed individuals about 5 to 15 percent since the unemployment may create depression and the loss of self-esteem. Clark and Oswald (1994) reveal that the cost of unemployed creates more harm to an individual than divorce or marital separation.

For hours worked, Powdthavee (2005) finds that part-time and the searching unemployed workers report lower well-being than those in full-time employment. The unemployment can lead to create poverty and crimes. However, by applying the US data (GSS) and International (ISSP) data, Blanchflower and Oswald (2004a) reveal that a full-time and a part-time worker report no differences in SWB. The possible reason is because employment can establish self-esteem (Clark and Oswald 1994).

2.2.3.1.5 Gender

According to many studies, gender is one of personal factors (Frey and Stutzer 2002; Thoits and Hewitt 2001; Powdthavee 2005; Haller and Hadler 2006).

Some studies reveal that the relationship between gender and SWB is inconclusive (Diener 2009; Frey and Stutzer 2002). This suggests that other correlates may also be more important than gender given that different studies have different control variables. The results can be positive, negative, or no difference. For example, Frey and Stutzer (2002) find that women are happier than men, but the difference is not significant. Diener (2009) agrees that there is little difference in global happiness or satisfaction is found between the genders. In Thailand, male is happier than female (Mongkol et al. 2009). Male seems to have a positive and forward-looking attitude.

2.2.3.1.6 Education

Many studies group an education in personal factors (Frey and Stutzer 2002; Thoits and Hewitt 2001; Powdthavee 2005; Haller and Hadler 2006; Di Tella, Haisken-De New, and MacCulloch 2010). However, some studies use “education” as one of independent variable (Luttmer 2004; Diener, Lucas, Oishi, and Suh 2002).

The relationship between education and SWB is inconclusive. The results are positive, negative, or not significance. Studies find that the influence of education on SWB has a positive relationship, which can be stated that individuals with higher education experience a happier life since it is important factor for individuals’ happiness. Education leads to success and obtain better career.(Frey and Stutzer 2002; Blanchflower and Oswald 2004b). On the other hand, Clark (2003a) reveals that education has negative relationship with SWB. Moreover, Stutzer (2004) exposes that the highest life satisfaction is associated with middle level of education. Flouri (2004) discloses that education does not provide any significant result with SWB.

Education can be asked in term of educational attainment such as high school achievement, vocational training or college degree (Di Tella, Haisken-De New, and MacCulloch 2010; NSO 2011) or it can be asked in term of years of education (Luttmer 2004).

2.2.3.1.7 Ethnicity

Ethnicity is one of an important SWB factors in Western countries. On the other hand, the ethnicity’s difference in Eastern countries is less. As a result, there are not many studies examine the relationship between ethnicity and SWB in Eastern countries. However, several studies investigate its relationship in the United States and find that Whites have higher SWB than American blacks (Frey and Stutzer 2002; Thoits and Hewitt 2001; Blanchflower and Oswald 2000).The reasons may be the lower status in society of the blacks, and the less opportunity to have education, skilled jobs, and high incomes.

2.2.3.1.8 Personality

For personality, there are number of psychology papers studying the relationship between personality and SWB. Some individuals have a genetic predisposition to be happy or not happy, which can be attributed to inborn individual differences in the nervous system. A common set of personality characteristics is the Big 5 personality items, which are neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience. Extraversion, for example, is related to the state of feeling more positive emotions while neuroticism is strongly related to the state of feeling more negative emotions (Layard 2005). For example, Bostic and Ptacek (2001) find that personality helps explaining the variability in SWB. Also, Gutierrez et al. (2005) believe that personality factor is a crucial determinant of SWB. A few economic papers investigate this issue especially in a large scale survey. Nevertheless, it can be concluded that personality tends to have impact on self-report SWB. Deneve and Copper (1998) find that neuroticism is the strongest predictor of life satisfaction, happiness, and negative affect. Positive affect is predicted equally well by extraversion and agreeableness. They suggest that certain personality traits such as extraversion and neuroticism represent enduring dispositions that directly lead to SWB. Other personality traits, such as agreeableness and conscientiousness, have an indirect or instrumental role in SWB. Agreeableness reflects how much individuals adjust their behavior to suit others, which expects positive effect with SWB. Conscientiousness is the personality trait of being honest and hardworking, which expected positive effect with SWB. Openness to experience is the personality trait of seeking new experience and intellectual pursuits, which is expected positive effect with SWB. These instrumental traits lead individuals to encounter specific life situations that in turn affect SWB. Nevertheless, it can be concluded that personality tends to have impact on self-report SWB. In line with Lucas and Diener (2001), they find that extraversion contributes to happiness whereas neuroticism can lead to unhappiness. Extraversion is considered most important for SWB.

2.2.3.1.9 Income

Income is the main issue debating on happiness economics. One of the key stimulations in the literature on income and happiness linkage has been Easterlin's article (1974). Applying longitudinal data, Easterlin (1974) is one of the first economists to study data over time on the reported level of happiness. He initiates the paradox of income growth in the United States and Europe over the last fifty years. The hypothesis underlying economic analysis that income does not always bring a proportional increase in happiness has occurred since then. To confirm his idea, Easterlin (1974) presents his found evidence by observing three main areas which are the United States, nine European countries, and Japan. Those countries provide the same result that income growth in a society does not increase happiness. He claims that it looks as if individuals in the U.S. yield "flat of the curve", with additional income obtaining a small amount extra happiness. Easterlin (1995) suggests that the time series evidence is weakly supportive of a happiness-income link. He concludes that the relationship between subjective well-being and income is curvilinear and he recognizes that income has diminishing marginal returns. Coincided with the theory of relative utility, Easterlin (1995) finds that happiness or subjective well-being changes directly with one's own income and oppositely with the incomes of others. Easterlin (1995) suggests that individuals receive utility from a comparison of themselves with others close to them which indicate happiness is relative. He means that generally individuals will consider themselves richer if their income increases significantly while other individuals' income still stays the same. On the other hand, if their income is still the same but other income increases extensively. They will feel poorer.

There are some happiness economists applying panel data and agree with Easterlin (1995), for example, Powdthavee (2005) and Diener and Biswas-Diener (2002). Powdthavee (2005) reveals that there is a positive and significant correlation between life satisfaction and income but the magnitude of the correlation is small. According to Diener and Biswas-Diener (2002), an individual's income has generally been related to happiness mostly at low levels of income. Once individuals have sufficient level of income, the association between money and happiness appears to be relatively weak.

In addition, Di Tella, MacCulloch, and Oswald (2003) argue with Easterlin's idea believing that after controlling for the characteristics of individuals and countries, happiness data behave in a predictable way. They reveal that reported well-being is correlated with changes in GDP since nations grow wealthier over the years. It means that an increase in GDP leads individuals to be happier.

It can be concluded that there is a positive relationship between income and SWB. However, the increase in SWB is diminishing returns to income. There are various studies on income and happiness as discussed above. The issue of the linkage between income and SWB is still open for a debate.

2.2.3.2 Consumption

Mainly there are three consumption categories interested.

2.2.3.2.1 Material goods

The increases in consumption may not tend to increase the happiness of those who consume. Kasser (2003) emphasizes that consumption does not seem to bring an individual happier or more fulfilled once individuals have sufficient level of consumption including food, clothing, housing and transportation.

Scitovsky (1992) introduces "defensive" consumption, which is "comfort goods" or "material goods", such as newer and fancier-looking sofa, nicer cars, and bigger houses to increase comfort. The gain from comfort is temporary and fades with time, which is a short term happiness which can be adapted though time, and a person simply continues need a comfort once one becomes familiarized to it.

2.2.3.2.2 Experiential goods

Scitovsky (1992) believes "creative" consumption is "pleasure goods", or "stimulation goods", or "relational goods", such as seeing beautiful scenery, meeting

good friends, listening to music, watching a movie. He advises that a person should spend money on “creative” consumption rather than “defensive” consumption because “pleasure goods” do not adapt though time, and can continually fascinate and provide satisfaction.

Deleire and Kalil (2010) find that leisure consumption is the only one component of consumption which has positive relationship to happiness. They also realize that the relationship between happiness and consumption of durables, charity, personal care, food, vehicles, and housing are not significant. According to Van Boven (2005), experiential purchases provide more happiness than material purchases because of the three reasons. The first reason is because experiences are more open to positive reinterpretation. The second reason is that experiences are less likely to disadvantageous comparisons. The final reason is since experiences are more prone to develop successful social relationships.

Many consumption components have latent property of both material and experiential goods. According to Van Boven (2005), the intention-based distinction allows individuals to decide for themselves whether purchases are experiential or material. The primary concern is the practical purpose of the purchase of goods and services.

The recent empirical evidence exploits a variety of methodologies such as the analysis of expenditure data (Charles et al., 2007; Heffetz 2011), stated preference (Carlsson et al., 2007), and laboratory experiments (Kross et al. 2013; Subrahmanyam et al. 2008; Fennis 2008). The expenditure data is in value terms (Charles et al. 2007; Heffetz 2011). Stated preference is a questionnaire-experimental method, which is based on a choice experiment in a sense that questionnaire respondents have to choose situation they prefer. To observe relative income and consumption from the situation chosen, thus dummies variables are applied. The relative consumption of leisure, cars and car safety are observed (Carlsson et al. 2007). According to laboratory experiments, Fennis (2008) supports the signaling model of conspicuous consumption that individuals assume submissive postures when confronted by a person wearing a shirt

with the logo of an expensive brand. On the other hand, those individuals assume less submissive postures when the shirt is digitally modified to have no logo or a logo from a cheap brand (Fennis 2008).

According to recent literatures, consumption expenditures are observed by two possibilities. First, total consumption expenditures are applied, for example, Noll and Weick (2014); Zimmermann (2014). Second, particular classes of consumption expenditure are observed, for example, Noll and Weick (2014); Zimmermann (2014); Perez-Truglia (2013); Hudders and Pandelaere (2012); and Deleire and Kalil (2010). Regarding to Noll and Weick (2014), they are interested in amount spent in 11 classes of goods and services. To study the relationship between consumption expenditures and SWB, they enter the expenditures on all these categories into the regression analysis. According to Zimmermann (2014), consumption categories interested include basic goods, conspicuous goods and experiential goods which are similarly to the study of Deleire and Kalil (2010). Both of the studies apply the amount of consumption expenditures interested into the regression analysis. Perez-Truglia (2013) studies the relationship between conspicuous consumption and SWB by applying linear regression. Consumption expenditure in different categories, for example, clothing, and food are all entered into the regression.

2.2.3.2.3 Online social networking (OSN)

OSN and OSN goods are related in a way that OSN goods is a mode of access through OSN. The main focus of this dissertation is on OSN goods and SWB but OSN goods are a relatively new dimension of social relationship and no one has been done this issue before as to the author's knowledge. As a result, OSN literatures are the only available sources.

For many individuals, an online social networking is ingrained in their everyday lives. For some individuals, internet usage is even surpassing time spent on traditional media such as television or print. Online social networking sites, for example, Twitter and Facebook provide a space for individuals to communicate, share, express

themselves, socialize, and connect with other individuals and form relationships (Steinfeld, Ellison, and Lampe 2008).

The study of the relationship between SWB and OSN is an emerging field. Therefore, methods to observe the relationship between SWB and OSN are in term of data collection, including survey (Kross et al. 2013; Steinfield, Ellison, and Lampe 2008; Subrahmanyam et al. 2008; Ellison, Steinfield, and Lampe 2007), in depth interview (Steinfeld, Ellison, and Lampe 2008), and experience-sampling (Kross et al. 2013; Subrahmanyam et al. 2008; Adamic and Adar 2005). To assess the relationship between OSN and SWB, Kross et al. (2013) apply SWLS, Beck Depression Inventory, Rosenberg Self-esteem Scale, and Social Provision Scale. In addition, Steinfield, Ellison, and Lampe (2008) and Ellison, Steinfield, and Lampe (2007) measure the relationship between OSN and SWB through the perceptions of the respondents (1) self-esteem (2) satisfaction with life. The self-esteem is observed by applying Rosenberg 7-item with 5-point Likert scale.

The results of the relationship between OSN and SWB can be positive or negative. Many studies find that there are some positive effects of OSN. For example, it increases communication with others, which have positive benefits on respondents' self-esteem and their reported satisfaction with life (Valkenburg, Peter, and Schouten 2006; Bargh and McKenna 2004). The reason is probably because one of the fundamental needs of individuals is to belong and to feel connected (Myers 1993; Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003). Online social networking is associated with not only increased communication but also involvement with family (Kraut et al. 2002). It also increases in perceived social support and decreases in perceived loneliness and depression (Shaw and Gant 2002). According to Subrahmanyam et al. (2008), the primarily reason of using online social networking is that it helps involved individuals from their offline lives. As a result, it makes individuals' lives meaningful and increases their subjective well-being (Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003; Myers 1993).

On the other hand, some studies reveal negative effects of online social networking (Kross et al. 2013; Mukesh and Gonçalves 2013). According to Kross et al. (2013), they use experience-sampling to observe the effect of Facebook on SWB. They examine SWB in two components, which are (1) moment-to-moment feeling, and (2) satisfaction with life. They reveal that the more time individuals spend on Facebook, the greater decline in both their moment-to-moment feeling and their life satisfaction (Kross et al. 2013). Mukesh and Gonçalves (2013) suggest that using Facebook has detrimental effects to SWB because it is associated with social comparison. Adding new friends on Facebook may make individuals feel good. However, after viewing friends' posts, their life satisfaction are diminished. One of the reasons is possibly because individuals might receive the increased ostentatious information by additional friends. In addition, they may not have perfect information about others. It means that they may only receive one-sided information, which is the ostentation (Mukesh and Gonçalves 2013).

Online social networking is one of the important determinants that affect SWB. The meaning of online social networking is discussed, follows by the importance of it and the reviews on research methods used.

Internet use such as Facebook plays a role in both the formation and maintenance of social relationship (Ellison, Steinfield, and Lampe 2007). It also builds relationship and creates new forms of social interaction through technologies such as wall posting, messaging, and tagging (Resnick 2001; Steinfield, Ellison, and Lampe 2008). The internet use assists to maintain relationships among the users cheaply and easily (Donath and Boyd 2004).

Some surveys are operated in laboratory (Kross et al. 2013; Subrahmanyam et al. 2008) and some are collected through online (Steinfield, Ellison, and Lampe 2008; Ellison, Steinfield, and Lampe 2007). To observe the intensity of FB use, there are mainly three questions asked in the questionnaires (Kross et al. 2013; Subrahmanyam et al. 2008). First, the question asks what activities respondents use FB for, e.g. edit profile, and/or write comments on others' wall. Second, motivation for using social

networking sites is observed, e.g. stay in touch with friends, flirt, meet new friends, share good and/or bad things with friends, obtain new information, or other reasons (e.g. chat, keep in touch with family, and facilitate schoolwork and/or business). Third, the question asks how respondents decide who to add or delete from their social networking sites, e.g. add anyone who sends a friend request, or only add a person if they are a face-to-face friend.

Regarding the literatures, there are three types of answers in the questionnaires (Kross et al. 2013; Subrahmanyam et al. 2008). First, they are check answers for activities they apply e.g. yes or no. Second, answers are ranked in order e.g. the frequency of activities. Third, open-ended responses e.g. ask why blocking someone from a profile, or how social networking site use helped solve a conflict or problem. The surveys are analyzed by applying cross-section and longitudinal analysis. For instance, Steinfield, Ellison, and Lampe conducted an online survey in 2007 and 2008 to study the relationship between OSN and SWB. They, as a result, are able to apply longitudinal analysis. To invite the participants for survey, it can be conducted through flyers posted (Kross et al. 2013) and email invitation (Steinfield, Ellison, and Lampe 2008; Ellison, Steinfield, and Lampe 2007). It can be seen that many literatures apply questionnaires to assess the relationship between SWB and social networking sites (Kross et al. 2013; Steinfield, Ellison, and Lampe 2008; Subrahmanyam et al. 2008; Ellison, Steinfield, and Lampe 2007).

2.2.3.3 Social Factors

One of the important determinants that affect SWB is social factors, which include marital status, children, social relationship, and neighborhood effects.

2.2.3.3.1 Marital status

Some studies categorize marital status in personal factors (Frey and Stutzer 2002; Thoits and Hewitt 2001; Powdthavee 2005; Di Tella, Haisken-De New, and MacCulloch 2010). Layard (2005) groups the marital status in “family relationships” factor and his marital status includes divorced, separated, widowed, never married, or

cohabiting. Di Tella, Haisken-De New, and MacCulloch (2010) define the marital state into married, divorced, separated or widowed.

The results of the relationship between marital status and SWB vary across studies. For example, the impact of marriage is found to be a positive relationship with level of happiness (Blanchflower and Oswald 2004a). In addition, stable and secure marriage and intimate relationship have positive relationship (Frey and Stutzer 2002). For separation, it has negative relationship with SWB and its SWB is lower than being divorced or widowed (Helliwell 2003).

2.2.3.3.2 Children

Children is in personal factors (Powdthavee 2005; Thoits and Hewitt 2001; Haller and Hadler 2006). Thoits and Hewitt (2001) focus on having one or more children living at home. However, some studies consider it as one independent variable. For example, Ferrer-i-Carbonell and Frijters (2004) study the methods for estimates determinants of happiness and “number of children in the household” is one of their determinants.

The relationship between children and SWB is inconclusive. The results can be positive, negative, or not significance. Children do not have a significant effect on happiness; however it has a positive and significant effect on life satisfaction (Haller and Hadler 2006). Children have negative effect to well-being if the family is poor (Alesina, Di Tella, and MacCulloch 2004) or if the child is unwell and requires more care than normal child (Marks, Lambert, and Choi 2002). For single parents (Frey and Stutzer 2000) and divorced mothers (Schoon, Hansson, and Salmela-Aro 2005), children also convey negative effect to well-being.

2.2.3.3.3 Friendship

Kross et al. 2013 reveal that the more time individuals spend on Facebook, the greater decline in both their moment-to-moment feeling and their life satisfaction. Mukesh and Gonçalves (2013) suggest that using Facebook has detrimental effects to

SWB because it is associated with social comparison. Adding new friends on Facebook may make individuals feel good. However, after viewing friends' posts, their life satisfaction are diminished. One of the reasons is possibly because individuals might receive the increased ostentatious information by additional friends. In addition, they may not have perfect information about others. It means that they may only receive one-sided information, which is the ostentation (Mukesh and Gonçalves 2013). Involving in social organization such as sports groups, professional societies, labor unions, and religious affiliation is one of an example of the interaction (Putnum 1995). An individual with social relationship includes the one who is in a society, where contains cultivation of trust, good will, fellowship, and participation in public activities (Pholphirul and Rukumnuaykit 2008).

The linkage between social relationship and SWB are discussed in term of (1) frequency of social interaction (Powdthavee 2008), (2) social connectedness (Deleire and Kalil 2010), (3) social embedding including (i). individual social relations, (ii). work participation and social status, and (iii). socio cultural integration of a person (Haller and Hadler 2006).

First, Powdthavee (2008) studies the relationships between life satisfaction (LS) and frequency of social interaction. For the frequency of social interaction, he measures by four categories which are (1). seeing friends or relatives less than once a month to never, (2). once or twice a month, (3). once or twice a week, and (4). on most days. He finds that social interaction significantly relates to LS and the relationship is positive.

Second, Deleire and Kalil (2010) emphasize the importance of social goods and social connectedness. Leisure consumption means consumption spending which relates to actual or perceived social connections, which is consumption spending on activities associated with the company of friends, relatives, and neighbors, for example, vacations, entertainment, and sports. They reveal that social connectedness, which is derived from leisure consumption, establishes higher level of happiness than other types of consumption.

Third, Haller and Hadler (2006) use regression analysis to examine the relationship between happiness and social factors. At the beginning, they use bivariate correlations between all independents and dependent variables. Then, all macro-level characteristics for the countries are added. They regard *micro social embedding* as micro social factors, which include (1) individual social relations, and (2) work participation and social status. *First*, individual social relations are, for example, married, divorced/ separated/ widowed, single, and having children/ no children, which might be contradict with some studies discussed prior in marital status section. *Second*, work participation and social status are, for example, employed, retired, housewife, student, unemployed, professional manual workers, farmer, army, never worked, financial satisfaction, subjective class, no chance of poverty, and poverty increased in last 10 years. *Socio cultural integration of a person* is, for example, religious, church attendance, and voluntary membership. Haller and Hadler (2006) suggest that micro social embedding and socio cultural integration of a person are highly relevant for happiness. Easterlin (2003) agrees that friendships, work, and employment status, also affect happiness.

2.2.3.3.4 Neighborhood effect

Social relationship relates to a sense of belonging (Bourdieu and Wacquant 1992; Putnum 1995). Interaction leads individuals to build communities and to commit themselves to each other (Bourdieu and Wacquant 1992; Putnum 1995; Pholphirul and Rukumnuaykit 2008). For community involvement and volunteering, both Helliwell (2003) and Helliwell and Putnam (2004) agree that at *aggregate* level average membership of community involvement and volunteering significantly increases SWB by analyzing of 49 countries from the World Value Survey (WVS). Helliwell (2003) also discloses that *individual* involvement in community and volunteering has a significant positive relationship between an individual membership and SWB, but Helliwell and Putnam (2004) disagree with the result.

According to Luttmer (2004), controlling for an individual's own income, higher earnings of neighbors is associated with lower levels of self-reported happiness.

There is suggestive evidence that the negative effect of increases in neighbors' earnings on own well-being is most likely caused by interpersonal preferences, that is, individuals having utility function that depend on relative consumption in addition to absolute consumption. An increase in neighbors' earnings and a similarly sized decrease in own income each lead to a reduction in happiness of about the same order of magnitude the paper offers suggestive evidence concerning the mechanism mediating the negative relationship between neighbors' earnings and happiness. He finds evidence that the results are stronger for individuals who socialize more with neighbors but not for those who socialize more with friends outside the neighborhood. The paper's findings indicate that interpersonal preferences that incorporate relative income concerns drive the negative association between neighbors' earnings and own well-being to address the concern that neighbors' earnings simply proxy for local housing prices, he examines whether the results are robust to including local housing price measures as controls and whether the results hold up when controlling for an individual's predicted real income based on education, age, and average national earnings for someone in the same industry and occupation as the respondent instead of the person's actual income neighbors' earnings still have a negative and significant effect on happiness. Material issues as their aspirations might be shaped by the spending patterns of those around them (Stutzer 2004). This finding therefore offers suggestive evidence that the estimated effect of neighbors' earnings on self-reported happiness is not simply due to a shift in the definition of happiness. If neighbors' consumption patterns shape one's aspirations, one might have expected that higher neighbors' earnings would significantly reduce one's satisfaction with material outcomes such as one's financial situation or one's home. Hence, apparently a significant part of the negative effect of neighbors' earnings on happiness runs through drivers of happiness not captured by the satisfaction questions.

2.2.3.4 Debt and Feeling debt burdened

An individual's borrowing and debt can increase consumption, but may not create happiness. In other word, an individual may not become happier by consuming more (Brown, Taylor and Price 2005). Debt can be measured by two alternative ways,

which are (1) the amount of debt outstanding (Brown, Taylor, and Price 2005) and (2) the feeling of debt burden (Gray, Kramanon, and Thapsuwan 2008).

Brown, Taylor and Price (2005) use British Household Panel data and reveal that levels of outstanding debt other than home mortgage debt significantly have negative effect on happiness, controlling for other variables such as age and other personal characteristics, savings and expected changes in financial conditions, and family income. Gray, Kramanon, and Thapsuwan (2008) argue, from the other point of views, that having debt does not always mean feeling financial strain and make an individual less happy. However, the ability to pay back the debt has to be taken into consideration. They reveal that being without debt or with debt but not feeling a big burden are strongly associated with greater happiness than being indebted and feeling a big-burden.

2.2.3.5 Psychological processes

This section discusses why consume more may not increase happiness. Regarding to Deleire and Kalil (2010), they reveal the results that material goods cannot buy happiness. Urbanization appears to be a one of the determinants in inducing change to materialism.

Kasser (2003) emphasizes that materialism may not create happiness to individuals. The desires and aspiration of having and consuming more of material goods drive individuals to work harder. Once possessing the goods, they have to persistently manage, maintain, upgrade, replace, and insure them. As a result, materialism generates damage and stress.

In addition to the substitution among working for money, family life and health, individuals make decisions assuming that more income, comfort, and positional goods will make them happier. There are other main reasons that consumption may not increase happiness. Individuals overlook to recognize of social comparison, adaptation, and the raise of their aspirations. These provide them feeling no happier than before. Consequently, most individuals spend a disproportionate amount of their lives working

for money, and sacrifice family life and health (Layard 2005). In addition, consumption may create negative effects on SWB because of these three main reasons that we might overlook. These are the aspects of social comparison, adaptation, and aspiration.

2.2.3.5.1 Social Comparison or “Relative Hypothesis”

There is a possibility that an individual concerns about his/her positions relative to others in the society, and not only about the absolute level. An individual usually compares himself/ herself with others, driving him/her to create desires or needs to have more and consume more. One of the obviously observed examples is that an individual purchases material goods as symbols of worth, in order to improve his/her status. A good example here is the purchase of luxury brand name watches that others may admire, or contemporary clothes and bags that convey the characteristics of attractiveness. This brings up the potential role of relative theory or the reference groups. According to Duesenberry (1949), the idiom of “Keeping up with the Joneses” (KUJ) is referred. The “KUJ” means that an individual consumes by considering interpersonal influences. Because an individual takes others’ consumption into account, he/she strives to match others in the levels of spending and social standing (Frank 1999; Gali 1994; Duesenberry 1949).

Relative consumption leads to a negative consumption externality. The term “consumption externality” is suggested by Scotchmer (2005); Frank (1999); Gali (1994), and Duesenberry (1949). It means that an individual makes a consumption decision without judging its impact on others. In other words, every time an individual raises his/her relative consumption; he/she lowers the relative consumption of other individuals. This is an external non-benefit or negative consumption externalities imposed on others. Where relative consumption matters, an increase of an individual consumption has no positive impact on SWB if negative consumption externalities exist. In the presence of consumption externalities, aggregate consumption increases, whereas an individual’s SWB does not. This is because an individual's consumption affects another individual's SWB.

2.2.3.5.2 Adaptation Theory or “Hedonic Treadmill”

Layard (2005) suggests that an individual is always able to adapt his/her preferences. Keeping the same level of satisfaction, an individual usually requires something better to respond to his/her higher needs. Frey and Stutzer (2007) reveal that after some initial period of satisfaction, which derived from the consumption of newly acquired possessions, an individual then accustoms to such things. He/she is, as a result, no longer able to experience pleasure and become bored with those possessions.

Kahneman and Tversky (2000) regard the adaptation theory as a “set-point” theory. The “set-point” theory suggests that inner characteristics, such as personality, are the things which decide an individual's SWB level. This means that the short term events, which come into individuals' lives, including bad health or increase in income, account for a very small percentage change in the SWB level. This suggests that an individual initially does react to the events, but that the corresponding feelings are adapted to the baseline level in the long run as time passes.

For consumption, an individual may raise his/her SWB at first when he/she purchases a new good. In the long run, however, his/her feeling is adjusted, resetting the level of satisfaction to his/her original set point. Importantly, adaptation may not operate equally for all goods (Wang, Novemsky and Dhar 2009). This means that not all consumer goods have the same adaptation level. The SWB from some goods lasts longer, for example, experiential goods compared to material goods (Van Boven 2005). These findings are supported by Van Boven (2005); Van Boven and Gilovich (2003), as well as Easterlin (2003). They agree that the satisfaction for experiential goods, such as music, literature, and art, are less likely to be adapted quickly, compared to other material goods, such as automobile. They concur that an individual will increase his/her SWB if the individual spends his/her money on experiences goods compared to material goods.

Few years later, Nicolao, Irwin and Goodman (2009) extend the study of Van Boven and Gilovich (2003) to examine not only the positive outcomes of experiential and material goods purchased but also their negative purchases outcomes. They find

that, for negative purchases, experiential goods lead to greater not happiness than material purchases. It means, for example, a bad vacation decreases happiness more than a disappointing automobile. This is because individuals adapt slower to experiential purchases than material purchases. As a result, making a negative choice can lead to lasting not happiness over time with the experience. They confirm the empirical test of Van Boven and Gilovich (2003) and agree in their experiment that their respondents receive more happiness from positive experiential purchases than from positive material purchases. As a result, it can be concluded that experiential purchases lead to greater in both happiness and none happiness (Nicolao et al. 2009).

2.2.3.5.3 Aspiration Theory or “Satisfaction Treadmill”

According to Kahneman, Wakker, and Sarin (1997), the aspiration theory is a theory based on the gap between aspiration and achievement. Aspiration level is the level that an individual would like to reach, but achievement level is the level an individual has already achieved. When there is a gap between the two, it would create the boundaries between satisfactory and unsatisfactory results. Frey and Stutzer (2002) study the effect of aspiration with an individual’s SWB. In doing so, they find that an individual is most likely to compare his/her current situation with his/her past or future expectations, and this creates the changing in aspiration level. An increase in aspirations level creates negative externalities in consumption. It will pollute or pose negative effects to an individual’s SWB.

2.2.3.6 *Satisfaction with the domains-of-life*

Satisfaction with the domains-of-life also contributes to individuals’ SWB (Rojas 2006). For example, van Praag et al. (2003) study the relationship of six domains-of-life (health, financial situation, job, housing, leisure, and environment) and satisfaction of life as a whole. Vermunt, Spaans, and Zorge (1989) study the relationship between satisfaction with life as a whole and satisfaction with the domains-of-life, relating to (1) primary groups, (2) transaction with the environment, and (3) less personal aspects of the environment. With regard to Vermunt, Spaans, and Zorge (1989), they use Dutch students as their sample and study on three dimensions. The

first dimension is satisfaction with domains related to important primary groups, including family, marriage, and friendship. The second dimension is satisfaction with domains related to transaction with the environment, including work, leisure time and educational level. The third dimension is satisfaction with domains related to less personal aspects of the environment, for example, transportation, and neighborhood. They find that the scores of satisfaction with the domains-of-life explain 50% of the variance of the scores of satisfaction with life as a whole. It represents that there is a fairly correlation between the two.

In addition, to determine the linearity between the domain satisfaction and satisfaction of life as a whole, Vermunt, Spaans, and Zorge (1989) compare the Pearson correlation coefficients and eta-coefficients among domain satisfaction and satisfaction with life as a whole scores. They find that almost all of the relationship among the domain satisfaction with life as a whole and the domain satisfaction are in a form of linear.

2.2.4 Conclusion on Literature Review

In the field of happiness research, the studies are mostly conducted empirically and they are most interested in happiness determinants. In terms of economic determinants, most of economists pay attention to the relationship between income and SWB.

Existing literatures appear to have different categorisation of variables and choice of reference category, depending on what they seek to find from the analyses. Therefore, a conclusion of control variable is difficult to observe and it is rather uncertain what should be controlled for in any SWB model. To summarize, the main determinants of SWB that are used in most studies are age, gender, marital status, education, health, employment, income; and some of the determinants perform robustly which are age, health, and employment.

As to the author's knowledge, happiness researches in Thailand have not yet incorporated consumption as a determinant of happiness and specifically not by types

of consumption namely material, experiential and online social network goods. This, as a result, may make some important determinants of economic behavior are neglected.

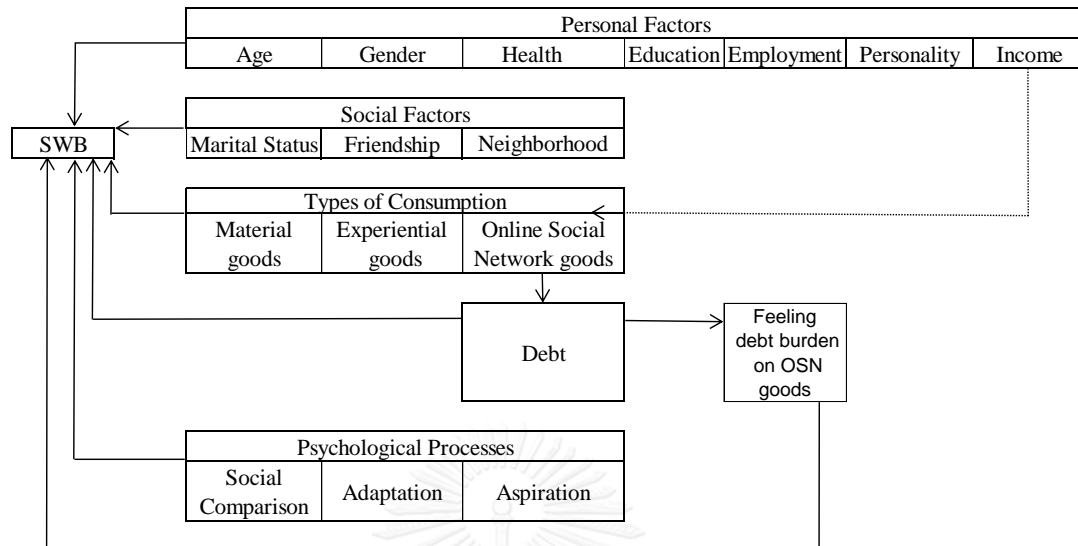
2.3 Methodology

This chapter aims to discuss the methods. The conceptual framework is presented in the first section, and the model in the second section. Because primary data are used, section 2.3.4 discusses sampling methods, which includes target population and sampling. In addition, the self-administered questionnaire is given in the appendix 1.

2.3.1 Conceptual framework

The conceptual framework shows the determinants, which may have a significant relationship with SWB. The economic determinants are emphasized, especially income, consumption types and debt. The determinants are categorized as personal factors, social factors, types of consumption, debt/ feeling debt burden (FDB), and psychological processes. Personal factors include age, gender, health, education, employment, personality, and income. Social factors include marital status, friendship, and neighborhood effect. Types of consumption are proxied by purchased material goods, experiential goods, and online social network goods. If income is insufficient to cover expenses, it may lead individuals to borrow and create debt. The interest here is in debt relating to the acquisition of OSN goods, and the feeling of debt burden. Psychological processes include social comparison, adaptation, and aspiration. The conceptual framework is shown below.

Figure 2.1 Conceptual Framework



Source: Author

There are mainly two reasons that particular determinants are selected from the literature reviews. First, they are selected if they are fundamental determinants, which determinants are referred to by a considerable number of papers, with mostly significant results. Second, they are selected because these determinants are the main objectives of this dissertation.

The conceptual framework shows the linkage of explanatory variables and SWB. The explanatory variables are grouped into five factors, which are personal factors, social factors, types of consumption, feeling debt burden, and psychological processes. Personal factors include age, gender, health, education, employment, personality and income. Many literatures (Powdthavee 2005; Diener and Biswas-Diener 2002; Easterlin 1995) confirm that income beyond such level may not create greater happiness and the association between money and happiness appears to be relatively weak. Social factors include marital status, friendship, and neighborhood. Types of consumption are material, experiential, OSN goods purchased. The feeling debt burden associated with OSN goods is interested to study since literatures (Gray, Kramanon, and Thapsuwan 2008) confirm that feeling debt burden has stronger

relationship than having debt itself. Psychological processes include social comparison, adaptation, and aspiration. Literature review assists to organize the grouping of the determinants.

The included determinants are explained in Table 2.1 below.

Table 2.1 Table of explanatory variables

Determinant	Indicator	Justification	Expected Sign	Questionnaire item
Personal Factor				
Age	Years	Many studies reveal significant and consistent results of age. Frey and Stutzer (2002) and Easterlin (2006) find that age has a U-shaped relationship.	Age (-),	2
Gender (Ref.:Female)	Dummy variable (1 if male and 0 if female)	Gender is a fundamental determinant in happiness studies. Almost all of the empirical studies include gender as one of the determinants (Frey and Stutzer 2002; Diener 2009).The results in the literature are ambiguous.	(+)/(-)	1
High blood pressure(Ref. : Others)	Dummy variable (1 if high blood pressure and 0 otherwise)	Health has a strong relationship with SWB. High blood pressure is used as a representative of poor health. Details are discussed in Section 2.3.2.1. Individuals who have poor health are negatively associated with SWB and good health has positive relationship (Diener 1984; Peiro 2006; Ferrer-i-Carbonell and Gowdy 2007).	(-)	11
Education	Years of educational attainment	Education is a fundamental determinant in happiness studies, which many studies refer to (Frey and Stutzer 2002; Blanchflower and Oswald 2004b; Clark 2003a; Stutzer 2004). Education is expected to be positively correlated with SWB. However, the effect would be smaller if income and health are controlled variables in the model because education is likely to be positively correlated with income and health as well. The results in the literature are ambiguous.	(+)/(-)	5
Employment	Dummy variable (1 if full-time employed and 0 otherwise)	Studies consistently reveal that unemployment has a strong negative effect with SWB (Di Tella, MacCulloch, and Oswald 2001; Winkelmann and Winkelmann 1998; Frey and Stutzer 2002 2007; Stutzer 2004).	(+)	6
Personality (Ref: others)	Dummy variable (1 if extraversion and 0 otherwise)	Extraversion is the personality trait of seeking fulfillment from sources outside the self or in community (expected positive effect).	(+)	55

Determinant	Indicator	Justification	Expected Sign	Questionnaire item
Income (Ref.: Less than 15,000 THB which is average monthly income of Bangkok individuals from NSO Socio-Economic Survey data)	Dummy variable (1 if above 15,000 THB and 0 otherwise)	An individual's income has generally been related to SWB (Powdthavee 2005; Diener and Biswas-Diener 2002). According to Diener and Biswas-Diener (2002), there is a positive relationship between income and SWB. However, the increase in SWB is diminishing returns to income.	(+)	7-8
<i>Social Factors</i>				
Married(Ref.: Others)	Dummy variable (1 if married and 0 if otherwise)	The literature shows that marriage has a positive relationship with SWB (Blanchflower and Oswald 2004a; Frey and Stutzer 2002; Helliwell 2003).	(+)	3
Friendship types	Number of friends	Socializing with family and friends provide a positive relationship with SWB (Deleire and Kalil 2010; Powdthavee 2008; Haller and Hadler 2006). Close friends are expected to have positive relationship with SWB (Helliwell 2006).	(+)/(-)	28-31
Neighborhood effects(Ref.: Bangkok Outer)	Dummy variable (1 if Bangkok inner and 0 if otherwise) and (1 if Bangkok middle and 0 if otherwise)	Bangkok inner are EAs 003, 020, 047, 067, 071, 110. Bangkok middle are EAs 007, 021, 129, 225, 226, 242, 244, and 285. Bangkok outer are EAs 004, 011, 060, 082, 130, 396. Inner Bangkok is expected to have lower SWB than individuals who live in outer Bangkok.	(-)	
<i>Types of Consumption</i>				
Material goods	Dummy variable (1 if purchase and 0 otherwise) and price-based dummies (1 if purchasing mat goods in price range e.g. P2 and 0 otherwise)	A material goods is one of the main objectives. The gain from material goods is temporary and fades with time (Zimmermann 2014; Perez-Truglia 2013; Hudders and Pandelaere 2012; Linssen 2011; Deleire and Kalil 2010; Kasser 2003; Scitovsky 1992).	(-)	32-37

Determinant	Indicator	Justification	Expected Sign	Questionnaire item
	Details are discussed in section 2.3.2.1.			
Experiential goods	Dummy variable (1 if purchase and 0 otherwise) and price-based dummies (1 if purchasing exp goods in price range e.g. P2 and 0 otherwise)	An experiential goods is the only one component of consumption, which has positive relationship to SWB (Zimmermann 2014; Deleire and Kalil 2010; Van Boven 2005).	(+)	38-43
Online social network goods	Dummy variable (1 if purchase and 0 otherwise) and price-based dummies (1 if purchasing osn goods in price range e.g. P2 and 0 otherwise)	A rapid technological development ⁴ facilitates the use of the internet capable mobile device, including smart phones, and tablets because they gain accessibility. These mobile devices provide on-the-go access to all kinds of online activities such as social networking, reading news and communication such as emails. An OSN goods is expected to have positive relationship to SWB.	(+)	44-49
Debt and Feeling Burden				
Debt (Ref. : having debt by yourself and other person in household)	Dummy variable (1 if having no debt and 0 otherwise)	Debt is one of the main objectives. Having debt may not always create low SWB (Gray, Kramanon, and Thapsuwan 2008; Brown, Taylor and Price 2005). Normally, debt have significantly negative effect on SWB but Gray, Kramanon, and Thapsuwan (2008) argue, from the other point of views, that having debt does not always	(+)/(-)	9

⁴According to a survey by Kasikorn Research Centre (KResearch), 50.4 % of consumers in Bangkok own smart phones and 56% of individuals answering the questionnaire, whose ages are between 20 to 24 years old or those who just start working, have smart phones in possession (Thailand Business News 2011). The data coincides with Ministry of Information and Communication Technology (MICT) that individuals in the age range between 15 to 24 years have the highest percentage of internet usage, representing 47.3 percent (MICT 2009). Nielsen's inaugural Southeast Asia Digital Consumer Report indicates that 36 % of Thai internet users access the web via mobile devices, but this ratio is considerable higher amongst younger demographic groups. The Thais are also Southeast Asia's biggest gamers, with 60% of internet users playing online games several times each week (Nation Multimedia Group 2011). In the future, tablets and smart phones market are expected to grow even stronger and wider upon the more advanced technology. A survey by the Nielsen Company finds that 47% of the survey participants who do not own a smart phone intend to purchase it in this year. In addition, the Nielsen Company reveals that 56 per cent of online Thais intend to access the internet via a mobile phone in the next 12 months, and 29 per cent intend to do so via another type of Internet-capable handheld device. The price of mobile devices is going down, and rich features such as high resolution and video functions will help to increase internet users and encourage them to access knowledge via mobile devices (Nation Multimedia Group 2011).

Determinant	Indicator	Justification	Expected Sign	Questionnaire item
	1 if having debt by yourself and 0 otherwise 1 if having debt by other person in household and 0 otherwise)	mean feeling financial strain and make an individual less happy because the feeling of debt burden is more important.		
Debt on material goods (ref. no)	(1 if yes)	Having debt may or may not increase SWB because the feeling of debt burden is more important.	(+)/(-)	34.2, 35.2,35.3
Debt on experiential goods (ref. no)	(1 if yes)		(+)/(-)	40.2,41.2, 41.3
Debt on Osn goods (ref. no)	(1 if yes)		(+)/(-)	46.2,47.2, 47.3
Feeling debt burden(Ref. : having debt and feeling seriously debt-burdened)	Dummy variable (1 if having some debt but feeling no debt burden and 0 otherwise 1 if having debt and feeling debt-burdened to some extent and 0 otherwise)	The feeling of debt burden is more important than having debt (Gray, Kramanon, and Thapsuwan 2008). They reveal that being without debt or with debt but not feeling a big burden are strongly associated with greater happiness than being indebted and feeling a big-burden. Since debt is not significant, the study uses the feeling debt burdened only for the analysis.	(-)	10
Feeling debt burden on material goods (ref. no)	(1 if yes)	Having debt and feeling debt burden are negative associated with SWB for all types of consumption.	(-)	36.2, 36.3
Feeling debt burden on experiential goods (ref. no)	(1 if yes)		(-)	42.2,42.3
Feeling debt burden on Osn goods (ref. no)	(1 if yes)		(-)	48.2,48.3
Psychological Processes				

Determinant	Indicator	Justification	Expected Sign	Questionnaire item
Social comparison (Ref: No)	Binary dummy variable (1 if yes and 0 otherwise)	There is possibility that individuals concern about their position relative to others in society (Charness and Grosskopf 2001; Oswald 1997). By comparing themselves with the others, individuals may decrease their SWB (Frank 1999; Gali 1994). The sign is expected to be negative.	(-)	32,38,44
Adaptation(Ref: short adaptation and (Ref: adaptation more than 1 year) (Van Boven 2005)	Binary dummy variable (1 if <1 wk and/or 1 week-1 month and 0 otherwise) and period dummy variables (1 if the respondents satisfy the goods less than 1 week/1 week to 1 month/1 month to 6 months/6 months to 1 year and 0 if otherwise).	After some initial period of satisfaction, which derived from the consumption of newly acquired possessions, an individual then accustoms to such things (Frey and Stutzer 2007; Van Boven 2005; Layard 2005; Kahneman and Tversky 2000). Because of the adaptation, individuals may decrease their SWB. Short adaptation is expected to have negative relationship with SWB.	(-)	33,39,45
Aspiration(Ref: not desire to purchase more)and (Ref: aspiration answer strongly agree)	Binary dummy variable (1 if agree and/or strongly agree with the desire of having more and 0 otherwise)and aspiration dummies (1 if respondents answer strongly disagree/ strongly agree/ neutral/	An individual is likely to compare his/her current situation with his/her past or future expectations (Layard 2005; Frey and Stutzer 2002). Because of the aspiration, individuals may decrease their SWB. Aspiration is expected to have negative relationship with SWB.	(-)	37,43,49

Determinant	Indicator	Justification	Expected Sign	Questionnaire item
	agree and 0 otherwise)			
Alternative dependent variables				
Thai Mental Health Indicator (TMHI-15)	Scores	A multi-item survey 3 groups: better than average mental health (51-60), average mental health (44-50), and below average mental health (≤ 43). 12 positive questions scored from 1 (not at all) to 4 (the most), and 3 negative questions scored from 1 (the most) to 4 (not at all).		13-27
World Value Survey (WVS) ⁵	4-point Likert scale	a single-item survey Answer ranked from 1 (very happy) to 4 (not at all happy)		12

Source: Author

Some determinants are excluded from the model. This can be explained by three reasons.

First, according to literature reviews, some determinants do not provide significant results and in addition their conclusions are ambiguous. These refer to some macro-factors such as type of work, commuting, welfare system and public insurance, degree of democracy, climate and the natural environment, safety and deprivation of the area, and urbanization (Dolan, Peasgood, and White 2008). These areas are required to have more examination. Community involvement also has inconclusive result (Helliwell 2003; Helliwell and Putnam 2004) because there has an inadequate evidence to draw a clear conclusion.

Second, these determinants are macro-level, such as inflation, income inequality, unemployment rates and Gross National Happiness (GNH).

The GNH comprises of four pillars of happiness, which are (1) fair socio-economic development (better education and health), (2) conservation and promotion

⁵ After diagnostic testing, the ordered probit model violates proportional odds assumption. As a result, WVS is not used.

of a vibrant culture, (3) environmental protection, and (4) good governance (GNH 2013).

In Thailand, the National Economic and Social Development Board (NESDB) introduced the Green and Happiness Society Index (GHI) in 2006. The objective of the GHI is to develop a necessary indicator for the Thai society to be able to live together in harmony (NESDB 2006). The GHI is based on three important fundamental concepts: 1) Sufficiency economy practice, 2) Human-based integrated development and 3) Vision of Thailand. Most happiness researches conducted in Thailand are related to two concepts, which are Sufficiency economy and Buddhist economics (Sachayansrisakul 2009; Pantasen 2011). In 1997, the concept of Sufficiency economy was introduced by His Majesty the King from his extensive experience after visiting remote villages. Applying Sufficiency economy will lead Thais to be happy because of the actualization of their potentials. Sufficiency economy assists Thais to rely their income on their local products. The aim of this philosophy is to create Thailand overall development by reducing disparities and enhancing economic growth, while ensuring sustainability. Since this is a micro-level study, sufficiency economy is not considered. Not only Sufficiency economy but also Buddhist Economics is prevalent in Thailand. The majority of Thailand's population is Buddhist. As a result, some studies are interested in Buddhist Economics. It can be stated that happiness studies can be generally divided into two dimensions, which are mundane and doctrinal. The aim of Buddhist Economics is doctrinal, which studies regarding moderation, reasonableness, and self-immunity (Pantasen 2011). The concept of Buddhist Economics, which is relatively intangible and difficult to value, is not investigated. However, this paper focuses on mundane specifically on economic determinants and considers mainly at individual level rather than aggregate level.

Third, only Bangkok is to be studied. Some determinants are found to depend on the differences of geographical locations. In Bangkok, most individuals consider themselves Thais (Sachayansrisakul 2009). Thus, ethnicity is not included in the model. In addition, the majority of Thais believe in Buddhism. The religious belief is not diversity. As a result, the religion variable is not included in the model.

2.3.2 Model

Two alternative proxies for measuring subjective well-being are aimed to use, namely the TMHI and global well-being (WVS). The TMHI's method of collective SWB is by summated scores. Positive items are scored from 1 (not at all) to 4 (the most) whereas negative items are scored reversely. On the other hand, the WVS's SWB ratings are an ordinal scale and categories based on ranking with respect to one another. Since there are two independent variables, two different regression methods are aimed to apply. Linear regression (OLS) is used for TMHI and ordered probit regression (OP) is aimed to use for WVS. Further details on TMHI's scores can be found in Section 2.3.3. They are applied hierarchical regression models, which are adopted from previous studies (Zimmermann 2014; Perez-Truglia 2013; Linssen et al. 2011; Sabatini 2011; Deleire and Kalil 2010; Powdthavee 2005). The independent variables are added to the regression on different steps. The significance levels associated with each independent variable are then able to observe.

First, SWB is regressed on personal factors.

$$SWB_i = X_i \beta + \varepsilon_i$$

where

i is an individual; $i = (1, \dots, 500)$

SWB_i is measured subjective well-being for individual i

X_i is a set of personal factors including age, gender, health, education, employment, personality, and income.

ε_i is an error term that subsumes the inability of human beings to communicate accurately the true well-being levels.

Second, SWB is regressed on personal and social factors.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + v_i$$

where

$Social_{ik}$ is social variables, where k = (married, friendship types, neighbour)

Third, SWB is regressed on personal, social factors and consumption.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + \sum \lambda_j Consumption_{ij} + \phi_i$$

where

$Consumption_{ij}$ is the purchased versus not purchased, different consumption categories entered the regression in terms of dummy variables, where j = (material, experiential, and OSN goods).

Fourth, feeling debt burden (FDB) variable is added to the model.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + \sum \lambda_j Consumption_{ij} + FDB_i \Theta + \sigma_i$$

where

FDB_i is the feeling of debt burden for individual i

Fifth, psychological processes are added to the model.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + \sum \lambda_j Consumption_{ij} + \sum \zeta_j Psy_p \Theta + \tau_i$$

where

Psy_p is the psychological processes entered the regression in level form, where p = (social comparison, adaptation, and aspiration).

Since the structure of SWB model is a qualitative dependent variable model in a form of ordered responses, an ordered probit or an ordered logit are appropriate choices of tools for estimating such ordered categorical data in a single-item survey such as WVS. The ordered logit is similar to the ordered probit approach. However, the ordered logit assumes a slightly different (fatter-tailed) distribution of the latent SWB in the population. In accordance with the literature, the ordered probit model is used for estimating an individual's SWB. For example, Winkelmann (2005) uses an ordered probit model to estimate the intra-family correlation of happiness. Tsou and Liu (2001) also apply an ordered probit model to identify the happiness determinants in Taiwan. It can be stated that an ordered probit model is commonly used in many researches worldwide such as Powdthavee (2005); Luttmer (2004); Dorn, Fischer, Kirchgassner, and Sousa-Poza (2007); Pholpirul and Rukumnuaykit (2008).

The ordered choice model⁶ is given by

$$\Pr(SWB_i \leq y | Z_i; \phi) = \Psi(-Z_i' \phi) \quad y = 1, \dots, J-1$$

where

$\Pr(SWB_i)$ is the probability of SWB taking on a certain value, conditional on the independent variables, Z_i

ϕ is the corresponding coefficients vector

Ψ is cumulative density of the standard normal distribution

J is the number of outcomes that the dependent variable (SWB) can take on.

⁶ The ordered probit is only used for the regressions in appendix 9 because after diagnostic testing the proportional odds assumption is violated.

The ordered probit coefficients can be used to interpret only the sign and the significance. The magnitude of the coefficient (ϕ) does not reveal the effect of the independent variables Z_i . Nevertheless, the marginal effect (ME) can be computed. ME are the partial effects of each explanatory variable on the probability that the observed dependent variable. For example, ME of married is 0.2215, which can be interpreted that married individuals have a 22% higher likelihood of being happy (Sabatini 2011).

2.3.2.1 Justification for the inclusion of independent variables

Variables constructions are clarified in this section. For personal factors, age is revealed by many studies that it has significant and consistent results. For example, Frey and Stutzer (2002) and Easterlin (2006) find that age has a U-shaped relationship. Age is measured in years which respondents' year born is asked. In happiness studies, gender is a fundamental determinant. Almost all of the empirical studies include gender as one of the determinants (Frey and Stutzer 2002; Diener 2009). However, the results from the literatures are ambiguous, which mean that in some literatures male has positive and significant relationship with SWB but for some literatures male has negative relationship. Gender is used by dummy variable, which is 1 if male and 0 if female. High blood pressure is used as a representative of poor health because it creates nervousness, difficulty to sleep or facial flushing, and also may lead to serious diseases, including stroke, heart disease and kidney failure (Brook 2002; Grundy and Sloggett 2003). Dummy variables are used, which is 1 if having high blood pressure and 0 if otherwise. Many studies refer to education as one of a fundamental determinant in happiness studies (Frey and Stutzer 2002; Blanchflower and Oswald 2004b; Clark 2003a; Stutzer 2004). Education is measured by number of years of formal education attainment. Studies consistently reveal that unemployment has a strong negative effect with SWB (Di Tella, MacCulloch, and Oswald 2001; Winkelmann and Winkelmann 1998; Frey and Stutzer 2002 2007; Stutzer 2004). According to the descriptive statistics discussed in Chapter 4, employment can be mainly grouped into full-time employed (63%) and others (37%). Dummy variables are used, which is 1 if full-time employment and 0 if otherwise. Extraversion personality dimension is used as a representative for personality because it is a certain personality traits that have endure dispositions which directly lead to SWB (Deneve and Copper 1998). Extraversion is the personality trait

of seeking fulfillment from sources outside the self or in community and expected to have positive effect. For an individual's income, it has generally been related to SWB (Powdthavee 2005; Diener and Biswas-Diener 2002). The results show that there is a positive relationship between income and SWB, however, the increase in SWB is diminishing returns to income (Diener and Biswas-Diener 2002). This paper categorizes income into below (poor) and above average (rich) by using data from 2013 NSO Socio-Economic Survey. Two thresholds are used. First, the threshold is below and above 15,000 baht per month since average monthly income of Bangkok individuals is 16,593 baht per month. Second, the alternative threshold given that the sample has higher income, the threshold is below and above 49,999 baht per month since the average monthly household income of Bangkok individuals is 49,191 baht per month. Regarding to a cross tabulation results, it leads to prefer the first income threshold than the alternative which the further details are discussed in section 2.4.3.1. Therefore, dummy variables are used which is 1 if above 15,000 THB (rich) and 0 otherwise.

For social factors, the literature shows that marriage has a positive and significant relationship with SWB (Blanchflower and Oswald 2004a; Frey and Stutzer 2002; Helliwell 2003). The descriptive statistics in Chapter 4 are examined in terms of managing marital status into married (45%) and others (55%). Therefore, dummy variables are used as 1 if married and 0 if otherwise. According to Deleire and Kalil (2010); Powdthavee (2008); Haller and Hadler (2006), socializing with family and friends provide a positive and significant relationship with SWB. Close friends are expected to have positive relationship with SWB (Helliwell 2006). Friendship is measured by number of friends the respondents have in each types which comprise close, casual, and virtual friends. Close friends are whom respondents can confide in, trust, and express secret. Casual friends are whom respondents cannot confide in or friends with benefits. Casual friends is opposite with close friends. Virtual friends are whom respondents meet in internet and may have never met in real life. Neighborhood effects are observed by area dummies. Bangkok is divided into 3 areas regarding to their radius from the center, which are Bangkok inner, middle, and outer. They are used

in term of dummy variables, which is 1 if the EAs are in Bangkok inner and 0 if otherwise; and 1 if Bangkok middle and 0 if otherwise.

For consumption factors, a material goods is one of the main objectives. The gain from material goods is temporary and fades with time and is expected to have negative relationship with SWB (Zimmermann 2014; Perez-Truglia 2013; Hudders and Pandelaere 2012; Linssen 2011; Deleire and Kalil 2010; Kasser 2003; Scitovsky 1992). An experiential goods is the only one component of consumption, which has positive relationship to SWB (Zimmermann 2014; Deleire and Kalil 2010; Van Boven 2005). An OSN goods is interested in this paper because of a rapid technological development, which facilitates the use of the internet capable mobile device, including smart phones, and tablets and that lead them to gain accessibility. These mobile devices provide on-the-go access to all kinds of online activities such as social networking, reading news and communication such as emails. An OSN goods is expected to have positive relationship to SWB.

The three consumption categories are material (Mat), experiential (Exp), and online social network (OSN) goods. Respondents are asked to consider the goods they purchased over the past 12 months to cover seasonal purchases such as Birthday and New Year. Considering the purchase over the past 12 months, this paper is aware that recall bias might still have. To analyze the relationship between SWB and the types of consumption, two scenarios are applied.

First, price dummies are used. According to the questionnaire, the three consumption goods (Mat, Exp, and OSN) are separated into 6 sub-categories by their prices. They are divided according to their prices from the lowest <1,000 baht to the highest >1,000,000 baht per piece. The price of consumption goods in Category 1 (P1) is <1,000 baht and refers as 1 if the respondents purchase and 0 if otherwise. Category 2 (P2) is 1,000-5,000 baht and refers as 1 if the respondents purchase and 0 if otherwise. Category 3 (P3) is 5,001-10,000 baht and refers as 1 if the respondents purchase and 0 if otherwise. Category 4 (P4) is 10,001-100,000 baht and refers as 1 if the respondents purchase and 0 if otherwise. Category 5 (P5) is 100,001-1,000,000 baht and refers as

1 if the respondents purchase and 0 if otherwise. Category 6 (P6) is >1,000,000 baht and refers as 1 if the respondents purchase and 0 if otherwise. The reason is because psychological processes, which are related to each type of consumption in different price level, might be associated with SWB differently. According to the results from descriptive statistics which will be further examined in Chapter 4, it can be seen that all of the questionnaire respondents purchase material goods which value is less than 1,000 baht per piece. On the other hand, none of the questionnaire respondents purchase experiential goods and OSN goods which value is more than 1,000,000 baht per piece. Hence, they are discarded from the regression analysis because they will not make any differences for estimating the SWB relationships.

Second, binary purchase variable is used which is the status of purchasing the goods or not. For material goods, if a respondent purchases any Mat goods at P2-P6 means purchase and P1 drops because everyone purchases. For experiential goods, if a respondent purchases any Exp goods at P1-P5 means purchase and P6 drops because no one purchases at price more than 1 million baht. For OSN goods, if a respondent purchases any OSN goods at P2-P5 means purchase, which P1 drops because no OSN goods sell at price less than 1,000 baht (P1 is not included in the questionnaire) and P6 drops because no one purchases at price more than 1 million baht.

Regarding to psychological processes, there is possibility that individuals concern about their position relative to others in society (Charness and Grosskopf 2001; Oswald 1997). By comparing themselves with the others, individuals may decrease their SWB (Frank 1999; Gali 1994). The sign is expected to be negative. To observe social comparison, respondents are asked whether they would like to purchase the goods in order to follow fashion/trend or not. Therefore, social comparison is binary purchase variable. Social comparison questions are separated for each consumption types and by their price. To analysis the relationship between SWB and social comparison, social comparison for material goods at prices (P2-P6) is considered, which the same way is applied with experiential goods (P1-P5) and OSN goods (P2-P5). For adaptation, after some initial period of satisfaction, which derived from the consumption of newly acquired possessions, an individual then accustoms to such

things (Frey and Stutzer 2007; Van Boven 2005; Layard 2005; Kahneman and Tversky 2000). Because of the adaptation, individuals may decrease their SWB. Short adaptation is expected to have negative relationship with SWB. Two scenarios are applied. According to the questionnaire, the respondents need to select one of the 5 adaptation levels which are less than 1 week (Adaptation1), 1 week to 1 month (Adaptation2), 1 month to 6 months (Adaptation3), 6 months to 1 year (Adaptation4), and more than 1 year (Adaptation5). First, period dummies are used, which refer as 1 if the respondents satisfy the goods less than 1 week/1 week to 1 month/1 month to 6 months/6 months to 1 year and 0 if otherwise. Second, binary purchase variable is applied as short and long adaptation. Short adaptation refers as 1 if respondents satisfy the goods less than 1 week and/or 1 week-1 month and 0 otherwise. Aspiration is included in the model because an individual is likely to compare his/her current situation with his/her past or future expectations (Layard 2005; Frey and Stutzer 2002). Because of the aspiration, individuals may decrease their SWB. Aspiration is expected to have negative relationship with SWB. Aspiration is applied in the same way as adaptation, which are measured by two scenarios. First, dummies variables are used which are 1 if respondents answer strongly disagree/ strongly agree/ neutral/ agree and 0 otherwise. Second, binary purchase variable is applied as 1 if respondents answer agree and/or strongly agree that they have aspiration to continue to purchase the goods.

One of the main objectives of this paper is the relationship between debt and SWB. Having debt may not always create low SWB (Gray, Kramanon, and Thapsuwan 2008; Brown, Taylor and Price 2005). Normally, debt have significantly negative effect on SWB but Gray, Kramanon, and Thapsuwan (2008) argue, from the other point of views, that having debt does not always mean feeling financial strain and make an individual less happy because the feeling of debt burden is more important. They reveal that being without debt or with debt but not feeling a big burden are strongly associated with greater happiness than being indebted and feeling a big-burden. For feeling debt burden, binary dummies variables are used which are 1 if respondents answer feeling debt burden on purchasing OSN goods and 0 otherwise. If the respondents purchase OSN goods by cash, they are included as 0.

Specifically, the 56 models are applied to answer the research questions as showed below.

Model 1	Personal Factors
Model 2	Personal + Social Factors
Model 3	Personal + Social Factors+ Mat purchased (binary; if purchase any Mat goods P2-P6 means purchase), P1 drops because everyone purchases.
Model 4	Personal + Social Factors+ Mat by prices (P2-P6), P1 drops because everyone purchases.
Model 5	Personal + Social Factors+ Exp purchased (binary; if purchase any Exp goods P1-P5 means purchase), P6 drops because no one purchases at price >1 million baht.
Model 6	Personal + Social Factors+ Exp by prices (P1-P5), P6 drops because no one purchases at price >1 million baht.
Model 7	Personal + Social Factors+ OSN purchased (binary; if purchase any OSN goods P2-P5 means purchase), P1 drops because no OSN goods sell <1,000 baht and P6 drop because no one buy at price >1 million baht.
Model 8	Personal + Social Factors+ OSN by prices (P2-P5), P1 drops because no OSN goods sell <1,000 baht and P6 drops because no one buy at price >1 million baht.
Model 9	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased
Model 10	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices
Model 11	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + Mat goods Social Comparison by prices (P2-P6)
Model 12	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices+ Mat goods Social Comparison by prices (P2-P6)
Model 13	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + Exp goods Social Comparison by prices (P1-P5)

Model 14	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices+ Exp goods Social Comparison by prices (P1-P5)
Model 15	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + OSN goods Social Comparison by prices (P2-P5)
Model 16	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices+ OSN goods Social Comparison by prices (P2-P5)
Model 17	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased +mat adaptation_s
Model 18	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + mat adaptation_s
Model 19	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + mat adaptation1-4
Model 20	Personal + Social Factors + Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + mat adaptation1-4
Model 21	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased +exp adaptation_s
Model 22	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + exp adaptation_s
Model 23	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + exp adaptation1-4
Model 24	Personal + Social Factors + Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + exp adaptation1-4
Model 25	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased +osn adaptation_s
Model 26	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + osn adaptation_s
Model 27	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + osn adaptation1-4
Model 28	Personal + Social Factors + Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + osn adaptation1-4

Model 29	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased +mat aspiration
Model 30	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + mat aspiration
Model 31	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + mat aspiration 1-4
Model 32	Personal + Social Factors + Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + mat aspiration 1-4
Model 33	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased +exp aspiration
Model 34	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + exp aspiration
Model 35	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + exp aspiration 1-4
Model 36	Personal + Social Factors + Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + exp aspiration 1-4
Model 37	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased +osn aspiration
Model 38	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + osn aspiration
Model 39	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + osn aspiration 1-4
Model 40	Personal + Social Factors + Mat purchased by prices + Exp purchased by prices + OSN purchased by prices + osn aspiration 1-4
Model 41	Personal + Social Factors+ matpurchased + osn_fdb_total
Model 42	Personal + Social Factors+ matpurchased + osn by price_fdb_ total
Model 43	Personal + Social Factors+ matpurchased by prices + osn_fdb_total
Model 44	Personal + Social Factors+ matpurchased by prices + osnby price_fdb_ total
Model 45	Personal + Social Factors+ expurchased + osn_fdb_total
Model 46	Personal + Social Factors+ expurchased + osn by price_fdb_ total

Model 47	Personal + Social Factors+ expurchased by prices + osn_fdb_total
Model 48	Personal + Social Factors+ expurchased by prices + osnby price_fdb_total
Model 49	Personal + Social Factors+ osnpurchased + osn_fdb_total
Model 50	Personal + Social Factors+ osnpurchased + osnby price_fdb_total
Model 51	Personal + Social Factors+ osnpurchased by prices + osn_fdb_total
Model 52	Personal + Social Factors+ osnpurchased by prices + osnby price_fdb_total
Model 53	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + osn_fdb_total
Model 54	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased + osnby price_fdb_total
Model 55	Personal + Social Factors+ matpurchased by prices+ expurchased by prices + osnpurchased by prices + osn_fdb_total
Model 56	Personal + Social Factors+ matpurchased by prices+ expurchased by prices + osnpurchased by prices + osn by price_fdb_total

Details of the models are further explained in Table 2.2 below.

Table 2.2 Table of Models Explanation in Details

Regression	Material goods (Mat)	Experiential goods (Exp)	Online Social Network (OSN) goods
Binary (as purchased/ not purchased)	1= if purchased at any of the prices P2-P6	1= if purchased at any price P1-P5	1= if purchased at any price P2-P5
	Social Comparison (Yes ¹ / No)	Social Comparison (Yes ¹ / No)	Social Comparison (Yes ¹ / No)
	Adaptation (Short ² /Long)	Adaptation (Short ² /Long)	Adaptation (Short ² /Long)
	Adaptation (5 periods ³) not applicable	Adaptation (5 periods ³) not applicable	Adaptation (5 periods ³) not applicable
	Aspiration (Still want to purchase ⁴ / Not)	Aspiration (Still want to purchase ⁴ / Not)	Aspiration (Still want to purchase ⁴ / Not)
	Aspiration (5 caterogies ⁵) not applicable	Aspiration (5 caterogies ⁵) not applicable	Aspiration (5 caterogies ⁵) not applicable

Regression	Material goods (Mat)	Experiential goods (Exp)	Online Social Network (OSN) goods
All prices (as purchased/ not purchased)	P2-P6	P1-P5	P2-P5
	Social Comparison (Yes ¹ / No)	Social Comparison (Yes ¹ / No)	Social Comparison (Yes ¹ / No)
	Adaptation (Short ² /Long)	Adaptation (Short ² /Long)	Adaptation (Short ² /Long)
	Adaptation (5 periods)	Adaptation (5 periods)	Adaptation (5 periods)
	Aspiration (Still want to purchase ⁴ / Not)	Aspiration (Still want to purchase ⁴ / Not)	Aspiration (Still want to purchase ⁴ / Not)
	Aspiration (5 categories)	Aspiration (5 categories)	Aspiration (5 categories)
Note:	Yes ¹ : if purchase because others have		
	Short ² : if answer either satisfy with the purchase < 1 week, or 1 week- 1 month		
	Adaptation (5 periods ³) not applicable: see example		
	Still want to purchase ⁴ : if answer either agree or strongly agree		
	Aspiration (5 caterogies ⁵) not applicable: see example		

Example	P2	P3	P4	P5	P6
Adaptation	<1 week	1 week-1 month	1 month-6 months	6 months-12 months	>12 months
If combined all prices as Mat purchased	If the person purchases mat goods at P2 answer 1 (<1 week), at P3 answer 2 (1 week-1 month), at P4 answer 3 (1 month-6 months), at P5 answer 4 (6 months-12 months) and at P6 answer 5 (>12 months), it is not applicable to conclude the adaptation level of this person in term of 5 periods.				
Short/Long	Short	short	long	long	long
Short ² : if answer either satisfy with the purchase < 1 week, or 1 week- 1 month	Conclude: This person has short adaptation speed for material goods.				

Example	P2	P3	P4	P5	P6
Aspiration	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
If combined all prices as Mat purchased	It is not applicable to conclude whether the person still wants to purchase mat goods in term of 5 categories because it cannot say yes or no if the person purchase mat goods at P2 answer 1 (strongly disagree), at P3 answer 2 (disagree), at P4 answer 3 (neutral), at P5 answer 4 (agree) and at P6 answer 5 (strongly agree).				
Still would like to purchase/ not	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Example	P2	P3	P4	P5	P6
Still want to purchase ⁴ : if answer either agree or strongly agree	Conclude: This person still has an aspiration to continue to purchase material goods.				

2.3.2.2 Diagnostic testing

Ordinary Least Square (OLS) are tested on 5 assumptions, which are outlier, linearity, normality of residuals, heteroskedasticity, and multicollinearity. Scatter plot is used to test the outlier and linearity. The graphical methods are shown that the assumptions are not violated. Kernel density plot is used to test normality of residuals and the results show that the model assumptions are not violated. Breusch-Pagan and Cook-Weisberg test is used to test heteroskedasticity. For multicollinearity, the correlation matrix is used to test the assumption and they are violated if their correlations are more than |0.4|. The results show that variables which have high correlations are age², children, and casual friends. Age and Age² are positively correlated with high blood pressure, and full time employment. The older might have higher blood pressure than the younger. Children and married, and virtual friends and casual friends are positive and high correlated. Individuals who are married may have children more than the others. Virtual friends might be considered as casual friends because individuals might not trust friends they never met in real life. Therefore, age², children, and casual friends are dropped from the model. Details of assumption tests are shown in appendix A4.2.

For ordered logistic, proportional odds assumption is tested, which is the distance between each category should be equivalent. Since the assumption of an ordered probit is the same as an ordered logistic regression and the test is only available for ordered logit, the ordered logit is applied to test the assumption. Some of the models used are violated the proportional odd assumption and some ordered logit estimates convergence are not achieved. The results show estimated coefficients questionable. Therefore, ordered probit is not used in this study.

In addition, factor analysis is then applied to verify the grouping after the data is collected. Using factor analysis seems appropriate to solve the problem of multicollinearity by combining correlated independent variables to construct a factor. It implies that the variables in the same factor are highly correlated, but the variables in a different group of factors are not correlated. Therefore, the number of variables is reduced. All variables in personal factors are applied. The KMO (Kaiser-Meyer-Olkin) is 0.425. According to Vanichbuncha (2010), the KMO is a measure of sampling adequacy in the factor and the KMO <0.5 can be interpreted that factor analysis is not suitable. Alternatively, the variance inflation factor (VIF) is used to check multicollinearity in OLS and finds that age and age² have VIF > 10, which can be concluded that they have high correlation with other independent variables (Vanichbuncha 2010). With the robustness check, excluding age from the regressions does not change the main results.

2.3.3 The structure of the questionnaires

The survey is conducted by self-administered questionnaire as the way individuals report their SWB is sensitive to context, threatening the validity and reliability of surveys.

To make a questionnaire more valid and reliable, both single- and multiple-item SWB questions are applied. According to the single-item measure (World Values Survey), respondents are asked to answer the question “Taken all together, how happy would you say you are: very happy, rather happy, not very happy, and not at all happy?” using a 4-point Likert scale. The answer is ranked from 1 (very happy) to 4 (not at all happy). Compared to other multi-item SWB constructs⁷, the TMHI is selected to be used because its suitability in Thai context with reliability and validity, and internal consistency among each question. With the ability to produce similar results of TMHI-15 compared to those of the longer versions (Mongkol et al. 2004), TMHI-15 is selected

⁷ The comparison among multiple-item scale questions are presented in Appendix 4, including PANAS, SWLS, Zuge, GHQ, TMHI, DRM, and ESM. Their characteristics and merits are also discussed.

to be used. According to the multi-item scales, the 15-item TMHI, an indicator of mental well-being, with 4 possible response options is used. TMHI-15 comprised 15 questions. 12 questions are positive and 3 questions are negative. Positive items are scored from 1 (not at all) to 4 (the most), while negative items are scored from 1 (the most) to 4 (not at all). A high score (51-60) means less mental distress and better mental health. A score of 44-50 means normal mental health. A low score (below ≤ 43) means more mental distress and worse mental health (Mongkol et al. 2004).

To increase validity, an objective measurement, which is digital blood pressure readings, is used. In addition, to make sure of the correct blood pressure reading, there are questions regarding exercise and the use of nicotine, alcohol, or caffeine within 30 minutes prior to the test included in the questionnaire.

To increase reliability of the questionnaire, questions relating the “Duchenne” smile and the frequency of smiles could be added to assess whether a person is a happy person. However, it is difficult to have a threshold of real smile and the frequency of smiles (Powdthavee 2005). As a result, the multi-item scale question in the form of TMHI is used.

To understand individuals, it is important to realize what individuals like, what makes them happy, and what they prefer to purchase. In line with Scotchmer (2005), Van Boven (2005), Van Boven and Gilovich (2003), Frank (1999); Gali (1994), and Duesenberry (1949), material goods are assumed social status goods. Individuals purchase these goods because of the seeking for prestige; power and social status.

As a result, the main focus is to consider the relationship between consumption and SWB at individual’s level. Through consumption, it can capture what is most worthwhile in individuals' lives with their consumption choices.

To clarify the characteristics of each consumption goods, examples of material goods, experiential goods, and online social network goods are provided at the end of the questionnaire. A list of material goods includes, for example, brand name and

fashionable products. A list of experiential goods includes, for example, movies, restaurant dinners, and travel. Online social network goods include communication products such as tablets and smart phones. In addition, the questionnaire has open ended questions for respondents to indicate their consumption goods.

Nevertheless, recall biases are taken into consideration. The advantages of DRM and ESM methods on the reduction of recall bias are well established; however, those methods cannot be applied. The main reasons are because many individuals may not willing to participate; they are time consuming and costly for both methods. As a result, to reduce recall problems, a short time frame is considered. Respondent are asked to recall their memory back on a maximum of a year (Van Boven 2005). Generally, purchasing a large and expensive item is easier for a respondent to recall the purchase, comparing to an expenditure on a small item.

2.3.4 Sampling Methods

Primary data is used since it explores into the new area of the SWB topic. The study uses cross-sectional data from a survey in Bangkok (n=500) collected in February and March 2015. Mainly, this section examines sampling designs which include target population and sample.

2.3.4.1 Target Population

In order to answer the research questions, Bangkok is selected because it has the highest consumption expenditure compared with other regions in Thailand, indicated by the highest percentage increase of monthly consumption expenditure. The target population is Thai individuals aged 20-59, who have lived in Bangkok. As the cohort effects of different age groups might occur, thus, the individuals are separated into subgroups after the data is collected. The subgroups are used to analyze in descriptive statistics section 2.4.3.2 (the use of OSNs) and Chapter5 (robustness check). According to Giddings et al. (2014), individuals in baby boomer generation are ages between 50 to 69 years, individuals in generation X are ages between 36 to 49 years and, individuals in generation Y are ages between 22 to 35 years. However, UN groups

generation Y for age between 15 to 34 years. As a result, the remaining ungrouped ages of 20 to 22 years are arranged into generation Y. Precisely, age is divided into 3 groups, which are (1) Generation Y are individuals whose age between 20 to 35 years, (2) Generation X are individuals whose age between 36 to 49 years, (3) Baby boomer are individuals whose age between 50 to 59 years.

On average, individuals in Bangkok spend the most 24,695 baht per month. Following by individuals in Southern and Central spend 15,040 and 14,959 baht per month. Individuals in Northeastern and Northern region have contiguous average monthly expenses of 10,905 and 10,496 baht per month respectively (NSO 2011).

The highest average consumption expenditure in Bangkok may be due to its high cost of living. The cost of living index is aimed to be used to identify the cost of living among regions. However, the CPI was developed to replace the cost of living index since 1948 (Bureau of Trade and Economic Indices 2011).

To observe that the increase in proportion of monthly consumption expenditure in Bangkok does not due to its higher cost of living, CPI among regions is compared. The cost of living may not be practical in real life. The cost of living aims to measure how much it costs to live in a certain area. Unfortunately, it is difficult to observe because the cost of living is also depended on other determinants, for example, income, number of family members, taxes, quality of goods, technology changes, and price changes. By applying CPI, it is more practical because the quality and quantity of goods are arranged to be the same, only the prices are changed. As a result, CPI is used. Regarding to Bureau of Trade and Economic Indices in 2009 based on 2007, Bangkok has the least CPI of 103.4 whereas Southern has the highest CPI of 106.5 among other regions. Central, Northern and Northeastern have similar CPI of 105.6, 105.4, and 105.8 respectively.

With an aim to compare average monthly expenditure and CPI, the proportion of the increase in average consumption expenditure as same year as applied to CPI, which is 2009 relative to the base year 2007, is calculated. It shows that Bangkok has

the highest proportion increase in average consumption spending of 17.5 percent, whereas Southern has the least 8.5 percent. Central and Northeastern have similar proportion increase in average monthly expenditure of 12.7 and 12.4 percent accordingly. Northern has the proportion increase in average monthly consumption expenditure of 9.1 percent.

Therefore, the increase in proportion of monthly consumption expenditure in Bangkok of 17.5 percent may not be due to the higher cost of living. This is because its CPI is the least, only 103.4. As a result, Bangkok is selected because their consumption level is the highest among other regions.

Table 2.3 Comparing the increase in cost of living by regions

Region	Average Monthly Consumption Expenditures per household			CPI
	2009	2007	2009 based on 2007	2009 based on 2007
Bangkok	24,695	21,009	+ 17.5%	103.4
Central	14,959	13,273	+ 12.7%	105.6
Northern	10,496	9,623	+ 9.1%	105.4
Northeastern	10,905	9,702	+ 12.4%	105.8
Southern	15,040	13,868	+ 8.5%	106.5

Source: NSO 2011 and Bureau of Trade and Economic Indices 2011 adapted by author

Individuals who are 20 to 59 years are selected. The reasons to select individuals, whose age between 20 to 59 years, are to answer and to cover all the objectives especially for the second and the third sub-objectives. For the constraint from the second sub-objective relating to online social network goods, individuals who are 60 years and over are not selected. According to Ministry of Information and Communication Technology (MICT 2011), it reveals that individuals in the age range between 15 to 24 years have the highest percentage of internet usage, representing 47.3 percent. Meanwhile, individuals who are 25 to 34 years use internet about 21.5 percent. Individuals who are between 35 years and over have the least internet usage of 15.9 percent comparing to other groups (MICT 2011). According to NSO (2011), it reveals that individuals who are 60 years and over have almost no internet usage. The figure is also corroborated with the number from Asia Digital Marketing Association (2011). It reveals that there is 0.39 percent internet usage for individuals who are in age range of

60 to 64 years. It discloses also the percentages of using the internet for individuals who are 65 to 69 years, and 70 years and older are 0.18 percent, and 0.15 percent respectively. It can be seen that individuals who are 60 years and over are slightly related to online social network goods. As a result, to cover the second sub-objective, individuals whose age 60 years and over are not included.

Regarding the third sub-objective relating to debt, individuals whose ages are less than 20 years are not selected. There are two reasons. First, even though there is no direct legal provision on an age to legally borrow, the conclusion can be done by combining the two sections of Civil and Commercial Code of Thailand. The Civil and Commercial Code of Thailand section 19 states that “a person, on the completion of twenty years of age ceases to be a minor and becomes sui juris” (Sandhikshetrin 1988, p.10). The Civil and Commercial Code of Thailand section 21 states that “for the doing of a juristic act, a minor must obtain the consent of his legal representative. All acts done by him without such consent are voidable unless otherwise provided” (Sandhikshetrin 1988, p.11). It can be concluded that a person, who is 20 years or over, is considered as an adult and is able to be responsible to all his acts. As a result, to be able to legally borrow, individuals are needed to be 20 years and over. Second, it has an aim to assess debt associated with purchasing goods through a credit card. By observing data from commercial banks in Thailand, it can be found that a person is needed to be 20 years or over to be able to apply for a main credit card.

Therefore, Thai individuals who are 20 to 59 years; and live in Bangkok are selected as a target population by based on individuals who are physical presence (residence of at least 12 months) or have house paper registration in Bangkok.

2.3.4.2 Sample

This section begins with sample size, followed by sampling technique, and a table of selected enumeration areas.

- *Sampling size*

Yamane (1967) provides a simplified formula to calculate the sample size. The formula can be used in case of finite population. As the number of individuals aged 20-59 years in Bangkok is finite, Yamane formula is employed to calculate the sample size.

$$n = \frac{Nk^2PQ}{k^2PQ + N(E)^2}$$

where

N is the total population of individuals age between 20-59 years old in Bangkok, which has 5,701,394 in 2010 (Ministry of Interior, 2011)

k is a constant confidence level, which equals to 1.96 for 95% confident.

P is the estimated proportion of population being studies, which is the maximum level of variability within a population, which assume $P = 0.5$ (maximum variability)

Q is $1-P$

E is the acceptable error, which equals to 0.05

After inserting the numbers into the equation, n equals to 399.97. Therefore, at least 400 samples should be included at 95% confidence level. To buffer non-response rates (Yamane 1967), 500 samples are obtained because the pilot survey results reveal low response rate. The questionnaires were added until 500 questionnaires were completed. The actual house-to-house observations were 619 households. 119 questionnaires were dropped because they are incomplete.

- *Sampling technique*

The sampling design was developed with the assistance of the NSO. NSO divides Bangkok into district, sub-district, and enumeration areas (EAs), and codes these. Each EA has different number of households depending on the density of population in that area.

Sampling frame is the total number of EAs, which is 19,726 EAs. Since the sample size is 500, 20 households per an EA are selected and thus 25 EAs are required.

Three stages cluster sampling are applied, where each EA is a cluster. The reason is because most surveys carried out by governmental statistical agencies rely on a sample frame that is composed of maps that partition the entire country or province into EAs. An EA is one of an area sampling, which is the most popular type of cluster sample. Drawing on Zikmund, et al. (2012), a cluster sample can be applied when a complete list of the members of a population is not available. Cluster sampling is inexpensive to conduct and at the same time it can retain the characteristics of a sample.

The first stage is called primary sampling units (PSUs). In this stage, EAs are selected by the NSO. EAs are sampled on probability proportional to size (PPS) and systematic sampling. An EA, which has large number of households, has high possibility of being selected by weight. Then, an interval (I) is needed for systematic sampling. Households from all 50 districts are arranged by their codes. An interval is calculated from total number of households in Bangkok divided by number of EAs needed ($n = 25$). The starting point of the sample is R, which is $1 < R \leq I$. R is randomly selected. Using both I and R, the EAs are selected by systematic sampling.

The second stage is called secondary sampling units (SSUs). In this stage, households are selected within their EAs. Household listings are also conducted, which aim to include only Thai permanent residents. The household listings are to list all households in the EAs. In the same way as EAs, households are sampled by systematic sampling. An interval (I) is calculated from total number of households in the selected EAs divided by number of households needed ($n = 20$).

The third stage is called ultimate sampling units (USUs). In this stage, an individual from each household is selected. Individuals, who are in the target population and in the sampling frame, are sampled from the selected household. Individuals are selected by the inclusion criteria of the study.

Type of field work is conducted via house-to-house visits and the maps provided by the NSO showing the boundaries of the EAs.

As a result, the sample is selected as shown in the below table.



Table 2.4 List of sampled EAs

No.	District	Sub-district	EA Number	Number of Household by Approximation	Sampled Households
	name	name			
1	Bang Rak	Maha Phruttharam	020	175	20
2	Bang Khen	Anusawari	242	174	20
3	Bang Kapi	Hua Mak	285	238	20
4	Phra Khanong	Bang Chak	244	158	20
5	Lat Krabang	Lam Plathew	060	416	20
6	Yan Nawa	Chong Nonsi	067	111	20
7	Yan Nawa	Bang Phong Phang	071	151	20
8	Khlong San	Khlong Ton Sai	067	127	20
9	Taling chan	Chim Phli	049	121	20
10	Bangkok Noi	Bang Khun Si	045	143	20
11	Bangkok Noi	Arun Amarin	110	170	20
12	Bang Khun Thian	Samae Dam	130	144	20
13	Bang Khun Thian	Samae Dam	396	188	20
14	Chatuchak	Sena Nikhom	065	107	20
15	Chatuchak	Chom Phon	003	120	20
16	Bang Kho Laem	Bang Khlo	047	182	20
17	Prawet	Prawet	129	136	20
18	Bang Khae	Bang Khae	225	116	20
19	Laksi	Talat Bang Khen	004	183	20
20	Sai Mai	Ao Ngoen	077	203	20
21	Khlong Sam Wa	Sam Wa Tawan Tok	011	530	20
22	Bang Na	Bang Na	007	162	20
23	Bang Na	Bang Na	225	165	20
24	Thung Khru	Thung Khru	020	186	20
25	Bang Bon	Bang Bon	082	551	20
					500

Source: Author assisted by NSO

2.3.4.3 Fieldwork Assistant

The field work was conducted in two stages. First, of the household listing was done. The author acted as leader of the fieldwork, which include the training of the household listers and mappers and to ensure the completion of it. The assistants were trained for approximately one hour. The trainings included explanation of the EA map, directions, and advice regarding the pleasant way to approach respondents. The assistants were undergraduate students from various universities, including Chulalongkorn University, Srinakharinwirot University, and Suan Dusit University. They were assigned to conduct the household listing in each EA in a pairs. One of the students was a mapper and the other did a house list, for example, list of house numbers and household's head names. Second, when questionnaires were undertaking the author again lead of the fieldwork, which included the training of the interviewers and ensured the completion of the questionnaires. Five persons were recruited to conduct the fieldwork. Each person was responsible for 100 questionnaires in 10 days. The assistant persons needed to distribute the questionnaires to the participants and/or explained them if they did not understand any questions. The assistants were required to demonstrate strong communication skills and were trained for approximately 3 hours. The training included the clarification of questions respondents might not understand. It also included training of a device used for measuring blood pressure, which was trained by a medical doctor from Srinakharinwirot University. The blood pressure reading was given to the respondents for them to know whether it was low, normal, or high. In addition, the treatment for low or high blood pressure was suggested to the respondents by the assistants. For example, they might be suggested to have more exercise, and/or to consume healthy diet.

2.3.4.4 Ethical Consideration

The ethical issues were examined. Respondents were asked for permission before conducting a survey. Moreover, the questionnaire was approved by the Ethics Review Committee for Research Involving Human Research Subjects from Health Science Group on December 22, 2014 before the fieldwork was conducted. The

respondents' names and addresses were not recorded. Furthermore, the questionnaires will be destroyed after the project is completed.

The choice of words and phrases in the questionnaire were concerned. For example, they were ensured of not leading the respondents into a desired answer and all respondents would interpret the questions in the same way.

In addition, the participation information sheet was included in the front page of the questionnaire in order that the instruction of the survey was introduced and the reasons why the respondents were selected as a target population were explained. Expected time needed was also informed.

2.3.4.5 Pilot survey results⁸

The pilot survey results are introduced to discuss some issues including pilot implementation, problems encounter, and a backup plan.

- *Pilot Implementation*

Pilot was aimed to have 50 households. Type of field work was house-to-house visits and the NSO assisted to provide the boundaries of the maps of EAs.

An EA number 020 located in Bang Rak district, and MahaPhruttharam sub-district was selected out of 25 EAs. The pilot was conducted on Friday May 9, 2014 during 4 to 7.30 pm with the team of 6 Chulalongkorn graduate students. At the beginning, the team visited 30 households by randomly selected from EA 020 but received 4 responses.

⁸ The pilot results were presented at 13th Eurasia Business and Economics Society conference, Turkey.

Due to the low response rate from EA 020, the enumerators were instructed to go to another EA, EA number 225 in Bang Na district, and Bang Na sub-district. The survey in EA 225 was conducted on Saturday May 10, 2014 during 10 am. to 4 pm. The team visited 40 households and received 11 responses. The number of responses is shown in Table 2.5 below.

Table 2.5 Pilot households' responses

Households	EA 020	EA 225	Total
Visited	30	40	70
Responses	4	11	15
Not completed	1	0	1
Registration book not in Bangkok	1	1	2
Usable	2	10	12

Source: Author

• *Problems Encountered*

A residential area in Bangkok can be broadly separated into 4 types, which are commercial buildings, detached and semi-detached houses, condominium, and townhouses. Each type of residential areas has its own problems, which will be discussed as followings.

1. Commercial buildings

Nobody came out when we rang the bell. The team believed that there might be no one at home. Occasionally, someone came out but they were not welcome us. Some had no time to do the questionnaire. Some did not complete all of the questions. Because the survey was conducted outside respondents' houses, the burden on respondents was high. They had to stand doing it beside their gates and the weather was fairly hot. Thus, the respondents might not have concentration.

2. Detached and semi-detached houses

The team could not access some houses because security guards did not allow us to pass. Even some the team could get into, we mostly met a housekeeper especially for a big or expensive house.

3. Condominium

The team could not access the condominium because security guards did not allow us to access the buildings. Moreover, another problem was that some of the residents did not have registration books in Bangkok.

4. Townhouses

The team found the similar problems as commercial buildings.

In light of the low response rate in EA 020 and EA 225, the remaining 38 questionnaires were subsequently distributed in a shopping mall. Central Bangna was selected because the convenient of its location and closed to the selected EA 225. On Sunday May 10, 2014 during 12 to 3 pm., the team of 5 Chulalongkorn graduate students was conducted the pilot survey. The team received the completed 38 questionnaires and spent approximately 3 hours.

The researcher envisages conducting the survey by following the same plan which will apply the sampling design from the NSO. The reason is because the problems occurred with the pilot might happen specifically with some EAs. As a result, the researcher decided to try 5 EAs at the beginning. If the same problems with the pilot are encountered or it is not applicable to conduct the house-to-house survey, the survey will be conducted in shopping malls.

Another problem found from the pilot was that several residents did not have registration books in Bangkok, especially who stay in condominium. As a result, the researcher considers accepting individuals who stay in Bangkok more than 6 months.

2.4 Descriptive Statistics

The data collected are discussed in two steps. First, descriptive statistics are examined. Second, the topic of representativeness of survey is discussed. Survey estimates are compared with the latest survey data compiled by the National Statistical Office of Thailand (NSO) and Ministry of Health to check representativeness.

The encountered problems in the pilot survey in terms of the low response rate were overcome by visiting a household twice if nobody was at home. The replacement of a new household was provided if after two visits, nobody could be found. The survey also excluded condominiums and some houses which had security guards. It was because, according to the pilot surveys, the assistants were not able to visit these types of residential areas. There were 119 questionnaires, which were dropped because of uncompleted. The questionnaires were added until 500 questionnaires were completed. The study finally obtained 500 completed questionnaires.

2.4.1 Personal Factors

Age

The average age of respondents is 40.13 years. The minimum respondents' age is 20 years and the maximum is 59 years, which is in line with the definition of the target population. Standard deviation is 10.97. Age is divided into 3 groups analogous the UN and Giddings et al. (2014), which are (1) Generation Y are individuals whose age between 20 to 35 years, (2) Generation X are individuals whose age between 36 to 49 years, (3) Baby boomer are individuals whose age between 50 to 59 years. Most respondents are in Generation X (39%), followed by Generation Y (36%), and Baby Boomer (25%). According to the 2010 NSO Population and Housing Census data, generation Y has the highest percentage (35%), following by generation X (25%), and baby boomer (11%). The study survey estimates are moderately in line with the 2010

NSO Population and Housing Census data, which indicate that the least percentage group is baby boomer.

Gender

Table 2.7 reveals that the number of male is less than female. Male and female respondents account for 46% and 54%, respectively. The gender percentage of the survey estimates is approximately in line with the 2010 NSO Population and Housing Census data in the sense that male is less than female, which reports male 48.63 % and female 51.37%.

Health

For health, the data reveals that 70 respondents have high blood pressure or 14%. Bangkok individuals' health percentage of the survey estimates is similar to the 2013 NSO Socio-Economic Survey data which according to which individuals with chronic diseases represent 17.4%.

Education

Educational attainment ranges from 4 years to 27 years. The average years of educational attainment of the respondents are 15.78 years. Standard deviation is 3.19. 46.2% of respondents have 16 years of schooling, and only 0.2% has primary school (4 years) only. According to the 2010 NSO Population and Housing Census data, Bangkok individuals mostly graduate from high school (12 years) accountings for 43.89% and few have doctoral degree accounting for 0.37%. The educational attainment percentage of the survey estimates is slightly different from the 2010 NSO Population and Housing Census data. The differences are likely to because the study observes different age group from the NSO.

Employment

For employment, most of the respondents are full-time employed (63%), following by students (22.4%), part-time employed (11.6%), and unemployed (3%). To check representativeness, most of the samplings are employed, while the 2015 NSO Labour Force survey data shows that 98.05% are employed and 0.99% are unemployed.

The employment of survey estimates is quite different from the NSO. This may be that the survey observes respondents who are at home at that time.

Personality

For personality, most of the respondents exhibit agreeableness (32.6%), followed by neuroticism (29.6%), openness to experience (14.8%), extraversion (13%), and conscientiousness (10%). However, these shares are not the same with the study of DeNeve and Cooper (1998) who construct research in the USA. They find that conscientiousness (31%) is the majority of their respondents followed by extraversion (22%), neuroticism (20%), agreeableness (16%) and openness to experience (11%). The share difference may be because of the different of samples that live in different cultures and the main personality for Thais is agreeableness.

Income

According to Table 2.6, most of the questionnaire respondents have income between 25,000 to 49,999 baht (29.2%), following by between 15,000 to 24,999 baht (27.6%) while the 2013 NSO Socio-Economic Survey data which shows that the average monthly income of Bangkok individuals is 16,593 baht. Thus, the questionnaire respondents' income is slightly higher than the average. In addition, most of the questionnaire respondents' household has monthly income between 50,000 to 60,000 baht (27%), following by between 25,000 to 49,999 baht (24%) which is relatively in line with the 2013 NSO Socio-Economic Survey data which shows that the average monthly household income of Bangkok individuals is 49,191 baht. Thus, the questionnaire respondents' household income is slightly higher than the average. The difference of income percentage between the study and the 2013 NSO Socio-Economic Survey might be possible because the study uses the range income while NSO reports its result as an average.

Table 2.6 Individual and Household Income

Income (baht)	Percentage Individual Monthly Income	Percentage Household Monthly Income
More than 60,000	12%	22%
50,000 - 60,000	15%	27%
25,000 - 49,999	29.2%	24%
15,000 - 24,999	27.6%	13.8%
Less than 15,000	16.2%	13.2%

Source: Author

Table 2.7 Summary of key personal factors

Personal Factors	Descriptive Statistics
Age	Mean 40.13 years
Male	46%
High Blood Pressure	70 respondents
Education	Mean 15.78 years
Full Employment	63%
Personality	Extraversion (13%), Neuroticism (29.6%)
Income	Min: more than 60,000 baht (12%) Max: 25,000-49,999 baht (29.2%)

Source: Author

To summarize, respondents' average age is 40.13 years. The percentage of male is 46%. 70 respondents have high blood pressure. Respondents have average education attainment of 15.78 years and 63% are full employment. The two main personalities are that extraversion personality dimension is 13% while neuroticism is 29.6%. Respondents have income more than 60,000 the least (12%) while the most (29.2%) has income between 25,000-49,999 baht.

2.4.2 Social Factors

Children

According to Table 2.8, the minimum number of children of respondents is 0 (49.4%) and the maximum is 4 persons (0.8%). Approximately half of the respondents do not have children. The average number of children is approximately 1 person. According to the 2010 NSO Population and Housing Census data, most of the Bangkok individuals' have one child 30%, and the least is six children 1%, reflecting the low fertility rates of overall country. To conclude, the number of child percentage of the survey estimates is in line with the 2010 NSO Population and Housing Census data.

Marital status

With the 500 samples, most of the respondents are single (48%), followed by married (45%), divorced (5%), and widowed (2%). According to the 2010 NSO Population and Housing Census data, most of the Bangkok individuals' are married (48.61%), following by single (39.96%), widowed (4.33%), separated (2.5%) and the least divorced (1.52%). The survey estimates are in line with the 2010 NSO Population and Housing Census data in the sense that the relatively large proportion of population is married.

Friendships

Focusing on friendship types, Table 2.8 shows that the average number of close friends (whom respondents can confide in) is approximately 7 persons. The minimum number of respondents' close friends is 2 persons (5.4%) and the maximum is 15 persons (0.8%). Respondents have casual friends (whom respondents cannot confide in or friends with benefits) equal to 31 persons on average. Individuals have a wide range of casual friends, from a minimum of 10 friends (0.2%) to a maximum of 60 friends (0.2%). Standard deviation is 3.01. The number of virtual friends (whom respondents meet in internet and may have never met in real life) ranges between the minimum 0 (1.8%) to the maximum 140 persons (0.4%). On average, the respondents have approximately 72 virtual friends and 25.6% of virtual friends are not respondents' close friends. On average, the respondents have approximately 4 virtual friends who are their close friend.

Neighborhood

To observe the neighborhood effects, EAs are grouped by area dummies including Bangkok inner, middle, and outer. Bangkok inner is EA 003, 020, 047, 067, 071, 110. There are 180 respondents living in this area. Bangkok middle includes EA 007, 021, 129, 225, 226, 242, 244, 285, which contains 180 respondents. Bangkok outer is EA 004, 011, 060, 082, 130, 396 which have 140 respondents living.

Table 2.8 Summary of key social factors

Social Factors	Descriptive Statistics
Married	45%
Friendships	
Close friend	Mean: 7 persons
Casual friend	Mean: 31 persons
Virtual friend as not close friend	Mean: 72 persons
Having virtual friend as close friend	Mean: 4 persons
Neighborhood	
Living in inner Bangkok	180 respondents
Living in middle Bangkok	180 respondents
Living in outer Bangkok	140 respondents

Source: Author

To summarize, 45% of the respondents are married. The average number of close, casual, virtual, and having virtual friends as close friends are 7, 31, 72, and 4 persons respectively. The three Bangkok areas, where respondents' living, are distributed equally.

2.4.3 Consumption

Three consumption types are examined, which are material goods, experiential goods, and online social network goods (OSN) in term of purchasing or not purchasing as dummy variables.

2.4.3.1 The purchase of material, experiential, and OSN goods

According to Table 2.9, the majority of respondents purchase material goods comparing to experiential and OSN goods. All respondents purchase material goods at price less than 1,000 baht, for example, street clothes and shoes. The percentages of purchases decrease when the prices of each types of consumption increase. For example, the number of respondents who purchased material goods decreased by 15.29% from price less than 1,000 baht to 1,000 to 5,000 baht. However, online social network goods have the exception to this where most of respondents purchase at the middle to high price level. Respondents purchase OSN goods at price 10,001-100,000 baht (60.80%) and this is reasonable because most of the OSN goods are in this price level, for example, iPhone and iPad. Moreover, the percentage of respondents purchase experiential goods has dropped dramatically from price less than 1,000 baht, 87.40% to 1,000-5,000 baht, 39.40%.

Table 2.9 The purchase of Mat, Exp, and OSN at price <1,000 to 10,000 baht

Price (Baht)	<1,000			1,000-5,000			5,001-10,000		
Goods	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase	100%	87.40%	-	84.60%	39.40%	23.60%	72.60%	34.80%	39%
Not purchase	-	12.60%	-	15.40%	60.60%	76.40%	27.40%	65.20%	61%
Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
Goods	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase	58.80%	21.80%	60.80%	36.40%	24.20%	1.20%	3%	-	-
Not purchase	41.20%	78.20%	39.20%	63.60%	75.80%	98.80%	97%	100%	100%

Source: Author

Analyzing differences of material, experiential, and OSN goods purchased between groups, crosstab is used which is shown in appendix 7. Generation X purchases material and OSN goods the most, while Baby Boomer purchases the least. The same number of respondents in Generation X and Y purchase experiential goods, while Baby Boomer purchase slightly less. Female purchases material, experiential, and OSN goods more than male. Full time employment respondents purchase material, experiential, and OSN goods more than the others. Two alternative income thresholds are used to observe the differences in purchasing each types of consumption. Respondents, whose income above threshold 1 (which is 16,593 baht), purchase

material, experiential, and OSN goods more than the others while respondents, whose income above threshold 2 (which is 49,191 baht), purchase less material, experiential, OSN goods than the others. Therefore, even they are rich they purchase less material, experiential, OSN goods less than the others. Regarding to this results, it leads to prefer the first income threshold than the alternative because it is more reasonable and realistic.

Bangkok individuals are observed their extravagant spending⁹ behavior. According to the data of debt from NSO Bangkok¹⁰, the average debt per household in Bangkok is the highest comparing to other provinces. This indicates individuals who live in Bangkok are likely to have an extravagant spending¹¹ behavior. Regarding to the 2014 NSO Social and Cultural Survey data, 60.1% of individuals whose age 13 years and over have extravagant spending behavior. 37.1% have never had extravagant spending behavior and 2.9% have no chance to do it. Regarding to material goods, the percentage of the survey estimates is fairly in line with the 2014 NSO Social and Cultural Survey data. This is in a sense that most of the samplings purchase material goods more than other goods by comparing at the same price ranges. This can be implied that most of the samplings have extravagant spending behavior.

2.4.3.2 The use of online social networking

According to Table 2.10, 84% of questionnaire respondents use internet from mobile phone, following by computer at workplace/school 79.2%, computer at home 73%, tablet 61%, and internet café 28%. Only 4.2% of questionnaire responders do not use the internet.

⁹ The NSO classifies extravagant spending as a purchase of brand name clothes and appliances.

¹⁰ The Household Socio - Economic Survey, National Statistical Office, Ministry of Information and Communication Technology

¹¹ Consumer spend on materialistic excesses, and purchasing as an act meant purely for display (Chaudhuri and Majumdar 2006)

Table 2.10 Internet Mediums (in percent distribution)

Mobile	84%
School/Office computer	79.2%
Home computer	73%
Tablet	61%
Internet café	28%
Not use	4.2%

Source: Author

According to Table 2.11, 86.8% purchase online social network goods to engage in continuous communication and interaction with other members of their family and their social network through, for example, Whatsapp, Line, Instagram, Skype, Facebook, and Twitter. Beyond a high level of interactivity and communication, the questionnaire responders report a diverse set of activities. 81.8% of questionnaire responders report that they purchase online social network goods because they regularly use the internet to work, for example, check emails, edit documents, and reading books. 81% of questionnaire respondents' purchases are for entertainment, for example, games, YouTube, watching movies, listening to music, and buying books, clothing, and electronics online. 61.8% purchase online social network goods to obtain maps and directions. 59% purchase online social network goods for modern and to upgrade their status.

Table 2.11 Purchase Reasons (in percent distribution)

Social activities	86.8%
Work	81.8%
Entertainment	81%
Navigator	61.8%
Modern	59%

Source: Author

Moreover, the significance of the various elements from using OSNs has on the questionnaire responders of different age groups are analyzed. The fourteen effects are positive and negative effects (Kross et al. 2013; Steinfield, Ellison, and Lampe 2008; Subrahmanyam et al. 2008; Ellison, Steinfield, and Lampe 2007). The seven positive

effects are to keep in touch with existing family and friends, to make new friends, to update personal information/status (e.g. invitation to wedding reception through Facebook), to entertain, to facilitate school/business work, to reduce phone bills, to reduce noises at public places. The seven negative effects are depletion of face to face interaction, loss concentration, health deterioration, involving yourself in danger (e.g. check in Facebook may attract criminals to detect where you are), involving others in danger (e.g. a car crash because of chatting), information hacked (e.g. bank account), and having less personal security. The questionnaire responders were asked to prioritize the effect from the most to the least significant where the most significant effect would have the score of one and the least significant element would have the score of fourteen.

According to the use of OSNs in Table 2.12 , most of the questionnaire respondents are in generation Y and baby boomers report that the highest priority (answer 1) are to keep in touch with existing family and friends 36.67% and 26.40% respectively. Generation X reports the highest priority for the OSNs use to facilitate business work (38.89%). Nevertheless, most of questionnaire respondents for all generations concern less on personal security issues, which 25.56% are generation Y, 24.1% are generation X, and 20.8% are baby boomers.

Table 2.12 The use of OSNs (in percent distribution)

	Highest Priority	Lowest Priority
Generation Y	36.67% Keep in touch with existing family and friends	25.56% Have less personal security
Generation X	38.89% Facilitate school/business work	24.1% Have less personal security
Baby boomer	26.4% Keep in touch with existing family and friends	20.8% Have less personal security

Source: Author

According to Table 2.13, to gain strong relationship with others, 4% of questionnaire respondents strongly disagree that meeting in person with others is unnecessary because they can contact each other's through the internet, following by 72.8% disagree, 13.2% neutral, 9% agree, and 1% strongly agrees. A large percentage of the respondents believe that they should socialize by meeting in person even though

they can contact through the internet, which implies that virtual friends are less important than close and casual friends.

Table 2.13 Unnecessary to meet in person (%)

Strongly disagree	4%
Disagree	72.80%
Neutral	13.20%
Agree	9%
Strongly agree	1%

Source: Author

To realize the use of the internet relative to other activities, questionnaire respondents were asked about their internet time use per day. According to Table 2.14, a crosstab between WVS and internet use per day are between 0 and 24 hours per day. Most of the respondents (70%) use internet between 4 and 9 hours per day and most of them report as very happy, following by 17% of respondents use internet for 10 to 15 hours. The percentage gap between respondents' using internet 4-9 hours and 10-15 hours is quite large. The difference is about 50%. Most of the respondents (20%) who use internet 10-15 hours report as rather happy and about 16% of them report as not very happy. This can be stated that spending too much time on the internet may not create happiness to the individuals. Not many respondents use or not use internet extremely. In particular, 6% of the respondents use internet 0-3 hours and 7% of them use for 16-24 hours.

Not many of respondents (4.2%) do not use internet. The least or 0.2% of respondents uses internet 20 hours per day. There is one respondent who spends on the internet the longest hours per day, which is all day, report that he/she is not very happy. As a result, using internet between 4 and 9 hours per day convey high SWB to the respondents.

The results are in line with other studies, which find that there is a positive effect of using internet on SWB to some extent. For example, communication with others increases leading to positive benefits on respondents' self-esteem and their reported

satisfaction with life (Bargh and McKenna 2004; Valkenburg, Peter, and Schouten 2006). Internet usage is associated with not only increased communication but also involvement with family (Kraut et al. 2002). Internet usage also increases in perceived social support and decreases in perceived loneliness and depression (Shaw and Gant 2002). However, spending too much time on internet makes respondents less happy, which may come from the increase of ostentatious information by additional friends on FB (Mukesh and Gonçalves 2013).

Table 2.14 Internet Duration

	Internet Duration per day (hours)	0-3	4-9	10-15	16-24	Total
WVS	Very happy(persons)	3	52	5	1	61
		4.92%	81.60%	11.48%	1.64%	100%
	Rather happy(persons)	18	152	47	16	233
		7.3%	64.80%	20.17%	7.73%	100%
	Not very happy(persons)	7	106	24	15	152
		4.61%	71.04%	15.80%	8.55%	100%
	Not at all happy(persons)	3	40	8	3	54
		5.56%	75.92%	12.96%	5.56%	100%
	Total (persons)	30	350	85	35	500
	Total (%)	6%	70%	17%	7%	100%

Source: Author

Online social networking is a new communication channel, which provides a space for individuals to connect with others and form relationships. Regarding to online social network goods, the OSNs percentage of the survey estimates is fairly in line with the NSO and the ETDA. According to the 2014 NSO data, Bangkok individuals use personal computer the most 69.53%, following by smart phone 61.10%, notebook 41.03%, tablet 25.16%, and PDA 2.37%. In addition, most of Bangkok individuals use internet, 76.66%. Male use internet 37.27% and female use 39.39%. The percentage of female using internet is more than men, which is in line with the study. In addition, the 2011 NSO Social and Cultural survey data on teenage behavior regarding internet

communication network shows that 37.3% of aged 20-24 years use internet communication network every time, 27.2 % use it sometimes, 28.8% do not use it, and 6.7% is unknown. Device, which individuals mostly use to access internet, is smart phone which has the percentage used of 77.1% or approximately 6.6 hours per day. The highest activity individuals accessing internet through mobile devices is for social network 78.2% following by reading e-book e-news 57.6%, and searching for information 56.5%. Individuals mostly use computer to send and receive email 82.6% following by searching for information 73.3%, and reading e-book e-news 63.8% (ETDA 2014).

2.4.4 Debt and Feeling debt burdened

Debt related to each types of consumption includes borrowing from others, purchasing by credit card and others. For all types of consumption goods, a small percentage of questionnaire respondents borrow money from others. Respondents' debt is mostly incurred from using credit cards. The majority of respondents use it to purchase material goods, while some use it for obtaining OSN goods mostly at middle to high price level, 10,001-100,000 baht. Most of respondents do not feel debt burden at the low price, while respondents feel debt burden when the costs of goods increase. For example, when the price of material goods increases from less than 1,000 baht to 1,000 to 5,000 baht the feeling of debt burden of the respondents increases by 138.51%.

Table 2.15 Percentage of debt and feel debt burdened

Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Debt	%	%	%	%	%	%	%	%	%
Borrowing	0.0	2.0	10.4	0.0	0.0	0.4	0.0	0.0	0.0
Credit card	52.6	14.8	54.4	30.6	18.4	0.4	1.6	0.0	0.0
Others	1.2	0.4	1.2	1.4	0.0	0.0	0.8	0.0	0.0
Feeling Burden									
Not Feel	5.0	18.6	6.6	4.4	21.4	0.8	0.6	0.0	0.0
Feel	53.8	3.2	54.2	32.0	2.8	0.4	2.4	0.0	0.0
Not Purchase	41.2	78.2	39.2	63.6	75.8	98.8	97.0	100.0	100.0

Source: Author

According to Table 2.16, 61.8% of Bangkok residents have no debt while 38.1% having debt. Most Bangkok residents have debt between 10,001 and 1,000,000 baht. The highest type of debt is from car following by business and investment, house,

consumption, and others respectively (NSO 2013). 7.4% of debt is for consumption, which may include the debt occurring from purchasing material, experiential, and OSN goods.

Table 2.16 Percentage of debt for Bangkok resident

Having debt	
No	61.9
Yes	38.1
<i>1,000 – 10,000</i>	<i>4.5</i>
<i>10,001 - 100,000</i>	<i>14.6</i>
<i>100,0001 - 1,000,000</i>	<i>17.3</i>
<i>>1,000,000</i>	<i>1.7</i>

Source: The 2013 Household Socio - Economic Survey, National Statistical Office, Ministry of Information and Communication Technology

2.4.5 Psychological Processes

Social comparison

For social comparison, most of respondents purchase material goods in order to follow trend/fashion for all price ranges. In line with Frank (1999) and Gali (1994) an individual takes others' consumption into account, as he/she strives to match others in the levels of spending and social standing. On the other hand, the purchase of experiential goods is not driven by trend/ fashion. Interestingly, OSN goods are also purchased because of trend/fashion, excepted for the price between 100,001 to 1,000,000 baht. In line with Mukesh and Gonçalves (2013), they suggest that using Facebook has detrimental effects to SWB because of social comparison. The 998 refers to respondents do not purchase the goods within 12 months. For example, it is possible that all respondents do not purchase experiential and OSN goods at price >1,000,000 baht and that make them not able to answer this question. The same applies for adaptation and aspiration.

Table 2.17 Social comparison Mat, Exp, and OSN <1,000-10,000 baht

Price (Baht)	<1,000			1,000-5,000			5,001-10,000		
Goods	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase because of trend	81.40%	25.40%	-	69.40%	9.60%	12.40%	62.40%	8.60%	24.40%
Not because of trend	18.60%	62%	-	15.20%	29.80%	11.20%	10.20%	26.20%	14.60%
998	-	12.60%	-	15.40%	60.60%	76.40%	27.40%	65.20%	61%

998 is not applicable. Mat. is material goods, Exp.is experiential goods, OSN. is online social network goods.

Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
Goods	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase because of trend	50%	3.40%	40.60%	26.20%	0.40%	0.40%	2.20%	-	-
Not because of trend	8.80%	18.40%	20.20%	10.20%	23.80%	0.80%	0.80%	-	-
998	41.20%	78.20%	39.20%	63.60%	75.80%	98.80%	97%	100%	100%

998 is not applicable. Mat. is material goods, Exp.is experiential goods, OSN. is online social network goods.

Source: Author

Adaptation

Price is matter for adaptation. The higher price is associated with the lower adaptation speed for all goods. At the same price, material goods adapt the most rapid among the other goods. For example, most of respondents (89%) satisfy material goods price <1,000baht for 1 week to 1 month. On the other hand, most of respondents (71.6%) satisfy experiential goods price <1,000 baht for 2 to 6 months, which is longer comparing to material goods. In line with Wang, Novemsky and Dhar (2009), adaptation may not operate equally for all goods. This means that not all consumer goods have the same adaptation level. The SWB from some goods lasts longer, for example, experiential goods compared to material goods (Van Boven 2005). After some initial period of satisfaction, which derived from the consumption of newly acquired possessions, an individual then accustoms to such things (Frey and Stutzer 2007).

Table 2.18 Adaptation Mat, Exp, and OSN <1,000-10,000 baht

Price (Baht)	<1,000			1,000-5,000			5,001-10,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
	%	%	%	%	%	%	%	%	%
Less than 1 week	3.0	2.8		2.0	0.4	0.8	2.8	0.4	0.4
1 week to 1 month	89.0	5.2		74.6	0.4	1.2	7.8	0.6	1.6
2 to 6 months	4.8	71.6		5.6	7.6	1.6	57.8	1.4	1.6
7 to 12 months	2.2	6.2		2.4	29.4	17.4	4.2	7.2	32.4
More than 12 months	1.0	14.2		0.0	1.6	2.6	0.0	25.2	3.0
998	0.0	12.6		15.4	60.6	76.4	27.4	65.2	61.0

998 is not applicable. Mat. is material goods, Exp.is experiential goods, OSN. is online social network goods.

Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
	%	%	%	%	%	%	%	%	%
Less than 1 week	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 week to 1 month	2.0	0.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0
2 to 6 months	27.2	1.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
7 to 12 months	29.6	0.0	51.8	0.8	0.8	0.4	0.0	0.0	0.0
More than 12 months	0.0	20.0	6.0	35.6	23.4	0.8	3.0	0.0	0.0
998	41.2	78.2	39.2	63.6	75.8	98.8	97.0	100.0	100.0

998 is not applicable. Mat. is material goods, Exp. is experiential goods, OSN. is online social network goods.

Source: Author

Aspiration

For aspiration, the higher the price is, the less respondents have aspiration to purchase more of the goods. Comparing among three goods, respondents have the most willingness to continue purchasing more of OSN goods than the others. For example, for the goods price between 5,001 to 10,000 baht, 26.8% of respondents agree to continue purchasing the OSN, while 57.8% and 24.2% of respondents disagree to continue to purchase material goods and experiential goods respectively. In line with Frey and Stutzer (2002), an individual is most likely to compare his/her current situation with his/her past or future expectations, and this creates the changing in aspiration level. This comparison pollutes negative effects to an individual's SWB (Kahneman, Wakker, and Sarin 1997).

Table 2.19 Aspiration Mat, Exp, and OSN <1000-10,000 baht

Price (Baht)	<1,000			1,000-5,000			5,001-10,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
	%	%	%	%	%	%	%	%	%
Still would like to purchase									
Strongly disagree	17.8	1.0		2.4	0.4	0.4	2.2	0.4	0.0
Disagree	69.8	53.4		69.8	29.0	1.0	57.8	24.2	2.0
Neutral	10.4	20.8		9.8	7.2	4.0	10.2	7.0	7.0
Agree	1.2	11.2		1.8	2.4	15.4	2.0	2.8	26.8
Strongly agree	0.8	13.6		0.8	0.4	2.8	0.4	0.4	3.2
998	0.0	12.6		15.4	60.6	76.4	27.4	65.2	61.0

998 is not applicable. Mat. is material goods, Exp. is experiential goods, OSN. is online social network goods.

Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
	%	%	%	%	%	%	%	%	%
Still would like to purchase									
Strongly disagree	1.6	0.0	1.2	2.4	0.0	0.0	0.2	0.0	0.0
Disagree	42.2	20.0	2.6	19.0	21.8	0.4	2.2	0.0	0.0
Neutral	12.6	1.2	11.4	13.6	2.0	0.8	0.6	0.0	0.0
Agree	2.0	0.6	40.6	1.4	0.4	0.0	0.0	0.0	0.0
Strongly agree	0.4	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
998	41.2	78.2	39.2	63.6	75.8	98.8	97.0	100.0	100.0

998 is not applicable. Mat. is material goods, Exp. is experiential goods, OSN. is online social network goods.

Source: Author

2.4.6 Subjective well-being (SWB)

SWB is measured by three approaches, namely single-, multi-item scales and blood pressure readings. Regarding the single-item measure (World Values Survey), respondents are asked to answer the question. Questionnaire responders report 12.2% very happy, 46.6% rather happy, 30.4% not very happy and 10.8% not at all happy.

Table 2.20 SWB single-item scales (WVS)

		Frequency	Percent
Valid	Very happy	61	12.2
	Rather happy	233	46.6
	Not very happy	152	30.4
	Not at all happy	54	10.8
	Total	500	100.0

Source: Author

Regarding the multi-item scales of the 15-item TMHI an indicator of mental well-being, the results show that 43.2% can be classified as having less mental distress and better mental health, 46% as having normal mental health, and 10.8% as having more mental distress and worse mental health (Mongkol et al. 2004). The results are in line with existing happiness studies on Thailand, which find that on average Thais have normal happiness level (Gray, Kramanon, and Thapsuwan 2008, Pholphirul and Rukumnuaykit 2008, and Mongkol et al. 2004). According to both WVS and TMHI, most of the questionnaire respondents have normal SWB.

Table 2.21 SWB multi-item scales (TMHI)

		Percent
more mental distress and worse mental health	below \leq 43	10.8
normal mental health	44-50	46.0
less mental distress and better mental health	51-60	43.2
		100.0

Source: Author

To analyze blood pressure of the questionnaire responders in term of high, or normal, the standard blood pressure reference values are referred in Table 2.22 below. The results find that most of questionnaire responders have 78% normal blood pressure, 14% high blood pressure, and 8% low blood pressure. Regarding to the 2007 NSO Social and Cultural survey data, Thai elderly has high blood pressure 31.7%. A number of individuals have high blood pressure moderately.

Table 2.22 Blood Pressure References

Blood Pressure	Systolic		Diastolic
Category	mm Hg (upper #)		mm Hg (lower #)
Normal	less than 120	and	less than 80
Prehypertension	120 – 139	or	80 – 89
High Blood Pressure (Hypertension) Stage 1	140 – 159	or	90 – 99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher
Hypertensive Crisis (Emergency care needed)	Higher than 180	or	Higher than 110

Source:http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/Understanding-Blood-Pressure-Readings_UCM_301764_Article.jsp (March 29, 2015)

The 15-item version of the TMHI is tested for reliability. Table 2.23 shows that all items contain corrected item of total correlation of more than 0.3. Cronbach's alpha is calculated to assess internal consistency. The alpha value for the overall sample is 0.827, indicating satisfactory internal consistency. Subsequently Cronbach's alpha is recalculated if the item is eliminated. None of the items should be excluded to improve overall reliability.

Table 2.23 Item-scale analysis of the TMHI-15

Item-scale analysis of the TMHI-15		
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1 You feel satisfied in life.	.536	.811
2 You feel pleasant.	.592	.807
3 You feel tired and frustrated with the daily life.	.354	.822
4 You feel disappointed with yourself.	.521	.812
5 You feel that your life is suffering.	.357	.822
6 You are able to overcome a difficult problem (when it occurs).	.357	.823
7 You are certain that you are able to control your emotions when the crisis occurs.	.376	.822
8 You are certain that you are able to face a serious incident that may occur in your life.	.323	.824
9 You feel sympathy when seeing others suffer.	.325	.824
10 You feel happy in assisting others, who have problems.	.418	.819
11 You provide assistance to others when the opportunity arises.	.318	.824
12 You feel proud of yourself.	.652	.801
13 You feel secure and safe when you are with your family.	.520	.813
14 If you are severely ill, you believe that your family will take care you well.	.453	.817
15 Your family members are loved and binding with each others.	.549	.809
Internal consistency of TMHI-15	Alpha	Standardized alpha
Overall sample	.827	.825

Source: Mongkol et al. (2004)

Dimensionality is tested by using factor analysis. The results indicate that the existence of four factors with an Eigenvalue of 4.504, 1.810, 1.396, and 1.184, which explains 0.30, 0.12, 0.09, and 0.08 percent of the variance respectively. The percentage

of the variance considers as not extremely high. Hence, the items are still acceptable. All other factors have an Eigenvalue of less than 1.

Pair-wise correlations between TMHI, WVS, and normal blood pressure are calculated to assess validity of proxies for SWB. The results are shown in Table 2.24. According to Table 2.24, the correlation between TMHI and WVS is negative and significant at the 1 percent level as indicated by the star because WVS is ranked in the opposite direction with the TMHI. The correlation is shown as negative sign. The WVS is ranked 1 indicating the most happiness whereas 4 is the least happiness. On the other hand, the low scores report the less happiness whereas the high score from TMHI reports the more happiness. Therefore, the value of correlation of the two happiness indicators would be reversed. Then, blood pressure is correlated with TMHI and WVS, but insignificantly. However, the correlation sign shows that respondents, who have normal blood pressure, seem to have positive correlated with SWB. This might be possible that the sample size maybe insufficient to observe the differences. In the empirical analysis, the study will use TMHI and WVS as proxy for SWB.

Table 2.24 Correlations TMHI, WVS and Blood Pressure

		TMHI_15	WVS	BloodPressure
TMHI_15	Pearson Correlation	1	-.945**	.072
	Sig. (2-tailed)		.000	.108
	N	500	500	500
WVS	Pearson Correlation	-.945**	1	-.059
	Sig. (2-tailed)	.000		.188
	N	500	500	500
BloodPressure	Pearson Correlation	.072	-.059	1
	Sig. (2-tailed)	.108	.188	
	N	500	500	500

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

Source: Author

2.5 Regression Results

An empirical analysis is conducted. In the presentation of findings, the regression results of personal, social, types of consumption, FDB on OSN goods, and psychological processes are examined. TMHI is used as a proxy for subjective well-being. At the beginning, the ordinal least square (OLS) is analyzed. In addition, the results from regressions are discussed by comparing with the existing literatures. Since a cross-sectional dataset is applied, the results cannot establish causality and must be interpreted as correlations only.

2.5.1. Personal Factors

Subjective well-being scores are regressed on personal factors which are age, gender, health, education, employment, personality, and income. The OLS could explain the relationship between personal factors and SWB for about 2.36%. The regression results are shown in Table 2.25. The result from the OLS reveals that age has a negative relationship with SWB, which is in line with the study of Frey and Stutzer 2002; Blanchflower and Oswald 2004a; Ferrer-i-Carbonell and Gowdy 2007. As people age, they tend to be less happy than young people since older people are less healthy, and nowadays more likely to be living alone. Male has a positive, significant relationship, and higher SWB than female. The results show that if other independent variables are fixed, male has higher SWB than female by 1.029. In Thailand, male seems to have a positive and forward-looking attitude (Mongkol et al. 2009). This is in line with the 2014 Ministry of Health, Mental Health survey, which reveals that male has better mental health than female. However, different context and situation in Thailand from Western countries might be possible for the gender results to be in contrast with the studies of Alesina, Di Tella, and MacCulloch (2004); Frey and Stutzer (2002). Different countries might be associated with different control variables. Alesina, Di Tella, and MacCulloch (2004); Frey and Stutzer (2002) reveal that female is happier than male, notwithstanding, Frey and Stutzer (2002) find that the difference is not significant. One of the possible reasons might be the varieties of interested study group. When studies focus on specific subsets, for example, Oswald and Powdthavee (2006) study on individuals who cannot work because of their health problems, the gender

effect vanishes. Bad health which is represented by high blood pressure has negative and significant relationship with SWB because high blood pressure creates nervousness, difficulty to sleep or facial flushing, and also may lead to serious diseases, including stroke, heart disease and kidney failure (Brook 2002; Grundy and Sloggett 2003). The results show that high blood pressure decreases an individual's SWB by 0.973. Level of educational attainment is another important factor of SWB. The results find that education has positive and statistically significant relation with SWB which is in line with the studies of Frey and Stutzer 2002; Blanchflower and Oswald 2004b. Individuals with higher education experience a happier life (Frey and Stutzer 2002; Blanchflower and Oswald 2004b). At the individual level, education attainment may be related to unobservable traits such as motivation, or intelligence, which is driven education to positively correlate with SWB (Blanchflower and Oswald 2004b). In addition, the result is in line with the 2014 Ministry of Health, Mental Health survey, which reports that undergraduate school has the highest TMHI scores. The results show that if other independent variables are fixed, an additional year of education attainment increases an individual's SWB by 0.152. Education is the primary source of human capital. With education individuals are prone to have full-time employment and earn higher income. The relationship among education, full-time employment and income are related at some extent. Full-time employment are positively associated with SWB which is line with the study of Di Tella, MacCulloch, and Oswald 2001; Winkelmann and Winkelmann 1998; Frey and Stutzer 2002 2007; Stutzer 2004. They find that unemployed individuals report lower SWB scores than employed individuals about 5 to 15 percent since the unemployment may create depression and the loss of self-esteem. In line with Layard (2005), Lucas and Diener (2001), and Deneve and Copper (1998), the results show that extraversion personality dimension has statistically significant and positive relationship with SWB. Basic characteristic of extraversion is the tendency to experience positive emotions, for example, outgoing, energized by interaction, expressive and enthusiastic. The results show that income has no relationship with SWB which is in line with many studies including Easterlin (1995), Powdthavee (2005), and Diener and Biswas-Diener (2002). They suggest that evidence is weakly supportive of a happiness-income link. An individual's income has generally been related to happiness mostly at low levels of income. Once individuals have

sufficient level of income, the association between income and SWB appears to be relatively weak.

2.5.2 Social Factors

Social factors are added as explanatory variables. The OLS is used and the R^2 of the model is 2.52%. The regression results are shown in Table 2.25. The result from the OLS reveals that married is positive associated with SWB which is in line with the study of Blanchflower and Oswald (2004a) and especially stable and secure marriage and intimate relationship lead to increase SWB Frey and Stutzer (2002). For friendship, virtual friends who are not respondents close friends have a negative relationship with SWB at 95% level of significant. The coefficient implies that an increase in number of virtual friends who are not respondents close friends decrease the expected SWB by 0.014. In general, socializing with family and friends is positively associated with SWB (Pholphirul and Rukumnuaykit 2008; Powdthavee 2008; Haller and Hadler 2006; Putnum 1995; Bourdieu and Wacquant 1992). However, greater contact with virtual friends who are not respondents close friends is not indicative of better SWB. One of the reasons might be because the increase of ostentatious information by additional friends on Facebook (Mukesh and Gonçalves 2013). For neighborhood effect, individuals who live in inner Bangkok have negative and statistically significant relation with SWB because higher earnings of neighbors are associated with lower levels of self-reported happiness. There is suggestive evidence that the negative effect of increases in neighbors' earnings on own well-being is most likely caused by interpersonal preferences, that is, individuals having utility function that depend on relative consumption in addition to absolute consumption (Luttmer 2004).

Table 2.25 Regression results: Personal, Social factors and SWB

VARIABLES	(1) model 1	(2) model 2
age	-0.00573 (0.0200)	-0.0185 (0.0207)
male	1.029*** (0.373)	0.876** (0.377)
high_bloodpressure	-0.973* (0.555)	-1.065* (0.554)
education	0.152*** (0.0584)	0.163*** (0.0586)
full-time employment	0.340 (0.440)	0.439 (0.445)

VARIABLES	(1) model 1	(2) model 2
extraversion	6.112*** (0.542)	5.995*** (0.543)
income above average (rich)	0.114 (0.430)	-0.106 (0.465)
married		0.539 (0.409)
virtual_not_close_friends		-0.0139* (0.00832)
having_virtual_as_close_friend		-0.00200 (0.00559)
bangkok inner		-0.972** (0.470)
bangkok middle		-0.644 (0.460)
Constant	45.75*** (1.120)	47.59*** (1.290)
Observations	500	500
R-squared	0.236	0.252

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Source: Author

2.5.3 Types of Consumption

Consumption which includes material goods, experiential goods, and online social network goods, are added as explanatory variables. Model 3 to model 10 focus to estimate consumption purchased. The analysis in model 3 and model 4 are incorporated material goods purchased and material goods purchased by price levels. Control variables are personal and social factors, which are not reported and can be found complete regression results in the appendix 8. In particular, control variables are age, male, high blood pressure, education, full time employment, extraversion personality dimension, income above average (rich), married, virtual friends who are not respondents close friend, having virtual friends as close friends, and neighborhood effect. They are not reported because the main variables of the study are attempted to focus on. Nevertheless, differences in sign and significance of control variables are explained.

Using binary variable (purchased or not purchased), all types of consumption purchased have negative relationship with the SWB, but the result of experiential goods purchased does not seem to be significant. The regression results are shown in Table 2.26 and Table 2.27. Material goods are negative and significant associated with SWB, which is in line with other studies (Zimmermann 2014; Perez-Truglia 2013; Hudders and Pandelaere 2012; Linssen 2011; Deleire and Kalil 2010; Kasser 2003). Particularly,

the magnitude of the consumption of material goods has the largest negative effect on SWB, while consuming experiential goods has the least. According to the OLS, an increase in consuming of material goods, experiential goods, and OSN goods reduce SWB by 3.458, 0.669, and 2.951 point respectively. The results reveal that the purchases of each types of consumption lead SWB to decrease. When material, experiential, OSN goods are added separately as shown in Table 2.26, sign and significance of control variables are the same, except for model 6, age has negative and statistically significant relationship with SWB, full-time employment, and married have positive and statistically significant relationship with SWB. The analysis in model 9 and model 10 are incorporated material, experiential, and OSN goods purchased by binary variable of purchased and by price levels purchased respectively. When material, experiential, OSN goods are added simultaneously as shown in Table 2.27, sign and significance of control variables are the same, except that age has negative and statistically significant relationship with SWB in both model 9 and 10, full-time employment, and married have positive and statistically significant relationship with SWB in model 10. When simultaneously regress on the three goods, the negative effect of material and OSN goods on SWB are still statistically significant at 99% level and the effect of experiential goods is still not significant. An increase in consuming of material goods and OSN goods reduce SWB by 3.427 and 2.929 points respectively.

Analyzing types of consumption purchased by price, price-based variables are used. The regression results are shown in Table 2.26 and Table 2.27. For all price ranges, purchasing material goods have negative relationship with SWB. Scitovsky (1992) also supports the finding that the gain from consumption of material goods is temporary and fades with time, which is a short term happiness which can be adapted though time, and a person simply continues need a comfort once one becomes familiarized to it. Purchasing experiential goods at P1 and P2 lead to have positive relationship with SWB while P3 and P4 show significant negative relationship. Experiential purchases provide more happiness than material purchases because of the three reasons. First, experiences are more open to positive reinterpretation. Experiential goods have adaptation speed lower than other goods (Nicolao, Irwin and Goodman 2009; Van Boven 2005; Van Boven and Gilovich 2003; Easterlin 2003). The

satisfaction for experiential goods, such as music, literature, and art, are less likely to be adapted quickly, compared to other material goods, such as automobile. Second, experiences are less likely to disadvantageous comparisons. Third, experiences are more prone to develop successful social relationships. DeLeire and Kalil (2010) agree that experiential goods are associated with social connection. Life experiences help individuals feel closer to others, and that bring us to have higher SWB. However, one of the possible reasons for negative results is that questionnaire respondents might have bad experience or negative purchases outcomes from any types of experiential goods and that would last long (Nicolao, Irwin and Goodman 2009). Considering OSN goods purchased at different price ranges, the results show that purchasing OSN goods is strongly and negatively associated with SWB in particular at P2, P3, and P4. According to the descriptive statistics in Chapter4, 59% of questionnaire respondents purchase online social network goods for modern and to upgrade their status. The reason for negative effect of consuming OSN goods can be that the questionnaire respondents purchase OSN goods to follow the current trends and fashion implying that OSN goods may be considered as material goods. As discussed prior, material goods yield a significantly negative relationship to SWB.

Table 2.26 Regression results: Each Types of Consumption and SWB

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
Controls	Yes	Yes	Yes	Yes	Yes	Yes
matP2purchased		-1.206** (0.487)				
matP3purchased		-1.517*** (0.397)				
matP4purchased		-1.720*** (0.356)				
matP5purchased		-0.559 (0.364)				
matP6purchased		-1.456 (1.043)				
matpurchased	-3.458*** (0.981)					
exppurchased			-0.669 (0.842)			
expP1purchased				0.0141 (0.447)		
expP2purchased				0.211 (0.302)		
expP3purchased				-0.751** (0.305)		
expP4purchased				-6.028*** (0.365)		
expP5purchased				-0.119		

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6 (0.342)	(5) model 7 -2.951*** (0.463)	(6) model 8 -1.558*** (0.408) -1.751*** (0.360) -1.562*** (0.355) 0.849 (1.650)
osnpurchased						
osnP2purchased						
osnP3purchased						
osnP4purchased						
osnP5purchased						
Constant	51.04*** (1.608)	51.12*** (1.384)	48.30*** (1.569)	48.80*** (1.137)	50.79*** (1.339)	50.41*** (1.308)
Observations	500	500	500	500	500	500
R-squared	0.271	0.323	0.253	0.529	0.310	0.331

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

Table 2.27 Regression results: All Types of Consumption Simultaneous and SWB

VARIABLES	(1) model 9	(2) model 10
Controls	Yes	Yes
matP2purchased		-1.370*** (0.364)
matP3purchased		-1.521*** (0.296)
matP4purchased		-0.858*** (0.268)
matP5purchased		-0.864*** (0.271)
matP6purchased		-1.575** (0.773)
expP1purchased		0.128 (0.403)
expP2purchased		-0.128 (0.272)
expP3purchased		-0.223 (0.278)
expP4purchased		-5.825*** (0.329)
expP5purchased		-0.218 (0.308)
osnP2purchased		-1.460*** (0.306)
osnP3purchased		-1.430*** (0.281)
osnP4purchased		-1.530*** (0.264)
osnP5purchased		-0.603 (1.235)
matpurchased	-3.427*** (0.944)	
exppurchased	-0.218 (0.804)	
osnpurchased	-2.929*** (0.461)	
Constant	54.42*** (1.819)	54.34*** (1.163)
Observations	500	500

VARIABLES	(1) model 9	(2) model 10
R-squared	0.328	0.641

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1
 Source: Author

2.5.4 Psychological processes

SWB are regressed on psychological processes, which are social comparison, adaptation, and aspiration from each types of consumption. The psychological processes are regressed on model 11 to model 40. Each price range is taken into account because the psychological processes might depend not only on types of consumption but also the price. Control variables are personal and social factors.

Regarding to Table 2.28, individuals who purchase material, experiential, and OSN goods by price based because of social comparison has strongly negative associated with SWB as shown in model 12, 14, and 16. In line with many studies, for example, Scotchmer (2005); Frank (1999); Gali (1994), and Duesenberry (1949), social comparison creates negative effect to SWB in term of driving respondents to create desires or needs to have more and consume more. However, the results from model 11 shows that purchasing material goods because of social comparison at price P2, P3, and P4 are positive and statistically significant with individuals' SWB. The magnitudes are small though. The reasons might be because questionnaire respondents may not report their true inner feelings. According to Powdthavee (2007), they may overstate their happiness level over an interviewer in order to maintain their self-esteem or because of ego-defense mechanisms.

Table 2.28 Regression results: Social Comparison

VARIABLES	(1) model 11	(2) model 12	(3) model 13	(4) model 14	(5) model 15	(6) model 16
Controls	Yes	Yes	Yes	Yes	Yes	Yes
		(373.2)		(0.351)		(0.344)
matP3purchased		-417.1		-1.618***		-1.461***
		(433.0)		(0.285)		(0.278)
matP4purchased		-227.2		-0.960***		-0.860***
		(480.8)		(0.259)		(0.250)
matP5purchased		-657.0		-0.792***		-0.789***
		(468.0)		(0.261)		(0.256)
matP6purchased		-1,549		-1.729**		-1.600**

VARIABLES	(1) model 11	(2) model 12	(3) model 13	(4) model 14	(5) model 15	(6) model 16
expP1purchased		(1,689) 0.0865 (0.399)		(0.742) -1,312*** (316.2)		(0.725) 0.0156 (0.377)
expP2purchased		-0.0880 (0.268)		-2,062*** (459.8)		-0.0668 (0.254)
expP3purchased		-0.232 (0.275)		-1,252** (498.6)		-0.331 (0.261)
expP4purchased		-5.737*** (0.332)		-798.9 (761.7)		-5.502*** (0.310)
expP5purchased		-0.223 (0.305)		-1,541 (2,016)		-0.0800 (0.289)
osnP2purchased		-1.420*** (0.303)		-1.531*** (0.295)		-2,187*** (505.1)
osnP3purchased		-1.439*** (0.277)		-1.029*** (0.285)		-1,781*** (412.5)
osnP4purchased		-1.599*** (0.261)		-1.533*** (0.255)		-1,859*** (334.4)
osnP5purchased		-0.374 (1.222)		-0.597 (1.185)		-820.5 (2,366)
matP2socialcomparison	0.00119** (0.000489)	-1.583*** (0.374)				
matP3socialcomparison	0.00142*** (0.000388)	-0.417 (0.434)				
matP4socialcomparison	0.00173*** (0.000350)	-0.227 (0.482)				
matP5socialcomparison	0.000436 (0.000351)	-0.658 (0.469)				
matP6socialcomparison	0.00163 (0.00100)	-1.552 (1.694)				
matpurchased	-1.001 (0.990)		-2.929*** (0.756)		-3.303*** (0.933)	
exppurchased	-0.347 (0.782)		1.268 (0.832)		-0.117 (0.797)	
osnpurchased	-3.041*** (0.443)		-2.453*** (0.372)		-1.299* (0.677)	
expP1socialcomparison			0.000311 (0.000530)	-1.315*** (0.317)		
expP2socialcomparison			0.000165 (0.000292)	-2.067*** (0.461)		
expP3socialcomparison			0.000526* (0.000297)	-1.255** (0.500)		
expP4socialcomparison			0.00590*** (0.000350)	-0.795 (0.763)		
expP5socialcomparison			0.000148 (0.000327)	-1.544 (2.020)		
osnP2socialcomparison					0.00130** *	-2.191***
osnP3socialcomparison					(0.000428) 0.00129** *	(0.506) -1.784***
osnP4socialcomparison					(0.000415) 0.000932* *	(0.414) -1.862***
osnP5socialcomparison					(0.000472) -0.00136 (0.00164)	(0.335) -0.821 (2.371)
Constant	49.25*** (2.140)	4,482** (1,937)	46.42*** (1.686)	7,017*** (2,141)	52.28*** (2.851)	6,701*** (2,418)
Observations	500	500	500	500	500	500
R-squared	0.387	0.656	0.581	0.674	0.352	0.690

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

According to the OLS regression results in Table 2.29 and 2.30, the short adaptation periods of material goods at P2, P3, and P4 have positive and statistically significantly associated with SWB comparing to the long adaptation periods. However, the short adaptation periods of experiential goods at P1, P2, and P3 have negative and statistically significantly associated with SWB comparing to the long adaptation periods as expected. The OLS results show that the short adaptation periods of OSN goods at P2, P3, and P4 also have negative and statistically significantly associated with SWB comparing to the long adaptation periods as expected. The longer time individuals adapt with the purchased goods is better for their SWB. Therefore, it can be concluded that the short adaptation periods for all of the three types of consumption are significantly and negatively correlated with SWB.

Table 2.29 Regression results: Adaptation

VARIABLES	(1) model 17	(2) model 18	(3) model 19	(4) model 20	(5) model 21	(6) model 22
Controls	Yes	Yes	Yes	Yes	Yes	Yes
matpurchased	-0.999 (0.990)		-0.981 (0.995)		-2.929*** (0.756)	
exppurchased	-0.347 (0.782)		-0.472 (0.776)		1.270 (0.832)	
osnpurchased	-3.041*** (0.443)		-2.899*** (0.440)		-2.453*** (0.372)	
matP2adaptation1			-0.337 (0.996)	-0.708 (0.785)		
matP2adaptation2			-0.492 (0.459)	-0.141 (0.361)		
matP2adaptation3			1.072 (0.687)	0.842 (0.542)		
matP2adaptation4			-0.243 (0.880)	0.00705 (0.696)		
matP3adaptation1			-1.592** (0.761)	-1.638 (1.253)		
matP3adaptation2			-0.288 (0.558)	-0.532 (0.719)		
matP3adaptation3			1.036** (0.424)	-0.394 (0.952)		
matP3adaptation4			0.846 (0.667)	-0.530 (1.155)		
matP4adaptation1			4.292*** (1.447)	0.594 (1.164)		
matP4adaptation2			-3.585*** (1.263)	-0.822 (1.008)		
matP4adaptation3			-0.706 (0.515)	0.229 (0.411)		
o.matP4adaptation4			-	-		
matP5adaptation1			-2.297 (1.885)	-1.787 (1.485)		
o.matP5adaptation2			-	-		
o.matP5adaptation3			-	-		
matP5adaptation4			2.297 (1.885)	1.788 (1.485)		

VARIABLES	(1) model 17	(2) model 18	(3) model 19	(4) model 20	(5) model 21	(6) model 22
matP6adaptation1			0.00141 (0.000992)	0.00153* (0.000780)		
o.matP6adaptation2			-	-		
o.matP6adaptation3			-	-		
o.matP6adaptation4			-	-		
matP2purchased		-769.7 (487.0)				-1.379*** (0.358)
matP3purchased		-499.8 (447.3)		-3,089 (3,582)		-1.546*** (0.293)
matP4purchased		-950.6 (961.9)				-0.913*** (0.264)
o.matP5purchased		-		-		
o.matP6purchased		-		-		
expP1purchased		0.0783 (0.404)		0.0509 (0.407)		-1,121** (500.4)
expP2purchased		-0.137 (0.271)		-0.146 (0.276)		-4,069*** (1,436)
expP3purchased		-0.263 (0.278)		-0.289 (0.281)		-2,951** (1,318)
expP4purchased		-5.731*** (0.332)		-5.753*** (0.341)		-1,497 (2,071)
expP5purchased		-0.198 (0.309)		-0.172 (0.314)		
osnP2purchased		-1.429*** (0.306)		-1.398*** (0.309)		-1.438*** (0.303)
osnP3purchased		-1.374*** (0.283)		-1.364*** (0.286)		-1.497*** (0.281)
osnP4purchased		-1.526*** (0.264)		-1.532*** (0.267)		-1.510*** (0.261)
osnP5purchased		-0.572 (1.234)		-0.547 (1.252)		-0.692 (1.215)
matP2adaptation_s	0.00119** (0.000489)	-0.771 (0.488)				
matP3adaptation_s	0.00141*** (0.000388)	-0.499 (0.448)				
matP4adaptation_s	0.00173*** (0.000349)	-0.952 (0.964)				
matP5adaptation_s	0.000435 (0.000350)	0.000917*** (0.000272)				
matP6adaptation_s	0.00163 (0.00100)	0.00147* (0.000775)				
o.matP2purchased				-		
o.matP4purchased				-		
expP1adaptation_s					0.000314 (0.000530)	-1.124** (0.501)
expP2adaptation_s					0.000165 (0.000292)	-4.077*** (1.438)
expP3adaptation_s					0.000526* (0.000297)	-2.957** (1.320)
expP4adaptation_s					0.00590*** (0.000350)	-1.494 (2.076)
expP5adaptation_s					0.000148 (0.000327)	0.000236 (0.000304)
matP5purchased						-0.850*** (0.268)
matP6purchased						-1.455* (0.763)
o.expP5purchased						-
Constant	49.25*** (2.140)	2,269** (1,137)	49.87*** (2.183)	3,138 (3,582)	46.41*** (1.686)	9,687*** (2,823)

VARIABLES	(1) model 17	(2) model 18	(3) model 19	(4) model 20	(5) model 21	(6) model 22
Observations	500	500	500	500	500	500
R-squared	0.387	0.645	0.417	0.648	0.581	0.656

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1
 Source: Author

Table 2.30 Regression results: Adaptation (continue)

VARIABLES	(1) model 23	(2) model 24	(3) model 25	(4) model 26	(5) model 27	(6) model 28
Controls	Yes	Yes	Yes	Yes	Yes	Yes
matP2purchased		-1.203*** (0.357)		-1.338*** (0.362)		-1.473*** (0.358)
matP3purchased		-1.507*** (0.291)		-1.490*** (0.295)		-1.475*** (0.287)
matP4purchased		-0.979*** (0.265)		-0.887*** (0.267)		-0.854*** (0.261)
matP5purchased		-0.844*** (0.265)		-0.828*** (0.271)		-0.823*** (0.267)
matP6purchased		-1.263* (0.759)		-1.594** (0.769)		-1.615** (0.744)
expP1purchased		-295.5 (4,160)		0.143 (0.400)		0.0322 (0.391)
expP2purchased		-6.679 (4,857)		-0.139 (0.271)		-0.140 (0.264)
expP3purchased		-9,314*** (2,970)		-0.161 (0.277)		-0.0900 (0.273)
o.expP4purchased		-				
o.expP5purchased		-				
osnP2purchased		-1.426*** (0.300)		-2,292** (961.7)		-627.8 (3,827)
osnP3purchased		-1.513*** (0.281)		-1,984** (953.8)		-11,631*** (3,769)
osnP4purchased		-1.486*** (0.259)		274.3 (1,212)		
osnP5purchased		-0.403 (1.210)				
expP1adaptation1	-0.118 (0.685)	-0.775 (1.313)				
expP1adaptation2	-0.289 (0.519)	-0.285 (1.149)				
expP1adaptation3	0.844*** (0.316)	0.717 (1.015)				
expP1adaptation4	-0.436 (0.506)	0.0469 (1.117)				
expP2adaptation1	-3.389** (1.639)	-5.496** (2.206)				
expP2adaptation2	0.915 (1.637)	-1.605 (2.220)				
expP2adaptation3	0.418 (0.743)	-0.773 (1.088)				
expP2adaptation4	2.058*** (0.661)	1.182 (1.016)				
expP3adaptation1	2.318 (1.522)	-2.949 (2.021)				
expP3adaptation2	-0.538 (1.468)	-3.505** (1.656)				
expP3adaptation3	-1.475 (1.066)	-2.657** (1.099)				
expP3adaptation4	-0.305 (0.571)	-0.221 (0.545)				
expP4adaptation1	8.764** (3.549)	6.410* (3.298)				
expP4adaptation2	-3.953* (2.207)	-2.066 (2.046)				
expP4adaptation3	-3.378	-3.547*				

VARIABLES	(1) model 23	(2) model 24	(3) model 25	(4) model 26	(5) model 27	(6) model 28
expP4adaptation4	(2.196) -1.427 (1.399)	(2.022) -0.791 (1.292)				
expP5adaptation1	(1.545) -0.327 (1.545)	(1.421) -0.935 (1.421)				
o.expP5adaptation2	-	-				
o.expP5adaptation3	-	-				
expP5adaptation4	0.327 (1.545)	0.936 (1.421)				
matpurchased	-2.885*** (0.739)		-3.303*** (0.933)		-3.149*** (0.916)	
exppurchased	1.014 (0.816)		-0.117 (0.797)		-0.194 (0.784)	
osnpurchased	-2.306*** (0.368)		-1.295* (0.677)		-1.050 (0.675)	
osnP2adaptation_s			0.00130*** (0.000428)	-2.295** (0.964)		
osnP3adaptation_s			0.00129*** (0.000414)	-1.986** (0.956)		
osnP4adaptation_s			0.000935** (0.000471)	0.276 (1.214)		
osnP5adaptation_s			-0.00136 (0.00164)	0.000711 (0.00123)		
expP4purchased				-5.817*** (0.327)		-5.785*** (0.318)
expP5purchased				-0.224 (0.308)		-0.154 (0.299)
o.osnP5purchased				-		-
osnP2adaptation1					1.695 (1.479)	-0.696 (1.604)
osnP2adaptation2					-2.398* (1.281)	-0.860 (1.397)
osnP2adaptation3					-1.606 (1.206)	-0.695 (1.299)
osnP2adaptation4					2.312*** (0.672)	1.624* (0.851)
osnP3adaptation1					1.341 (1.902)	-2.436 (2.152)
osnP3adaptation2					-0.00525 (1.252)	-3.993*** (1.229)
osnP3adaptation3					-1.190 (1.261)	-3.117** (1.221)
osnP3adaptation4					-0.144 (0.696)	-2.108*** (0.756)
osnP4adaptation1					7.492** (2.910)	8.281*** (2.153)
osnP4adaptation2					-2.804 (1.743)	-2.262* (1.297)
osnP4adaptation3					-2.226 (1.449)	-3.362*** (1.075)
osnP4adaptation4					-2.462*** (0.737)	-2.658*** (0.542)
osnP5adaptation1					-0.590 (3.315)	1.458 (2.484)
o.osnP5adaptation2					-	-
o.osnP5adaptation3					-	-
osnP5adaptation4					0.588 (3.316)	-1.458 (2.485)
o.osnP4purchased						-
Constant	45.01*** (1.775)	16,336** (7,015)	52.28*** (2.850)	4,051** (1,766)	52.31*** (3.078)	12,312** (5,281)
Observations	500	500	500	500	500	500

VARIABLES	(1) model 23	(2) model 24	(3) model 25	(4) model 26	(5) model 27	(6) model 28
R-squared	0.611	0.679	0.352	0.649	0.391	0.680

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

According to Table 2.31 and 2.32, the results show that the aspiration or the desire to purchase more of material goods at P3, and P5, and OSN goods at for P2, P3, P4 create negative and significant impact to SWB. However, the results show that aspiration to continue to purchase experiential goods mostly brings positive and significant relationship to SWB which might be because experiential goods are more open to positive reinterpretation and are more prone to develop successful social relationships.

Table 2.31 Regression results: Aspiration

VARIABLES	(1) model 29	(2) model 30	(3) model 31	(4) model 32	(5) model 33	(6) model 34
Controls	Yes	Yes	Yes	Yes	Yes	Yes
matpurchased	-0.999 (0.990)		-1.133 (0.982)		-2.929*** (0.756)	
exppurchased	-0.348 (0.782)		-0.146 (0.783)		1.268 (0.832)	
osnpurchased	-3.041*** (0.443)		-2.949*** (0.448)		-2.453*** (0.372)	
mat2aspiration1			0.699 (0.939)	0.0598 (1.795)		
mat2aspiration2			0.131 (0.464)	-0.282 (1.533)		
mat2aspiration3			0.0155 (0.585)	-0.989 (1.583)		
mat2aspiration4			-0.844 (0.996)	-2.105 (1.801)		
mat3aspiration1			1.501 (0.940)	3.543 (2.249)		
mat3aspiration2			0.236 (0.458)	2.479 (2.037)		
mat3aspiration3			-1.307** (0.581)	1.888 (2.075)		
mat3aspiration4			-0.429 (0.948)	3.092 (2.228)		
mat4aspiration1			1.109 (1.038)	0.932 (0.815)		
mat4aspiration2			0.466 (0.510)	-0.394 (0.403)		
mat4aspiration3			-0.703 (0.562)	0.125 (0.441)		
mat4aspiration4			-0.871 (0.942)	-0.663 (0.735)		
mat5aspiration1			-0.324 (0.944)	-0.526 (0.774)		
mat5aspiration2			0.975* (0.581)	0.580 (0.455)		
mat5aspiration3			1.402** (0.583)	0.407 (0.463)		
mat5aspiration4			-2.051* (1.176)	-0.460 (0.930)		
mat6aspiration1			-0.00715* (0.00388)	-0.00680** (0.00309)		

VARIABLES	(1) model 29	(2) model 30	(3) model 31	(4) model 32	(5) model 33	(6) model 34
mat6aspiration2			-6.453 (3.953)	-3.670 (3.098)		
mat6aspiration3			-5.555 (4.374)	-4.097 (3.429)		
mat6aspiration4			12.01 (7.971)	7.772 (6.249)		
mat2purchased		-1,246 (845.5)		-3,310 (6,247)		-1.318*** (0.348)
mat3purchased		41.10 (853.4)		10,977 (8,239)		-1.683*** (0.284)
mat4purchased		-647.1 (851.3)				-0.957*** (0.257)
mat5purchased		-585.7 (1,133)				-0.744*** (0.260)
o.mat6purchased		-		-		
exp1purchased		0.128 (0.404)		0.199 (0.412)		-2,178*** (400.1)
exp2purchased		-0.133 (0.273)		-0.188 (0.275)		-2,453*** (777.5)
exp3purchased		-0.222 (0.278)		-0.253 (0.282)		-1,517** (735.3)
exp4purchased		-5.807*** (0.332)		-5.845*** (0.344)		-2,605 (1,627)
exp5purchased		-0.187 (0.311)		-0.0754 (0.314)		-3,385* (1,975)
osn2purchased		-1.428*** (0.309)		-1.437*** (0.316)		-1,550*** (0.293)
osn3purchased		-1.438*** (0.282)		-1.476*** (0.288)		-0,995*** (0.277)
osn4purchased		-1.585*** (0.267)		-1.590*** (0.268)		-1,551*** (0.253)
osn5purchased		-0.576 (1.238)		-0.359 (1.247)		-0.541 (1.183)
mat2aspiration	0.00119** (0.000489)	-1.247 (0.847)				
mat3aspiration	0.00141*** (0.000387)	0.0428 (0.855)				
mat4aspiration	0.00173*** (0.000349)	-0.648 (0.853)				
mat5aspiration	0.000435 (0.000350)	-0.586 (1.135)				
mat6aspiration	0.00163 (0.00100)	0.00158** (0.000777)				
o.mat4purchased				-		
o.mat5purchased				-		
exp1aspiration					0.000311 (0.000530)	-2.182*** (0.401)
exp2aspiration					0.000165 (0.000292)	-2.458*** (0.779)
exp3aspiration					0.000526* (0.000297)	-1.519** (0.737)
exp4aspiration					0.00590*** (0.000350)	-2.605 (1.630)
exp5aspiration					0.000148 (0.000327)	-3.392* (1.979)
mat6purchased						-1.663** (0.738)
Constant	49.25*** (2.140)	2.486 (1,906)	53.88*** (4.366)	-7,618 (10,419)	46.42*** (1.686)	12,187*** (2,791)
Observations	500	500	500	500	500	500
R-squared	0.387	0.644	0.421	0.656	0.581	0.678

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

Table 2.32 Regression results: Aspiration(Continue)

VARIABLES	(1) model 35	(2) model 36	(3) model 37	(4) model 38	(5) model 39	(6) model 40
Controls	Yes	Yes	Yes	Yes	Yes	Yes
mat2purchased		-1.301*** (0.349)		-1.562*** (0.351)		-1.566*** (0.350)
mat3purchased		-1.666*** (0.284)		-1.466*** (0.285)		-1.477*** (0.286)
mat4purchased		-1.029*** (0.258)		-0.884*** (0.258)		-0.799*** (0.256)
mat5purchased		-0.736*** (0.259)		-0.777*** (0.264)		-0.760*** (0.261)
mat6purchased		-1.618** (0.734)		-1.205 (0.744)		-1.257* (0.738)
exp1purchased		13,289** (5,404)		0.128 (0.387)		0.00957 (0.390)
o.exp2purchased		-				
o.exp3purchased		-				
o.exp4purchased		-				
o.exp5purchased		-				
osn2purchased		-1.542*** (0.291)		-2,047*** (624.2)		17,510*** (3,865)
osn3purchased		-1.070*** (0.301)		-1,703*** (477.9)		
osn4purchased		-1.502*** (0.253)		-1,513*** (369.2)		9,008*** (2,657)
osn5purchased		-0.522 (1.173)				
exp1aspiration1	0.479 (0.979)	3.967** (1.812)				
exp1aspiration2	0.580 (0.371)	3.724*** (1.326)				
exp1aspiration3	0.534 (0.410)	3.936*** (1.335)				
exp1aspiration4	-1.593*** (0.454)	1.690 (1.356)				
exp2aspiration1	-3.931** (1.577)	-3.964*** (1.455)				
exp2aspiration2	2.423*** (0.597)	2.613*** (0.551)				
exp2aspiration3	1.342** (0.681)	1.481** (0.631)				
exp2aspiration4	0.169 (0.854)	-0.128 (0.785)				
exp3aspiration1	-0.776 (1.768)	-0.858 (1.636)				
exp3aspiration2	0.610 (0.653)	0.713 (0.602)				
exp3aspiration3	0.856 (0.734)	0.792 (0.682)				
exp3aspiration4	-0.689 (0.870)	-0.647 (0.801)				
exp4aspiration1	-5.811 (3.680)	-4.198 (3.456)				
exp4aspiration2	3.761** (1.757)	2.378 (1.675)				
exp4aspiration3	2.059 (2.121)	1.828 (1.969)				
o.exp4aspiration4	-	-				
exp5aspiration1	1.674 (3.083)	2.199 (2.845)				
exp5aspiration2	0.325 (0.994)	0.487 (0.923)				
o.exp5aspiration3	-	-				

VARIABLES	(1) model 35	(2) model 36	(3) model 37	(4) model 38	(5) model 39	(6) model 40
exp5aspiration4	-1.998 (2.597)	-2.685 (2.392)				
matpurchased	-3.276*** (0.732)		-3.303*** (0.933)		-3.367*** (0.933)	
exppurchased	0.925 (0.802)		-0.117 (0.797)		-0.178 (0.794)	
osnpurchased	-2.191*** (0.363)		-1.298* (0.677)		-1.195* (0.677)	
osn2aspiration			0.00130*** (0.000428)	-2.051*** (0.626)		
osn3aspiration			0.00129*** (0.000415)	-1.706*** (0.479)		
osn4aspiration			0.000934** (0.000472)	-1.516*** (0.370)		
osn5aspiration			-0.00136 (0.00164)	0.000686 (0.00119)		
exp2purchased				-0.159 (0.261)		-0.104 (0.259)
exp3purchased				-0.175 (0.268)		-0.120 (0.269)
exp4purchased				-5.703*** (0.317)		-5.750*** (0.315)
exp5purchased				-0.171 (0.299)		-0.113 (0.296)
o.osn5purchased				-		-
osn2aspiration1					-0.0743 (1.947)	8.386*** (2.146)
osn2aspiration2					-0.853 (1.487)	3.716** (1.437)
osn2aspiration3					1.212 (0.970)	3.406*** (0.988)
osn2aspiration4					-0.283 (0.757)	2.041** (0.815)
osn3aspiration1					-4.513 (3.265)	-6.704*** (2.390)
osn3aspiration2					2.305 (1.566)	2.879** (1.141)
osn3aspiration3					1.864 (1.183)	2.701*** (0.867)
osn3aspiration4					0.346 (1.032)	1.127 (0.754)
osn4aspiration1					0.263 (1.139)	4.258*** (1.259)
osn4aspiration2					0.217 (0.905)	2.573*** (0.947)
osn4aspiration3					0.537 (0.583)	1.672** (0.675)
osn4aspiration4					-1.017** (0.475)	0.526 (0.595)
osn5aspiration1					0.354 (3.301)	1.713 (2.402)
osn5aspiration2					-0.355 (3.302)	-1.712 (2.402)
o.osn5aspiration3					-	-
o.osn5aspiration4					-	-
o.osn3purchased						-
Constant	41.19*** (2.532)	-13,248** (5,405)	52.28*** (2.851)	5,317*** (836.5)	52.30*** (3.207)	-26,472*** (4,789)
Observations	500	500	500	500	500	500
R-squared	0.625	0.690	0.352	0.672	0.377	0.687

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Author

2.5.5 Feeling debt burden (FDB)

To the extent that the effect of OSN goods on SWB is due to feeling burden that are associated with it. FDB is added as explanatory variables hierarchically. The control variables are personal and social factors. The regression results are shown in Table 2.33, 5.10, and 5.11. According to the OLS, an increase in FDB on OSN goods decreases SWB at 99% level of significant which can be seen from Model 42, 44, and 46 at price P2, P3, P4. When FDB on OSN goods are added, sign and significance of control variables are the same, except for education and virtual friend. Education and virtual friend increase significant level from $P \leq 0.05$ to $P \leq 0.01$.

Table 2.33 Regression results: FDB on OSN goods and SWB

VARIABLES	(1) model 41	(2) model 42	(3) model 43	(4) model 44	(5) model 45	(6) model 46
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Matpurchased	-3.421*** (0.943)	-3.160*** (0.905)				
osnP2_fdb_total		-2.402*** (0.439)		-2.221*** (0.427)		-2.388*** (0.444)
osnP3_fdb_total		-2.003*** (0.354)		-2.082*** (0.341)		-2.058*** (0.361)
osnP4_fdb_total		-1.978*** (0.334)		-2.060*** (0.322)		-2.000*** (0.338)
osnP5_fdb_total		0.487 (2.661)		-0.708 (2.585)		0.335 (2.695)
osn_fdb_total	-2.941*** (0.458)		-3.070*** (0.441)		-2.942*** (0.466)	
matP2purchased			-1.314*** (0.465)	-1.308*** (0.450)		
matP3purchased			-1.467*** (0.379)	-1.423*** (0.365)		
matP4purchased			-1.811*** (0.340)	-1.663*** (0.327)		
matP5purchased			-0.472 (0.348)	-0.505 (0.338)		
matP6purchased			-1.696* (0.995)	-1.804* (0.955)		
expurchased					-0.157 (0.814)	-0.205 (0.781)
Constant	54.20*** (1.621)	53.58*** (1.520)	54.55*** (1.409)	53.95*** (1.311)	50.95*** (1.567)	50.68*** (1.487)
Observations	500	500	500	500	500	500
R-squared	0.328	0.386	0.385	0.439	0.310	0.371

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Author

Table 2.34 Regression results: FDB on OSN goods and SWB (Continue 1)

VARIABLES	(1) model 47	(2) model 48	(3) model 49	(4) model 50	(5) model 51	(6) model 52
Controls	Yes	Yes	Yes	Yes	Yes	Yes
exp1purchased	0.163 (0.430)	0.314 (0.405)				
exp2purchased	-0.0147	0.0261				

VARIABLES	(1) model 47	(2) model 48	(3) model 49	(4) model 50	(5) model 51	(6) model 52
exp3purchased	(0.293) -0.531*	(0.273) -0.206				
exp4purchased	(0.295) -5.859***	(0.284) -5.841***				
exp5purchased	(0.352) -0.0424	(0.328) 0.0634				
osn2_fdb_total	(0.330)	(0.308) -2.161***		(0.464) -2.291***		(0.799) -2.971***
osn3_fdb_total		(0.293) -1.838***		(0.405) -1.932***		(0.960) -2.228**
osn4_fdb_total		(0.263) -1.904***		(0.422) -1.816***		(0.700) -2.529***
osn5_fdb_total		(2.098) -1.342		(2.697) 0.427		(3.270) -0.797
osn_fdb_total	-2.387*** (0.377)				-1.219* (0.682)	
osnpurchased			-2.951*** (0.463)	-0.440 (0.603)		
o.osn_fdb_tota l			-			
osn2purchased					-1.304*** (0.432)	0.608 (0.714)
osn3purchased					-1.374*** (0.417)	0.116 (0.940)
osn4purchased					-0.998** (0.475)	0.619 (0.714)
osn5purchased					1.103 (1.653)	1.234 (1.949)
Constant	51.21*** (1.158)	50.84*** (1.054)	50.79*** (1.339)	50.73*** (1.297)	51.01*** (1.348)	50.39*** (1.272)
Observations	500	500	500	500	500	500
R-squared	0.565	0.624	0.310	0.371	0.335	0.373

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

Table 2.35 Regression results: FDB on OSN goods and SWB (Continue 2)

VARIABLES	(1) model 53	(2) model 54	(3) model 55	(4) model 56
Controls	Yes	Yes	Yes	Yes
mat2purchased			-1.396*** (0.365)	-1.474*** (0.350)
mat3purchased			-1.521*** (0.296)	-1.546*** (0.284)
mat4purchased			-0.876*** (0.268)	-0.772*** (0.256)
mat5purchased			-0.837*** (0.272)	-0.836*** (0.263)
mat6purchased			-1.566** (0.773)	-1.441* (0.740)
exp1purchased			0.127 (0.403)	0.129 (0.385)
exp2purchased			-0.164 (0.273)	-0.172 (0.260)
exp3purchased			-0.227 (0.278)	-0.115 (0.269)
exp4purchased			-5.792*** (0.331)	-5.800*** (0.314)
exp5purchased			-0.225 (0.308)	-0.251 (0.297)
osn2purchased			-1.335*** (0.325)	-0.0695 (0.534)
osn3purchased			-1.251***	0.595

VARIABLES	(1) model 53	(2) model 54	(3) model 55	(4) model 56
osn4purchased			(0.321) -1.255*** (0.356)	(0.689) 0.784 (0.521)
osn5purchased			-0.485 (1.239)	0.0242 (1.433)
osn_fdb_total			-0.592 (0.514)	
matpurchased	-3.427*** (0.944)	-3.187*** (0.907)		
exppurchased	-0.218 (0.804)	-0.224 (0.775)		
osnpurchased	-2.929*** (0.461)	-0.483 (0.599)		
osn2_fdb_total		-2.295*** (0.459)		-1.919*** (0.598)
osn3_fdb_total		-1.840*** (0.402)		-2.447*** (0.707)
osn4_fdb_total		-1.776*** (0.418)		-2.657*** (0.511)
osn5_fdb_total		0.630 (2.669)		-2.072 (2.413)
o.osn_fdb_total	-			
Constant	54.42*** (1.819)	54.13*** (1.759)	54.68*** (1.199)	54.42*** (1.111)
Observations	500	500	500	500
R-squared	0.328	0.387	0.642	0.677

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

2.5.6 Robustness check

Recoded TMHI

The TMHI is recoded into 3 categories, where 3 = better than average mental health (51-60), 2 = average mental health (44-50), and 1 = below average mental health (≤ 43). Then, the ordered probit (OP) is used. According to the recoded TMHI and using OP regression; the overall results do not improve much. Comparing to the OLS models, the OLS shows more significant variable results than using the OP. For personal factors (model 1), male and high blood pressure are two variables which both OLS and OP models show significance and coefficient signs. However, education and extraversion variables are not significant in OP but they are significant in OLS. When social factors are added (model 2), four variables are significant and have the same coefficient signs in both models which are male, high blood pressure, education, and Bangkok inner. However, there are two variables (extraversion, and virtual friends who are not respondents' close friends) which are not significant in OP but they are significant in

OLS model. As a result, OLS is superior to OP model and this study will continue to use the original OLS models. The results of the recode TMHI models and their proportional odds assumption test are shown in Appendix A9.1.

Sub-sample analyses

Age groups are divided into 3 groups, which are Baby Boomer (125 individuals), Generation X (195 individuals), and Generation Y (180 individuals). The results are shown in Appendix A9.2. Regarding to Baby Boomer Generation, male, education, full time employment, extraversion personality have positive and significant relationship with SWB while virtual friends, material, experiential and OSN goods purchased have negative and significant relationship with SWB. Regarding to Generation X, education, full time employment, and extraversion personality have positive and significant relationship with SWB whereas virtual friends who are not respondents' close friend and all the three consumption purchases show negative and significant results. Regarding to Generation Y, male and extraversion personality are positively associated with SWB. The living areas are highly correlated with SWB for Generation Y. Individuals who live in inner and middle Bangkok have negative relationship with SWB. In addition, three types of consumption are negatively associated with SWB. All in all, the analysis shows that different age group does not provide much different results in term of both significant levels and coefficient signs. Therefore, the study continues to use the OLS full model.

Use some interaction terms

One might concern that some variables may jointly involve SWB. Two interaction terms are tested, which are (1) between “material and experiential goods” and (2) between “material and OSN goods”. The results show in Appendix A9.3. The multicollinearity is tested. Both of the interaction terms show that “material and experiential goods” and “material and OSN goods” are high collinearity because their VIFs are more than 10. As a result, the interaction terms are not to be used.

Use number of temples and movie as proxies for neighborhood effects

In addition, number of temples and movie theaters in each EA are added as independent variables to observe whether they provide any significant relationship with the individuals SWB. Data is observed from Bangkok Metropolitan Administration (BMA) official website. The results show in Appendix A9.4. Number of temple in the EA provides positive and significant relationship with SWB as well as number of movie theaters, which implies that the more the temples and movie theaters lead individuals to have higher SWB. The reason can be because activities at temples and movie theaters create social interaction and bonding social relationship with each other.

Friends squared

The results show in Appendix A9.5 The significant variable for friendship types is only virtual friends square, which has negative relationship with SWB. By comparing to the original OLS models, the main results do not change. Unfortunately, the questionnaire collected debt data in term of dummies variables. As a result, debts squared are not able to compute. As a result, the original variables will continue to use.

To conclude, the main findings from the regressions are male, education, and full time employment have positive and statistically significant relationship with SWB. Virtual friends who are not respondents' close friend have negative and significant relationship with SWB. Each types of consumption has negative and significant associated with SWB. Feeling debt burden related with OSN goods shows negative and significant relationship with SWB. Social comparison associated with material goods has negative and significant relationship with SWB.

3 Consumption, Online Social Networking, and Subjective Well-being in Cosmopolitan Bangkok: A Sub-sample Analysis by Income Groups

After the entire sample has been applied, the sub-sample analysis by income groups is explored in this paper in order to cluster the data sets efficiently. The sub-sample analysis would help to analysis the results more efficiently by comparing the sub-sample with the other sample members.

3.1 Introduction

One of the key stimulations in the literature on income and happiness has been Easterlin's article (1974), initiating the paradox of real income growth in Western countries over the last fifty years. The hypothesis underlying economic analysis that wealth or economic well-being did not always bring a proportional increase in happiness has occurred since then.

The relationship between income and consumption has been explored for a long time by economists. Normally, the demands of goods are positively related to consumer's income. Income and consumption are fundamentally correlated with SWB, and it is important to understand the relationships between them. Firstly, expected future income is an important determinant of consumption for at least some households. At the same time, income remains an important determinant of consumption and it is available to support consumption in both the short and the long run. Secondly, the consumption of goods and services is a primary component of economic well-being and a primary indicator of living standards.

3.2 Literature review

Income and consumption are related. A once drop in income or expected income will lead to an immediate reduction in purchases. Assessing SWB through income makes us unable to conclude which spending goods can lead us to be happy. Consumption is used to make purchases. This means that consumption can lead us to observe how individuals allocate a certain sum of income (Kyrk 1950). As individuals

purchase things through their income, the effect of SWB is summed in bundle of goods. Therefore, individuals are hardly able to realize which goods convey them happiness. The SWB from income spent in one goods may be cancelled out with the negative effect of SWB from other goods. Diener and Biswas-Diener (2002) suggest that considering how individuals spend their income is important. Since consumption can be divided into meaningful categories, it can assist to understand which goods bring them happiness. Regarding to Meyer and Sullivan (2003), one can directly measure well-being through essential expenditure categories such as food and housing. Deleire and Kalil (2010) also concur that measured consumption makes researchers being able to observe how respondents live and assess their subjective well-being.

Empirical research on consumption behavior has been strongly influenced by Hall (1979) who examined the stochastic implications of the permanent income hypothesis (PIH). In the original version of Hall (1979), individual consumption follows a random walk. An individual alters consumption only when confronted with unpredictable changes in income. However, Campbell and Deaton (1989) state that PIH can explain the smoothness of consumption only when changes in income are mostly predictable. They use a number of univariate time series studies of aggregate income, including Nelson and Plosser (1982) and Campbell and Mankiw (1986), to support that the predictable component of income is small. Therefore, they argue that permanent income is much more volatile than consumption and, also does not explain its smoothness.

Expected changes in income are associated with expected changes in consumption. Campbell and Mankiw (1986) present the result that contrast to the simplest version of the PIH. Regarding their study, consumption is not a random walk, but should be expected to increase 0.5 percent when income is expected to rise by 1 percent. The strong connection between current income and consumption provides at least circumstantial evidence for "rule-of-thumb" behavior on the part of some individuals (Campbell and Mankiw 1989).

On the other hand, Cochrane (1994) supports still the PIH and indicates that PIH is a fair description of aggregate consumption behavior. This study uses bivariate co-integration and finds that the aggregate income is largely predictable given past consumption.

Generally, current income is different from long run level of income. Blundell and Preston (1998) show that consumption expenditures are well insulated from transitory movements. Therefore, permanent income is a more useful indicator than transitory income for thinking about consumption-income relationship.

The first quantities study on consumption patterns of households is done by Ernst Engel in 1857 (Dilek and Çolakoğlu 2011). The Engel curves show the proportion of the percentage change in expenditure on a consumption item to a percentage change in income (Ahcihoca and Ertek 2000). The Engel curves are important and useful for studies of household expenditures because the curves show the relationship between the equilibrium quantity purchased of a good and the level of income. In other words, they relate the share of household expenditure on individual goods to total expenditure. The shape of a consumer's Engel curve depends on the nature of the good, the nature of the consumer's tastes and the level at which commodity prices are held constant. Engel curves would show that the consumption of necessary goods does not change much in response to changes in income, but the consumption of luxury goods increases considerably with increases in income.

Nevertheless, Aaron and Friedman (1998) claim that more income will not lead to greater well-being once one's basic physical needs are met. Income helps individuals to achieve their goals. Working on goals also increases SWB by pursuing intrinsically rewarding goals (Aaron and Friedman 1998). Thus, income correlates weakly with SWB. In other word, income leads to well-being primarily to the extent that it enables individuals to use (or consume) their time more satisfying ways. Moreover, consumption of goods and services leads to greater SWB only when consumers are satisfied with those goods and services (Aaron and Friedman 1998).

Easterlin in 1974 conducts a test whether more riches had made Americans happier. In 1995, he claims that it looks as if individuals in the US yield 'flat of the curve', with additional income obtaining a small amount extra happiness. Easterlin (1995) suggests that there is approximately no trended nature of reported happiness, and the time series evidence is weakly supportive of a happiness-income link. Easterlin (1995) focuses on the question of does growth in incomes imply more happiness which aims to verify that the increase in income of all will not enlarge the happiness of all. He supports his belief by using survey data on more than past half century in regard to happiness, material norms and income. His study involves income growth and happiness through time series in Japan, the U.S. and Europe. He believes in the theory of relative utility and finds that happiness or subjective well-being changes directly with one's own income and oppositely with the incomes of others. Easterlin suggests that one should think of individuals as getting utility from a comparison of themselves with others close to them which is happiness is relative. Generally, one will consider himself richer if his income increases significantly while other individuals' income still stays the same. On the other hand, if his income is still the same but other income increases extensively. Undeniably, one will feel poorer. To confirm his idea, Easterlin presents his found evidence in the article by observed three main areas which are the United States, nine European countries, and Japan. They provide the same result that income growth in a society does not increase happiness. He believes that material aspirations move in the same way with the level of economic development because the actual society's income increases in the same direction and rate as the greater material norms. Then, the relationship between subjective well-being and income can be concluded as curvilinear and income has diminishing marginal returns.

In addition, Hudders and Pandelaere (2011) use a structural model to investigate the relationship between luxury consumption, materialism and cognitive and affective subjective well-being. They find that that luxury consumption affects materialistic consumers than less materialistic consumers. Regarding the materialistic consumer luxury consumption has a short run effect that leads to enhanced positive mood, diminished negative mood and increased satisfaction with life. Cai and Park (2014) use a panel dataset from rural China including subjective expectations of future income and

actual income in each wave to test the relationship between SWB and the income change. They find that SWB is affected by unanticipated rather than anticipated income, and is more influenced by permanent rather than transitory income shocks.

3.3 Data and methods

This paper uses cross-sectional data from the survey in Bangkok (n=500). The survey carried out during February and March 2015. Linear regression (OLS) is the model used and applies hierarchical regression models. Subjective well-being scores are regressed on personal factors which are age, gender, health, education, employment, personality, and income. Social factors include married, virtual friends who are not respondents close friends, having virtual friends who are respondents close friends and neighborhood effect.

First, SWB is regressed on personal factors.

$$SWB_i = X_i \beta + \varepsilon_i$$

where

i is an individual; $i = (1, \dots, 500)$

SWB_i is measured subjective well-being for individual i

X_i is a set of personal factors including age, gender, health, education, employment, and personality. Income is not included in the model because income subgroups are applied and income is ranked in terms of dummy variables. Every individual in the same income subgroup has the same dummy variables. Therefore, there is no differences to include income variable.

ε_i is an error term that subsumes the inability of human beings to communicate accurately the true well-being levels.

Second, SWB is regressed on personal and social factors.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + v_i$$

where

$Social_{ik}$ is social variables, where k = (married, friendship types, neighbour)

Third, SWB is regressed on personal, social factors and consumption.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + \sum \lambda_j Consumption_{ij} + \phi_i$$

where

$Consumption_{ij}$ is the purchased versus not purchased, different consumption categories entered the regression in terms of dummy variables, where j = (material, experiential, and OSN goods).

Specifically, the 10 models are applied to answer the research questions as showed below. The models justification can be found in Section 2.3.2.1.

Model 1	Personal Factors
Model 2	Personal + Social Factors
Model 3	Personal + Social Factors+ Mat purchased (binary; if purchase any Mat goods P2-P6 means purchase), P1 drops because everyone purchases.
Model 4	Personal + Social Factors+ Mat by prices (P2-P6), P1 drops because everyone purchases.
Model 5	Personal + Social Factors+ Exp purchased (binary; if purchase any Exp goods P1-P5 means purchase), P6 drops because no one purchases at price >1 million baht.
Model 6	Personal + Social Factors+ Exp by prices (P1-P5), P6 drops because no one purchases at price >1 million baht.
Model 7	Personal + Social Factors+ OSN purchased (binary; if purchase any OSN goods P2-P5 means purchase), P1 drops because no OSN goods

	sell <1,000 baht and P6 drop because no one buy at price>1 million baht.
Model 8	Personal + Social Factors+ OSN by prices (P2-P5), P1 drops because no OSN goods sell <1,000 baht and P6 drops because no one buy at price >1 million baht.
Model 9	Personal + Social Factors+ Mat purchased+ Exp purchased + OSN purchased
Model 10	Personal + Social Factors+ Mat purchased by prices + Exp purchased by prices + OSN purchased by prices

Justification of income sub-group

According to the response answers from the questionnaire, income can be separated into 5 groups. Sub-group 1 is individuals who earn more than 60,000 baht per month, representing 60 individuals. Sub-group 2 is individuals who earn between 50,000 - 60,000 baht per month. There are 73 individuals in this sub-group 2. Sub-group 3 is individuals who earn between 25,000 – 49,999 baht per month, which are 142 individuals. Sub-group 4 is individuals who earn between 15,000 – 24,999 baht per month. There are 137 individuals in this sub-group 4. Sub-group 5 is individuals who earn less than 15,000 baht per month, representing 88 individuals.

3.4 Results

The summary of regression results for all significant variables in all models is shown in Table 3.1 and the full regression results can be found in Appendix 10. For personal factors, the regression result from income sub-group 3, 4, and 5 shows that age has a strong negative relationship with SWB. As elderly individuals, they tend to be less happy than young people because they may leave alone and may not have social relationship. However, age does not seem to be significant at the higher income sub-group (1 and 2), which means that they do not seem to provide age as an important factor affecting SWB. One possible reason might be that aged people with higher income can spend their money with their friends and family. More money may bring more social activities. For income subgroup 3 and 5, male has positive and statistically

significant relationship with SWB meaning that at low income level male are happier than female. Individuals in high income subgroup (1, 2, and 3) concern about their high blood pressure which has negative and statistically significant relationship with SWB. On the other hand, the results find no significant relation between high blood pressure and SWB in income subgroup 4 and 5. The regression result shows that education and full-time employment have positive and statistically significant relationship with SWB. Extraversion personality dimension has strong and positive association with SWB for all income subgroups.

When social factors are added, married has positive and statistically significant relationship with SWB, which is in line with the study of Blanchflower and Oswald (2004a) and Frey and Stutzer (2002). The result (from income sub-group 2) shows that virtual friends who are not respondents close friends have negative and statistically significant association with SWB as per expected. This can be because individuals might receive the increased ostentatious information by additional friends on Facebook (Mukesh and Gonçalves 2013). The results (from income sub-group 4 and 5) show that living in inner Bangkok has negative and statistically significant relationship with SWB comparing to Bangkok outer. Also, living in middle of Bangkok is negatively correlated with SWB for income sub-group 1 and 5 while income sub-group 3 seems to be happy to live in middle of Bangkok. The reason might be because they are in working age groups. Living in middle of Bangkok makes them convenient to commute to their work place, comparing to individuals who live in outer Bangkok.

There seems that different income subgroups do not significantly affect the relationship between consumption and SWB. Consumption of material goods for every price levels and all income sub-groups is negatively correlated with SWB, which is in line with other studies (Zimmermann 2014; Perez-Truglia 2013; Hudders and Pandelaere 2012; Linssen 2011; Deleire and Kalil 2010; Kasser 2003). However, not all experiential goods at every price levels lead to decrease SWB. Individuals, who are in income sub-group 1, increase SWB significantly when they purchase experiential goods at price 2. The possible reasons are that experience goods are more open to positive reinterpretation and they are associated with social connection (DeLeire and

Kalil 2010). The regression yields a significantly negative coefficient on OSN goods purchased for all income subgroups. Most of questionnaire responders report that they purchase OSN goods because they use to work and many of them purchase OSN goods because they follow fashion and trends. Therefore, these might be the reasons that purchasing OSN goods decrease individuals' SWB.

Table 3.1 Summary of significant variable results for all models

Variables	Income Subgroup				
	1	2	3	4	5
age			-	-	-
			p<0.01	p<0.01	p<0.05
male			+		+
			p<0.05		p<0.05
highblood pressure	-	-	-		
	p<0.05	p<0.1	p<0.1		
education		+		+	+
		p<0.05		p<0.1	p<0.1
fulltime employment			+	+	
			p<0.05	p<0.1	
extraversion	+	+	+	+	+
	p<0.01	p<0.01	p<0.01	p<0.01	p<0.01
married		+		+	
		p<0.05		p<0.05	
virtual friends who are not respondents close friends		-			
		p<0.1			
Bangkok inner				-	-
				p<0.01	p<0.01
Bangkok middle	-		+		-
	p<0.1		p<0.1		p<0.05
Mat goods at price2purchased	-		-		-
	p<0.1		p<0.05		p<0.01
Mat goods at price3purchased		-		-	-
		p<0.05		p<0.1	p<0.01
Mat goods at price4purchased	-			-	-
	p<0.5			p<0.01	p<0.1
Mat goods at price5purchased		-		-	
		p<0.1		p<0.1	

Variables	Income Subgroup				
	1	2	3	4	5
Mat goods at price6 purchased				-	
				p<0.1	
Mat goods purchased			-		
			p<0.05		
Exp goods at price2 purchased	+				
	p<0.1				
Exp goods at price3 purchased	-	-			
	p<0.01	p<0.1			
Exp goods at price4 purchased	-	-	-	-	-
	p<0.01	p<0.01	p<0.01	p<0.01	p<0.01
Exp goods at price5 purchased					-
					p<0.01
Osn goods purchased	-	-	-	-	-
	p<0.1	p<0.05	p<0.01	p<0.01	p<0.05
Osn goods at price2 purchased		-	-	-	
		p<0.01	p<0.05	p<0.01	
Osn goods at price3 purchased		-	-	-	-
		p<0.05	p<0.05	p<0.01	p<0.01
Osn goods at price4 purchased		-	-	-	-
		p<0.05	p<0.01	p<0.01	p<0.05

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1
 Source: Author

3.5 Conclusion

This paper shows that factors influence individuals' SWB are different and driven by different income groups. The results find that age has a negative and significant relationship with SWB in low income subgroup (3, 4, and 5). As people age, they tend to be less happy than young people, which might be driven by the loneliness the elderly may have. For high income subgroup (1 and 2), the old age individuals may have more possibility to spend their money to engage in social interaction with their family and friends, for example, dinner with their peers. This may make the regression results find no significant relation between age and SWB in these income sub-groups.

Male are happier than female in low income subgroups since they seem to enjoy their lives and have a positive attitude. High blood pressure has negative and statistically significant relationship with SWB in high income subgroup (1, 2, and 3) which might come from the stress from a workplace or the high calories foods which commonly found in expensive foods. Education, full-time employment, and extraversion personality are positively correlated with SWB as per expected. For social factors, the regression yields a significantly positive coefficient on married, which is in line with the study of Blanchflower and Oswald (2004a) and Frey and Stutzer (2002). As per expected, the coefficient (from income sub-group 2) on virtual friends, who are not respondents close friends, are negatively associated with SWB. This can be because additional friends on Facebook might lead individuals to receive the increased ostentatious information (Mukesh and Gonçalves 2013). Because of the pollution and the density of population in inner Bangkok, this may lead individuals who living in this area have negatively and statistically significant relationship with SWB. Comparing to individuals who live in outer Bangkok, living in middle of Bangkok leads them to commute to their work place easier. Therefore, the regression results find positive and significant relation between living in middle Bangkok and SWB. The relationship between consumption and SWB is not affected by different income subgroups. For all income sub-groups, purchasing material goods at every price levels decrease individuals' SWB significantly as per expected (Zimmermann 2014; Perez-Truglia 2013; Hudders and Pandelaere 2012; Linssen 2011; Deleire and Kalil 2010; Kasser 2003). Individuals, whose income in subgroup1, have positive and significant relationship with SWB when they purchase experiential goods at price 2. The reason might be because the individuals in high income sub-group have sufficient money to spend with their family and friends and that relates to social connected. The result is also supported by DeLeire and Kalil (2010) that experiential goods are the only types of goods which increase SWB because of social connected. The purposes of purchasing OSN goods to work and to follow trends and fashion may decrease individuals' SWB significantly. The same results find in all income subgroups.

4 An exploratory study of the relationship between online social networking and individuals' subjective well-being: Pilot Analysis

This paper studies the determinants of subjective well-being, with the main focus on time spending on online social networking (OSN). Friendship types, particularly virtual friends, are also examined, given social changes in today's digital age. It is an exploratory pilot study. The study uses cross-sectional data from a pilot study in Bangkok (n=50) collected in April 2014. The target population is individuals, who are 20 to 59 years old and reside in Bangkok. An ordinary least square regression and an ordered probit model are used to analyse the results hierarchically. The result reveals that individuals, who use online social networking to stay in touch with family and close friends, and spend for 4-6 hours per day, have high SWB. It can be concluded that social relationship through online social networking is one of the important determinants for individuals' SWB.

4.1 Introduction

An online social networking is a relatively new dimension of social relationship. For many individuals, an online social networking is ingrained in their everyday lives. For some individuals, internet usage is even surpassing time spent on traditional media such as television or print. Online social networking sites, for example, Twitter and Facebook provide a space for individuals to communicate, share, express themselves, socialize, and connect with other individuals and form relationships (Steinfeld, Ellison, and Lampe 2008).

The results of the relationship between OSN and SWB can be positive or negative. Many studies find that there are some positive effects of online social networking. For example, it increases communication with others, which have positive benefits on respondents' self-esteem and their reported satisfaction with life (Bargh and McKenna 2004; Valkenburg, Peter, and Schouten 2006). It is probably because one of the fundamental needs of individuals is to belong and to feel connected (Myers 1993; Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003). Online social

networking is associated with increased communication and involvement with family (Kraut et al. 2002). It also increases in perceived social support and decreases in perceived loneliness and depression (Shaw and Gant 2002). As a result, it makes individuals' lives meaningful and increases their subjective well-being (Myers 1993; Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003).

On the other hand, some studies reveal negative effects of online social networking (Kross et al. 2013; Mukesh and Gonçalves 2013). According to Kross et al. (2013), they use experience-sampling to observe the effect of Facebook on SWB. They examine SWB in two components, which are (1) moment-to-moment feeling, and (2) satisfaction with life. They reveal that the more time individuals spend on Facebook, the greater decline in both their moment-to-moment feeling and their life satisfaction (Kross et al. 2013). Mukesh and Gonçalves (2013) suggest that using Facebook has detrimental effects to SWB because it is associated with social comparison. Adding new friends on Facebook may make individuals feel good. However, after viewing friends' posts, their life satisfaction are diminished. One of the reasons is possibly because individuals might receive the increased ostentatious information by additional friends. In addition, they may not have perfect information about others. It means that they may only receive one-sided information, which is the ostentation (Mukesh and Gonçalves 2013).

Objectives of the Study

To explore possible linkages between social relationship and individuals' subjective well-being, the focus being on online social networking and friendship types.

Scopes of the Study

Participants should be aged between 20 to 59 years old. The reason to select this group is to ensure relevance. Individuals, whose age is in this range, tend to have a huge impact on online social networking. The survey was conducted during April 2014 and contains 50 samples.

Benefits of the Study

The main contribution to happiness contexts is on social relationship aspects. This paper attempts to incorporate a new pattern of socialization in these days' digital ages into a consideration since online social networking becoming an important part of lifestyle for many individuals nowadays. The paper aims to examine happiness in contemporary society in views of globalization and the rapid use of new and emerging technologies. The author believes that these movements exert significant impact on the subjective well-being of individuals living today.

Generally, there are several researches concerned with the relationship between happiness and its determinants but most early studies and existing research primarily focus on developed countries. However, there are not many of happiness studies in developing countries including Thailand.

Terms and Definitions

Subjective well-being (SWB) is defined as the ability to solve problems in life and the capability to improve oneself to have good quality of life. This includes the good mind set under these days social and environmental changed (Kahneman and Deaton 2010; Mongkol et al. 2009; Sachayansrisakul 2009). The term SWB is used interchangeably with happiness (Deleire and Kalil 2010; Diener 2009).

Online social network is a space for individuals to communicate, share, express themselves, socialize, and connect with other individuals and form relationships (Steinfeld, Ellison, and Lampe 2008).

4.2 Literature review

One of the important determinants that affect SWB is social capital. The meaning of social capital is discussed and follows by the importance of it. Social capital is a relationships matter (Bourdieu and Wacquant 1992). It relates to a sense of belonging (Bourdieu and Wacquant 1992; Putnum 1995). Interaction leads individuals to build communities and to commit themselves to each other (Bourdieu and Wacquant 1992; Putnum 1995; Pholphirul and Rukumnuaykit 2008). Involving in social

organization such as sports groups, professional societies, labor unions, and religious affiliation is one of an example of the interaction (Putnum 1995). An individual with social capital includes the one who is in a society, where contains cultivation of trust, good will, fellowship, and participation in public activities (Pholphirul and Rukumnuaykit 2008).

The linkage between social relationship and SWB are discussed in term of (1) frequency of social interaction (Powdthavee 2008), (2) social connectedness (Deleire and Kalil 2010), (3) social embedding including *i*) individual social relations, *ii*)work participation and social status, *iii*)socio cultural integration of a person(Haller and Hadler 2006).

Powdthavee (2008) studies the relationships between life satisfaction (LS) and social relationships. He values social relationships as price and finds that frequency of social interaction (1. seeing friends or relatives less than once a month to never, 2. once or twice a month, 3. once or twice a week, and 4. on most days) is worth an extra £85,000 per year in term of LS. It is calculated by shadow pricing method (SP)¹². The SP represents the forgone social relationship, which equals to the extra income.

Deleire and Kalil (2010) emphasize the importance of social goods and social connectedness. Leisure consumption means consumption spending which relates to actual or perceived social connections. It is consumption spending on activities associated with the company of friends, relatives, and neighbors, for example, vacations, entertainment, and sports. They reveal that social connectedness, which is derived from leisure consumption, establishes higher level of happiness than other types of consumption.

¹²SP = $(\beta_2 - \beta_1) / \lambda$; where β_1 is correlation between meet once/twice a month and LS, β_2 is correlation between meet once/twice a week and LS, λ is estimated coefficient on income of that LS. See also Powdthavee (2007) for addition information.

Moreover, Haller and Hadler (2006) suggest that micro social embedding and socio cultural integration of a person are highly relevant for happiness. *Micro social embedding* in this regard are micro social factors, which include (1) individual social relations, and (2) work participation and social status. *First*, individual social relations are, for example, married, divorced/ separated/ widowed, single, and having children/ no children. *Second*, work participation and social status are, for example, employed, retired, housewife, student, unemployed, professional manual workers, farmer, army, never worked, financial satisfaction, subjective class, no chance of poverty, and poverty increased in last 10 years. *Socio cultural integration of a person* is, for example, religious, church attendance, and voluntary membership. Easterlin (2003) agrees that friendships, work, and employment status, also affect happiness.

For community involvement and volunteering, both Helliwell (2003) and Helliwell and Putnam (2004) agree that at *aggregate* level average membership of community involvement and volunteering significantly increases SWB by analyzing of 49 countries from the World Value Survey (WVS). Helliwell (2003) also discloses that *individual* involvement in community and volunteering has a significant positive relationship between an individual membership and SWB, but Helliwell and Putnam (2004) disagree with the result.

Another important determinant that affects SWB is online social networking. According to Schneider et al. (2009), an online social networking is defined as an online community. It is a place where individuals, who have common interests, activities, backgrounds, and/or friendships, are able to interact with others in many ways such as upload profiles (text, images, and videos). Boyd and Ellison (2007) define social networking sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) joint a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. Adamic and Adar (2005) define a social networking service that it gathers information on users' social contacts, constructs a large interconnected social networking, and reveals to users how they are connected to others in the network.

Internet use such as Facebook plays a role in both the formation and maintenance of social capital (Ellison, Steinfield, and Lampe 2007). It also builds relationship and creates new forms of social capital through technologies such as wall posting, messaging, and tagging (Resnick 2001; Steinfield, Ellison, and Lampe 2008). The internet use assists to maintain relationships among the users cheaply and easily (Donath and Boyd 2004).

There is a linkage between online social networking and friendship. According to Subrahmanyam et al. (2008), the primarily reason of using online social networking is that it helps involved individuals from their offline lives. They reveal that 81% individuals report using online social networking to keep in touch with friends they do not see often, 48% use it to keep in touch with relatives and family, 35% is to make plans with friends they see often, and it is rarely that individuals use online social networking to looking for new friends, which represents only 29%.

The study of the relationship between SWB and OSN is an emerging field. Therefore, methods to observe the relationship between SWB and OSN are in term of data collection, including survey (Kross et al. 2013; Steinfield, Ellison, and Lampe 2008; Subrahmanyam et al. 2008; Ellison, Steinfield, and Lampe 2007), in depth interview (Steinfield, Ellison, and Lampe 2008), and experience-sampling (Kross et al. 2013; Subrahmanyam et al. 2008; Adamic and Adar 2005). To assess the relationship between OSN and SWB, Kross et al. (2013) apply SWLS, Beck Depression Inventory, Rosenberg Self-esteem Scale, and Social Provision Scale. In addition, Steinfield, Ellison, and Lampe (2008) and Ellison, Steinfield, and Lampe (2007) measure the relationship between OSN and SWB through the perceptions of the respondents (1) self-esteem (2) satisfaction with life. The self-esteem is observed by applying Rosenberg 7-item with 5-point Likert scale.

Some surveys are operated in laboratory (Kross et al. 2013; Subrahmanyam et al. 2008) and some are collected through online (Steinfield, Ellison, and Lampe 2008; Ellison, Steinfield, and Lampe 2007). To observe the intensity of FB use, there are

mainly three questions asked in the questionnaires (Kross et al. 2013; Subrahmanyam et al. 2008). First, the question asks what activities respondents use FB for, e.g. edit profile, and/or write comments on others' wall. Second, motivation for using social networking sites is observed, e.g. stay in touch with friends, flirt, meet new friends, share good and/or bad things with friends, obtain new information, or other reasons (e.g. chat, keep in touch with family, and facilitate schoolwork and/or business). Third, the question asks how respondents decide who to add or delete from their social networking sites, e.g. add anyone who sends a friend request, or only add a person if they are a face-to-face friend.

Regarding the literatures, there are three types of answers in the questionnaires (Kross et al. 2013; Subrahmanyam et al. 2008). First, they are check answers for activities they apply e.g. yes or no. Second, answers are ranked in order e.g. the frequency of activities. Third, open-ended responses e.g. ask why blocking someone from a profile, or how social networking site use helped solve a conflict or problem. The surveys are analyzed by applying cross-section and longitudinal analysis. For instance, Steinfield, Ellison, and Lampe conducted an online survey in 2007 and 2008 to study the relationship between OSN and SWB. They, as a result, are able to apply longitudinal analysis. To invite the participants for survey, it can be conducted through flyers posted (Kross et al. 2013) and email invitation (Steinfield, Ellison, and Lampe 2008; Ellison, Steinfield, and Lampe 2007). It can be seen that many literatures apply questionnaires to assess the relationship between SWB and social networking sites (Kross et al. 2013; Steinfield, Ellison, and Lampe 2008; Subrahmanyam et al. 2008; Ellison, Steinfield, and Lampe 2007).

4.3 Methodology

This section begins by the models used, which are linear regression and ordered probit regression. It applies hierarchical regression models, which are adopted from previous studies (Zimmermann 2014; Perez-Truglia 2013; Linssen et al. 2011; Sabatini 2011; Deleire and Kalil 2010; Powdthavee 2005). The independent variables are added to the regression on different steps. The significance levels associated with each independent variable are then able to observe.

First, SWB is regressed on personal and social factors.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + v_i$$

where

i is an individual; $i = (1, \dots, 500)$

SWB_i is measured subjective well-being for individual i

X_i is a set of personal factors including age, gender, health, education, employment, personality, and income.

$Social_{ik}$ is social variables, where $k =$ (married, friendship types)

ε_i is an error term that subsumes the inability of human beings to communicate accurately the true well-being levels.

Second, online social networking is added as one of independent variables.

$$SWB_i = X_i \beta + \sum \alpha_k Social_{ik} + \sum \lambda OSN_i + \tau_i$$

where

OSN_i is number of hours respondents spend on online social network.

Since the structure of SWB model is also in a qualitative dependent variable model in a form of ordered responses, an ordered probit or an ordered logit are appropriate choices of tools for estimating such ordered categorical data in a single-item survey such as WVS. The ordered logit is similar to the ordered probit approach. However, the ordered logit assumes a slightly different (fatter-tailed) distribution of the latent SWB in the population. In accordance with the literature, the ordered probit model is used for estimating an individual's SWB. For example, Winkelmann (2005) uses an ordered probit model to estimate the intra-family correlation of happiness. Tsou and Liu (2001) also apply an ordered probit model to identify the happiness determinants in Taiwan. It can be stated that an ordered probit model is commonly used in many researches worldwide such as Powdthavee (2005); Luttmer (2004); Dorn, Fischer, Kirchgassner, and Sousa-Poza (2007); Pholphirul and Rukumnuaykit (2008).

The ordered choice model is given by

$$Pr(SWB_i \leq y | Z_i; \phi) = \Psi(-Z_i' \phi) \quad y = 1, \dots, J-1$$

where

$Pr(SWB_i)$ is the probability of SWB taking on a certain value, conditional on the independent variables, Z_i

ϕ is the corresponding coefficients vector

Ψ is cumulative density of the standard normal distribution

J is the number of outcomes that the dependent variable (SWB) can take on

The ordered probit coefficients can be used to interpret only the sign and the significance. The magnitude of the coefficient (ϕ) does not reveal the effect of the independent variables Z_i . Nevertheless, the marginal effect (ME) can be computed. ME

are the partial effects of each explanatory variable on the probability that the observed dependent variable (Sabatini 2011).

4.4 Results

The data collected are discussed in two steps. First, descriptive statistics are examined. Second, regression results from both OLS and ordered probit are presented. Table 4.1 and 4.2 summarize descriptive statistics of personal and social factors respectively. According to Table 4.1, it can be seen that the pilot observes number of male less than female. Male respondents account for 46% and female for 54%. This is in line with the 2010 NSO data, which reports male 48.55 % and female 51.45% in Bangkok. For age, the average age of respondents is 36.4 years. The range is between 20 years to 59 years, which is the target population. The respondents have a wide range of education attainment, which is between 6 years to 23 years. Most respondents have 16 years education attainment (46%), followed by 17 years (22%), 18 years (18%), 12 years (6%), 6 years (2%), 15years (2%), 21years (2%), and 23years (2%). For employment, 68% of respondents are full-time employed, followed by unemployed (20%) which students are included in this group, and part-time employed (12%). For health, the data reveals that 70% of respondents do not have chronic disease.

Table 4.1 Summary of key personal factors

Personal Factors	Descriptive Statistics
Age	Mean 36.4 years
Male	46%
Chronic Disease	30%
Education	Mean 16.36 years
Full Employment	68%
Income	Least: 9% (more than 60,000 baht/month) Most: 34% (25,000-49,999 baht/month)

Source: Author

With the 50 samples, half of them are married. 60% of respondents do not have children. The number of children ranges between 0 to 3 persons and the average number of children is approximately 1 person. Focusing on friendship types, it is noteworthy

that most respondents have 1 or 2 close friends (24%). Some respondents do not have any close friends. The maximum close friends the respondents have are 8 persons. It can be pointed out that a casual friend variable has the highest standard deviation. It is because individuals have a wide range number of casual friends, from lowest 10 friends to highest 500 friends. It can be revealed that respondents have casual friends 115 persons on average. The number of virtual friends ranges between 0 friends to 40 friends. On average, the respondents have approximately 6 virtual friends. It can also be noticed that 80% of virtual friends are not respondents' close friend. Only 20% of respondents' virtual friends are their close friends.

Table 4.2 Summary of key social factors

Social Factors	Descriptive Statistics
Married	50%
Children	Mean: 1 person
Friendships	
Close friends	Mean: 3 persons
Casual friends	Mean: 115 persons
Virtual friends	Mean: 6 persons
Having virtual friends as close friends	Mean: 0

Source: Author

According to Table 4.3 (a crosstab between global happiness and internet use per day), the respondents use internet between 1 and 9 hours per day. Most of the respondents (18%) use internet 6 hours, following by 16% use for 2 hours per day. 14% of respondents use internet 3, 5, and 7 hours per day. 8% of respondents use internet 4 and 8 hours per day. Not many of respondents (6%) use internet an hour per day. Only 2% of respondents use internet 9 hours per day. It can be seen that respondents who report very happy use internet between 4 to 6 hours per day. However, respondents who report very unhappy use internet between 1 to 3 hours per day. Respondents who spend on the internet the longest hours per day (9 hours per day) report as unhappy. As a result, it can be concluded that using internet in appropriated hours per day convey high

SWB to the respondents. The results are in line with other studies, which find that there is a positive effect of using internet on SWB. For example, it increases communication with others, which have positive benefits on respondents' self-esteem and their reported satisfaction with life (Bargh and McKenna 2004; Valkenburg, Peter, and Schouten 2006). Internet use is associated with increased communication and involvement with family (Kraut et al. 2002). It also increases in perceived social support and decreases in perceived loneliness and depression (Shaw and Gant 2002). However, spending too much time on internet make respondents bring respondents unhappy, which may be because the increase of ostentatious information by additional friends on FB (Mukesh and Gonçalves 2013).

Table 4.3 Cross tab between global happiness and time spending internet per day

Count

	HowLong									Total
	1	2	3	4	5	6	7	8	9	
HappinessQ Very happy	0	0	0	1	3	1	0	0	0	5
Happy	0	0	0	2	2	3	0	2	0	9
Neutral	0	3	0	1	2	5	7	1	0	19
Unhappy	0	2	6	0	0	0	0	1	1	10
Very unhappy	3	3	1	0	0	0	0	0	0	7
Total	3	8	7	4	7	9	7	4	1	50

Source: Author

Table 4.4 and 4.5 present the hierarchical regression results from estimating a simple well-being function. Two alternative proxies for subjective well-being are used, namely global happiness and the Thai Mental Health Indicator (TMHI).

First, subjective well-being scores are regressed on personal and social factors. The regression results are shown in Table 4.4. The findings suggest as per the discussion below.

Table 4.4 Regression results from personal and social factors

	OLS		Ordered Probit	
	Coefficients		Marginal Effects	
	B	Std. Error	dy/dx	Std. Error
(Constant)	43.315	7.157		
Age	-.274 ***	.080	-0.001	.001
Male (Ref: Female)	1.489	1.103	0.002	.005
Health(Ref: No chronic disease)	1.577	1.523	0.004	.007
Education	.202	.242	0.003	.003
Full time employment (Ref: Others)	3.087 ***	1.125	0.014	.015
Personality dimension extraversion (Ref: Others)	-1.798	1.269	-0.005	.007
Income above average (Ref: others)	1.114	1.307	0.009	.015
Married (Ref: Others)	-.289	1.203	-0.004	.006
Close friends	.039	.334	0.000	.001
Virtual friends	.084	.083	0.001	.001
Having virtual friends as close friends	-.085	.836	0.002	.004
	Number of obs	50	Number of obs	50
	F(11,38)	6.41	Chi-Square	65.73
	R-square	.650	Pseudo R-square	0.4371

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author

Age

According to the results from OLS, in line with most of the literatures (Frey and Stutzer 2002; Blanchflower and Oswald 2004a; Ferrer-i-Carbonell and Gowdy 2007), a negative and significant relationship between age and SWB is revealed.

Gender

The result from both global happiness as well as the TMHI reveals that gender does not seem to be significant which is in line with the studies of Frey and Stutzer (2002) and Diener (2009). They reveal that the relationship between gender and SWB is inconclusive. The results can be positive, negative, or no difference. Specifically, Frey and Stutzer (2002) find that women are happier than men, but the difference is not significant.

Health

Studies consistently reveal that poor health is negatively associated with SWB while good health has positive relationship (Diener 1984; Peiro 2006). However, the pilot results do not find the relationship is significant.

Education

The relationship between education and subjective well-being is not significant, which is in line with the study of Flouri (2004). The relationship is ambiguous, since it can be positive, negative, or not significant. Some studies find that the influence of education on SWB has a positive relationship, which can be stated that individuals with higher education experience a happier life (Frey and Stutzer 2002; Blanchflower and Oswald 2004b). Moreover, Stutzer (2004) exposes that the highest life satisfaction is associated with middle level of education. On the other hand, Clark (2003a) reveals that education has a negative relationship with SWB.

Employment

Consistently with other literatures, the pilot results from OLS show that full time employment has a positive effect with SWB (Di Tella, MacCulloch, and Oswald 2001; Winkelmann and Winkelmann 1998; Frey and Stutzer 2002 2007; Stutzer 2004). They find that unemployed individuals report lower SWB scores than employed individuals approximately 5 to 15 percent. Clark and Oswald (1994) reveal that the cost of unemployed creates more harm to an individual than divorce or marital separation.

Marital status

The impact of marriage is found to be a positive relationship with level of happiness (Blanchflower and Oswald 2004a). In addition, stable and secure marriage, and intimate relationship have positive relationship with SWB (Frey and Stutzer 2002). For separation, it has negative relationship with SWB and its SWB is lower than being divorced or widowed (Helliwell 2003). Nevertheless, the pilot results do not find the relationship, between marriage and global happiness, as well as the TMHI to be significant.

Children

Children have a negative effect to SWB if the family is poor (Alesina, Di Tella, and MacCulloch 2004) or if the child is unwell and requires more care than normal child (Marks, Lambert, and Choi 2002). For single parents (Frey and Stutzer 2000) and

divorced mothers (Schoon, Hansson, and Salmela-Aro 2005), children also convey a negative effect to SWB. However, some studies find that children have a positive and significant effect on life satisfaction (Haller and Hadler 2006). The pilot results find that children do not provide any significant relationship with SWB.

Friendship

Generally socializing with family and friends provide a positive relationship with SWB (Deleire and Kalil 2010). By applying the Health and Retirement Study (HRS) a nationally representative sample of older Americans, Deleire and Kalil (2010) reveal that family relationships have a stronger impact on SWB than personal income. Social capital has a positive relationship with an individual's happiness (Pholphirul and Rukumnuaykit 2008). According to Pholphirul and Rukumnuaykit (2008), trust is the most important social capital's determinant, which creates significant differences at the individual's happiness level. Moreover, happiness of family members also provides a positive relationship with the individual's happiness. Additionally, Helliwell (2006) reveals that social capital has substantial effects on well-being more than economic determinants. However, the pilot results do not find any significant relationship between friendship (close friends and virtual friends) and SWB.

Table 4.5 Regression results from adding time spending on OSN

	OLS		Ordered Probit	
	Coefficients		Marginal Effects	
	B	Std. Error	dy/dx	Std. Error
(Constant)	42.948	9.404		
Age	-.269 **	.114	-.001	.001
Male (Ref: Female)	1.495	1.122	.002	.004
Health(Ref: No chronic disease)	1.570	1.548	.004	.006
Education	.203	.246	.003	.003
Full time employment (Ref: Others)	3.111 **	1.206	.012	.014
Personality dimension extraversion (Ref: Others)	-1.788	1.297	-.005	.007
Income above average (Ref: others)	1.133	1.360	0.007	.012
Married (Ref: Others)	-.298	1.228	-.003	.005
Close friends	.036	.342	.000	.001
Virtual friends	.085	.086	.001	.001
Having virtual friends as close friends	-.073	.871	.001	.003
Time spending on OSN	.027	.445	-.001	.002
	F(12,37)	5.72	Chi-Square	66.23

	OLS		Ordered Probit	
	Coefficients		Marginal Effects	
	B	Std. Error	dy/dx	Std. Error
	R-square	.650	Pseudo R-square	0.4404

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1
 Source: Author

Table 4.5 shows the results when online social networking is added as explanatory variables. The control variables results show only age and full time employment is significant at 95% level, which decreases from 99% level. Age has negative relationship with SWB whereas full time employment has a positive relationship. The regression results from both OLS and ordered probit do not seem to show time spending on OSN has significant result with SWB.

4.5 Conclusion

Because of a rapid technological development, it facilitates the use of online activities such as reading news, emails, Facebook, and Twitter. For many individuals, online social networking is ingrained in their everyday lives, and for some individuals internet usage is even surpassing time spent on traditional media such as television or print. It also reveals that individuals, who use online social networking for 4-6 hours per day, have high SWB. The behavior of spending time has been changed. Individuals spend more time on the internet comparing to the past. Moreover, behavior of using tool to access the internet is also changed. In the past, most individuals used personal computer to access the internet but recently they use OSN goods to stay connected to the internet. This have a profound impact on the digital behaviours of individuals which is revolutionizing the way we communicate, share, entertain ourselves and others, socialize, and form relationships.

5 Conclusions

This study uses cross-sectional data from a survey in Bangkok to explore possible linkages between an individual's subjective well-being and three interested consumption types, which are material, experiential, and OSN goods. The analyses reveal a number of interesting findings, which are concluded as follows.

Personal factors include age, gender, health, education, employment, personality, and income. The results find that age has a negative and significant relationship with SWB. As people age, they tend to be less happy than young people since older people are less healthy, and nowadays more likely to be living alone (Frey and Stutzer 2002; Blanchflower and Oswald 2004a; Ferrer-i-Carbonell and Gowdy 2007). Male has a positive, significant relationship, and higher SWB than female. In Thailand, male seems to have a positive and forward-looking attitude (Mongkol et al. 2009). Bad health which is represented by high blood pressure has negative and significant relationship with SWB because high blood pressure creates nervousness, difficulty to sleep or facial flushing, and also may lead to serious diseases, including stroke, heart disease and kidney failure (Brook 2002; Grundy and Sloggett 2003). The results find that education has positive and statistically significant relation with SWB. Individuals with higher education experience a happier life (Frey and Stutzer 2002; Blanchflower and Oswald 2004b). Education is important factor for our happiness because it leads to success and obtain better career. With education individuals are prone to have full-time employment and earn higher income. The relationship among education, full-time employment and income are related at some extent. Full-time employment has a positive and statistically significant association with SWB. Extraversion personality dimension has statistically significant and positive relationship with SWB because basic characteristic of extraversion is the tendency to experience positive emotions such as outgoing, energized by interaction, expressive and enthusiastic (Layard 2005; Lucas and Diener 2001; Deneve and Copper 1998). The results show that income has no relationship with SWB. Many studies (Easterlin 1995, Powdthavee 2005, and Diener and Biswas-Diener 2002) agree that once individuals

have sufficient level of income, the association between SWB and income appears to be relatively weak. An individual's income has been related to SWB mostly at low levels of income.

Social factors include marital status, friendship, and neighborhood effects. The result finds that married is positive and statistically significant association with SWB, which is in line with the study of Blanchflower and Oswald (2004a) and Frey and Stutzer (2002). The development of the electronic media enables us to keep in touch with friends despite the fact that we are geographically mobile and time-pressured, although not a substitute for face-to-face contact. The results show that virtual friends who are not respondent close friend are negative associated with SWB. The findings is in the line with Helliwell (2006) who claims that SWB increases as more frequent face-to-face contacts with family, friends, and neighbors. Therefore, government should persuade individuals to spend less time on online social networking, and encourage individuals to spend more time on offline activities. By doing so, government might provide exhortation and information through advertisement channel to inform both individuals and parents having more family time spent. For neighborhood effect, individuals who live in inner Bangkok have negative and statistically significant relation with SWB because higher earnings of neighbors are associated with lower levels of self-reported happiness. Government could deliver more provision of multi-use public spaces which creates more linkage among generations in the provision of leisure such as health gardens or national parks (Helliwell 2006).

Types of consumption are material, experiential, and OSN goods. The study finds that purchasing any of material, experiential, and OSN goods does not increase an individual's SWB. Comparing among each types of consumption, material goods purchased is prone to reduce SWB the most. In particular, perceiving experiential goods create less negative effect on individuals' SWB than material and OSN goods because they can gain life experiences which can be rethought over time. According to the 2014 NSO Socio-Economic data, Thai households spend 1.5% for entertainment. However, the entertainment expenditure continually reduces from 1.6% in 2013 and 1.8% in 2012. The government should encourage the consumption of experiential goods. Moreover,

learning activities are important and should be promoted intensively such as reducing entry fees at museum, historical places, and culture events. Since our society moves into digital age, OSN goods have recently entered into our daily life. Individuals spend more time on the internet comparing to the past. The behavior of spending time and tools to access the internet has been changed. In the past, most individuals used personal computer to access the internet but recently they change to use OSN goods instead. This have a profound impact on the digital behaviours of individuals which is revolutionizing the way we communicate, share, entertain ourselves and others, socialize, and form relationships. The study finds a large number individuals purchase OSN goods, and internet usage is highest amongst younger generation, and declines with age.

In addition, this dissertation raises an issue to investigate the relationship between purchasing OSN goods—but at the same time creating debt—and individuals' happiness. Social interaction creates individuals happier. However, OSN goods associated with debt may not make individuals happy because of the feeling of debt burden. In general, individuals in most of the countries appear to engage in debt consuming more than they earn. The reason is because they have some perception of their permanent income or longer term earning capacity; therefore they seek to smooth their consumption over time. Too much debt may lead to reduce happiness. The reason may be because highly indebted individuals are more financially fragile than individuals who are not; and that make those individuals are more likely to failure to pay back their debt when affect by adverse shocks such as unemployment or interest rates increases (Jappelli, Pagano, and Maggio 2008). In addition, Gray et al. (2008) argue that having debt does not always mean feeling financial strain and make individual less happy. However, the ability to pay back the debt has to be taken into consideration. They classify individuals who having debt into four types: first, having no debt at all, second having some debt but feeling no debt-burden, third having debt and feeling debt-burdened to some extent, and fourth having debt and feeling seriously debt-burdened. They find that being without debt or with debt but not feeling a big burden are strongly associated with greater happiness than being indebted and feeling that it is a big-burden(Gray et al. 2008). Most of the OSN goods consumptions based on 0% interest

promotion which allow consumers to pay an installment along 4-10 months without interest included. Although the interest promotion seems to be normal for OSN goods markets, the government may need to concern about the debt and feeling debt burdened incurred that may decrease our SWB.

Psychological processes include social comparison, adaptation, and aspiration from each types of consumption. Mostly, purchasing the goods because of social comparison creates negative effect to SWB in term of driving respondents to create desires or needs to have more and consume more. Consuming material goods is the most associated with social comparison whereas experiential goods are the least. The results of adaptation for the three types of consumption goods can be concluded that mostly the adaptation brings negative effect to SWB. Frey and Stutzer (2007) reveal that after some initial period of satisfaction of consuming new things, individuals get used to the certain things. They become to have no pleasure and bore with the things. As a result, timing of the purchase also matters. It can be stated that purchasing a goods yesterday and a year ago can provide different level of happiness. Especially, the short adaptation periods leads to have negative relationship with SWB than the longer adaptation periods. The longer periods of experience pleasure from the consumption of newly acquired possessions is the better. Aspiration for consuming any types of the goods negatively relates with SWB because an individual would like to purchase the goods but has not achieved. Therefore, an increase in aspirations level creates negative effect to SWB.

6 Limitations and Extensions

Many happiness studies encounter with validity and reliability issues. Some of insignificant results might because of the fact that self-rating questionnaire by asking personal feeling of happiness or subjective well-being is applied, which almost all of happiness researches do so. The dissertation is aware that the way people report their happiness is sensitive to context, threatening the validity and reliability of surveys. Individuals do not give any opinion or they do not answer happiness questions from their true inner feelings. For example, they may overstate or understate their happiness level over an interviewer in order to maintain their self-esteem or because of ego-defense mechanisms (Powdthavee 2007). In addition, the cost of unemployment does not only lose in income, but also causes the non-pecuniary costs including social relationships and individual self-esteem (Winkelmann and Winkelmann 1998). The recall bias might also occur because respondents are asked to consider the goods they purchased over the past 12 months to cover seasonal purchases.

One limitation of this analysis is that unfortunately the proportional odds assumption is violated. However, this assumption often is violated in practice. One of the suggestions is to do nothing and continue to use ordered logistic regression because the practical implications of violating this assumption are minimal (Long and Freese 2006). Nonetheless, the better approach is suggested to apply generalized ordered logit model because the assumption is relaxed. The model is needed to decide the cut point which is actually the intercept in the cumulative logit probability to determine whether there is a statistically significant difference between categories.

By aiming to focus on SWB and consumption, religious views on happiness and spirituality are overlooked and they might be related to individuals' SWB to some extent. Religion and religious activities variables are possible to influence individuals' SWB. Individuals with religious report higher SWB than non-religious individuals as individuals' beliefs affect their SWB (Dolan, Peasgood, and White 2008). For religious activities, regular engagement in religious activities is positively related to SWB

(Dolan, Peasgood, and White 2008). Happiness in Buddhism means the relief of all kinds of sufferings (Kittiprapas 2015). According to the Buddhist analysis, happiness is a mental factor or inner happiness. Inner happiness is happiness development higher than the physical-based. When the wish and the need for happiness has been fulfilled on the most basic level of ordinary happiness, individuals may aim for more satisfying levels of happiness with more advanced spiritual practices at deeper level. The inner happiness is obtained by the wisdom, understanding of life and sustainability. While happiness economics today explain the unsustainable happiness from theories of social comparison, adaptation and aspiration, they do not suggest how to exit from this problem but Buddhism provides suggestion how to be free from sufferings. Applying the middle path approach of Buddhism and sufficiency economy which is the sustainable consumption and production can lead to individuals to achieve true or inner happiness (Kittiprapas 2015).

In addition, one of the limitations is that this study only focuses on the purchasing of smart phones and tablets and debt related with the purchases, but other expenses incurred from them are not considered. For example, many of economic transactions can be achieved by using smart phones and tablets which can be consider as a new type of consumption and the monthly internet expenditure associated with smart phones and tablets are not interested in this study.

Since cross-sectional data is only possible in this study, further research might focus on the panel data by tracking the same individuals over time and causality can then be established. This will help to obtain answers for some issues, for example, income and happiness have some correlations but it is likely to mean higher income cause people to be happier. Or, reversely happy people may be satisfied with their jobs causing them to work hard and gain higher income. There are causal effects of individual characteristics on labor market outcomes in a sense that outgoing and flexible people is more happy with their lives, leading to generate higher productivity, and thus having the better chances of making more money than other people (Powdthavee 2009). To conclude, those are only some general recommendations on a

future research. Nonetheless, the main objective of the future research should extend the focus on how to further increase the growth of our happiness.



REFERENCES

- (GSS), G. S. S. (2012). 2012 English Questionnaires Cross-Section GSS V1. Retrieved 5 December, 2012, from <http://www3.norc.org/NR/rdonlyres/21403184-C064-4E20-944F-0CFCABC9BB5E/2010/2012Questionnaires2.html>.
- (IFLS), T. I. F. L. S. The fourth wave of the Indonesia Life Survey (IFLS4) Survey Description Household Questionnaires English. Retrieved 5 December, 2012, from <http://www.rand.org/labor/FLS/IFLS/ifls4.html>
- (MICT), M. o. I. a. C. T. (2009). ICT Household 2009 Retrieved 2 February, 2011, from <http://www.mict.go.th>
- (MOI), M. o. I. Bureau of Registration Administration, Department of Provincial Administration. Retrieved 22 July, 2011, from <http://www.moi.go.th>
- (NEF), T. N. E. F. The unhappy planet index 2.0. . Retrieved 13 May, 2011, from <http://www.happyplanetindex.org>
- (NSO), T. N. S. O. T. Table 3 Number of Buddhists, aged 13 years and over by level of educational attainment, religious attainment, religious activity and area, southern region 2008. Retrieved 14 June, 2011, from <http://www.nso.go.th>
- (NSO), T. N. S. O. T. (2009). The 2009 Household Socio-Economic Survey. . Retrieved 25 April, 2011, from <http://www.nso.go.th>
- (RLMS), T. R. L. M. S. Questionnaires for a selective survey of household conditions and public health. Retrieved 5 December, 2012, from <http://www.cpc.unc.edu/projects/rlms-hse/data/questionnaires/rlinques.pdf>
- (SALDRU), S. A. L. a. D. R. U. Project for Statistics on Living Standards and Development. Retrieved 5 December, 2012, from <http://www.datafirst.uct.ac.za/catalogue3/index.php/catalog/5>
- (WVS), W. V. S. O. World Values Survey – Surveys. . Retrieved 5 December, 2012, from http://www.worldvaluessurvey.org/index_surveys
- Adamic, L., & Adar, E. (2005). How to search a social network. *Social networks*, 27(3), 187-203.
- Administration, B. M. Administrative Strategy Division: Statistical Profile of Bangkok Retrieved 20 July, 2011, from <http://www.bangkok.go.th>
- Ahçihoca, D., & Ertek, T. (2000). Consumption patterns of households in north cyprus.
- Aldridge, A. (2003). *Consumption*. Cambridge: Polity.
- Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: are Europeans and Americans different? *Journal of Public Economics*, 88(9), 2009-2042.
- Allardt, E. (1976). Dimensions of welfare in a comparative Scandinavian study. *Acta sociologica*, 227-239.
- Asia Digital Marketing Association (ADMA). (2010). Asia Pacific Digital Marketing Yearbook 2010 Retrieved 4 February, 2011, from <http://www.asiadma.com>
- Bargh, J. A., & McKenna, K. Y. (2004). The Internet and social life. *Annu. Rev. Psychol.*, 55, 573-590.
- Baudrillard, J. (1993). *Symbolic exchange and death* (Vol. 25): Sage.
- Bentham, J. (1879). *An introduction to the principles of morals and legislation*: Clarendon Press.

- Blanchflower, D. G., & Oswald, A. J. (1998). What Makes an Entrepreneur? *Journal of labor economics*, 16(1), 26-60. doi: 10.1086/209881
- Blanchflower, D. G., & Oswald, A. J. (2004a). Money, sex and happiness: An empirical study. *The Scandinavian Journal of Economics*, 106(3), 393-415.
- Blanchflower, D. G., & Oswald, A. J. (2004b). Well-being over time in Britain and the USA. *Journal of Public Economics*, 88(7), 1359-1386.
- Blanchflower, D. G., & Oswald, A. J. (2008). Hypertension and happiness across nations. *Journal of health economics*, 27(2), 218-233.
- Blanchflower, D. G., Oswald, A. J., & Stewart-Brown, S. (2013). Is psychological well-being linked to the consumption of fruit and vegetables? *Social indicators research*, 114(3), 785-801.
- Blundell, R., & Preston, I. (1998). Consumption inequality and income uncertainty. *quarterly Journal of Economics*, 603-640.
- Bormans, L. (2010). *The World Book of Happiness: The Knowledge and Wisdom of One Hundred Happiness Professors from Around the World: Page One*.
- Bostic, T. J., & Ptacek, J. (2001). Personality factors and the short-term variability in subjective well-being. *Journal of Happiness Studies*, 2(4), 355-373.
- Bourdieu, P., & Wacquant, L. J. (1992). *An invitation to reflexive sociology*: University of Chicago Press.
- Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. *Adaptation-level theory*, 287-305.
- Brook, R. D., Brook, J. R., Urch, B., Vincent, R., Rajagopalan, S., & Silverman, F. (2002). Inhalation of fine particulate air pollution and ozone causes acute arterial vasoconstriction in healthy adults. *Circulation*, 105(13), 1534-1536.
- Brown, S., Taylor, K., & Price, S. W. (2005). Debt and distress: Evaluating the psychological cost of credit. *Journal of Economic Psychology*, 26(5), 642-663.
- Bunnag, C. (2008). *Mobile Phone Culture in Bangkok : The Expression of Modernity and Cultural Changes*. Paper presented at the The 10th International Conference on Thai Studies, Bangkok.
- Bureau of Trade and Economic Indices, M. o. C. Report for Consumer Price Index. Retrieved 19 November, 2011, from <http://www.price.moc.go.th>
- Campbell, J., & Deaton, A. (1989). Why is consumption so smooth? *The Review of Economic Studies*, 56(3), 357-373.
- Campbell, J. Y., & Mankiw, N. G. (1986). Are output fluctuations transitory? : National Bureau of Economic Research.
- Campbell, J. Y., & Mankiw, N. G. (1989). Consumption, income and interest rates: Reinterpreting the time series evidence *NBER Macroeconomics Annual 1989, Volume 4* (pp. 185-246): MIT Press.
- Carlsson, F., Johansson-Stenman, O., & Martinsson, P. (2007). Do you enjoy having more than others? Survey evidence of positional goods. *Economica*, 74(296), 586-598.
- Centre, T. G. N. H. The Background of Gross National Happiness. Retrieved 16 April, 2013, from <http://www.gnhbhutan.org>
- Chao, A., & Schor, J. B. (1998). Empirical tests of status consumption: Evidence from women's cosmetics. *Journal of Economic Psychology*, 19(1), 107-131.
- Charles, K. K., Hurst, E., & Roussanov, N. (2007). Conspicuous consumption and race: National Bureau of Economic Research.

- Charness, G., & Grosskopf, B. (2001). Relative payoffs and happiness: an experimental study. *Journal of Economic Behavior & Organization*, 45(3), 301-328.
- Clark, A. E. (2003). Unemployment as a social norm: Psychological evidence from panel data. *Journal of labor economics*, 21(2), 323-351.
- Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles. *Journal of Economic Literature*, 95-144.
- Clark, A. E., & Oswald, A. J. (1994). Unhappiness and unemployment. *The Economic Journal*, 648-659.
- Clarke, M., & Islam, S. M. (2004). *Economic growth and social welfare: Operationalising normative social choice theory* (Vol. 262): Elsevier.
- Cochrane, J. H. (1994). Permanent and transitory components of GNP and stock prices. *The quarterly journal of economics*, 241-265.
- Crawford, J. R., & Henry, J. D. (2004). The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 43(3), 245-265.
- de Jesus Garcia, J., Fuentes, N. C., Borrego, S. A., Gutierrez, M. D., & Tapia, A. (2007). 19 Values and happiness in Mexico: the case of the metropolitan city of Monterrey. *Handbook on the Economics of Happiness*, 407.
- DeLeire, T., & Kalil, A. (2010). Does consumption buy happiness? Evidence from the United States. *International Review of Economics*, 57(2), 163-176.
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: a meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124(2), 197.
- Di Tella, R., Haisken-De New, J., & MacCulloch, R. (2010). Happiness adaptation to income and to status in an individual panel. *Journal of Economic Behavior & Organization*, 76(3), 834-852.
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *American Economic Review*, 335-341.
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *Review of Economics and Statistics*, 85(4), 809-827.
- Diener, E. (1984). Subjective Well-Being. *Psychological Bulletin*, 95(3), 542-575.
- Diener, E. (2009). *The science of well-being: The collected works of Ed Diener* (Vol. 37): Springer Science & Business Media.
- Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social indicators research*, 57(2), 119-169.
- Diener, E., Lucas, R. E., Oishi, S., & Suh, E. M. (2002). Looking up and looking down: Weighting good and bad information in life satisfaction judgments. *Personality and Social Psychology Bulletin*, 28(4), 437-445.
- Dilek, S., & Çolakoğlu, N. (2011). The relationship between income and consumption after global financial crisis1.
- Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29(1), 94-122.

- Donath, J., & Boyd, D. (2004). Public displays of connection. *bt technology Journal*, 22(4), 71-82.
- Dorn, D., Fischer, J. A., Kirchgässner, G., & Sousa-Poza, A. (2007). Is it culture or democracy? The impact of democracy and culture on happiness. *Social indicators research*, 82(3), 505-526.
- Duesenberry, J. S. (1949). Income, saving, and the theory of consumer behavior.
- Dutt, A. (2006). Consumption and happiness: Alternative approaches. *New Directions in the Study of Happiness*, 1-58.
- Easterlin, R. A. (1974). *Does economic growth improves the human a lot? Some empirical evidence in Paul A David and Melvin W. Reder (eds.) Nations and Households in Economic Growth: Essays in Honour of Moses Abramowitz.* New York and London: Academic Press.
- Easterlin, R. A. (1995). Will raising the incomes of all increase the happiness of all? *Journal of Economic Behavior & Organization*, 27(1), 35-47.
- Easterlin, R. A. (2003). Explaining happiness. *Proceedings of the National Academy of Sciences*, 100(19), 11176-11183.
- Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, 27(4), 463-482.
- Economic and Business Research Center, F. o. E., Rangsit University (2015). *Sustainable Happiness and Sustainable Development* (Vol. 200). Bangkok: Rangsit University Press.
- Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143-1168.
- Ferrer-i-Carbonell, A., & Gowdy, J. M. (2007). Environmental degradation and happiness. *Ecological Economics*, 60(3), 509-516.
- Ferrer-i-Carbonell, A., & Frijters, P. (2004). How Important is Methodology for the estimates of the determinants of Happiness?*. *The Economic Journal*, 114(497), 641-659.
- Flouri, E. (2004). Subjective well-being in midlife: The role of involvement of and closeness to parents in childhood. *Journal of Happiness Studies*, 5(4), 335-358.
- Frank, R. H. (1985). The demand for unobservable and other nonpositional goods. *The American Economic Review*, 101-116.
- Frank, R. H. (2001). *Luxury fever: Why money fails to satisfy in an era of excess:* Simon and Schuster.
- Frey, B. S., Benz, M., & Stutzer, A. (2004). Introducing procedural utility: Not only what, but also how matters. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, 377-401.
- Frey, B. S., & Stutzer, A. (2000). Happiness, economy and institutions. *The Economic Journal*, 110(466), 918-938.
- Frey, B. S., & Stutzer, A. (2002). *Happiness and economics: How the economy and institutions affect human well-being:* Princeton University Press.

- Frey, B. S., Stutzer, A., & Seminer, L.-M. U. C. f. E. S. I. f. E. R. (2007). *Economics and psychology: a promising new cross-disciplinary field*: Mit Press Cambridge, MA.
- Friedman, M. (1957). Introduction to "A Theory of the Consumption Function" *A theory of the consumption function* (pp. 1-6): princeton university press.
- Gali, J. (1994). Keeping up with the Joneses: Consumption externalities, portfolio choice, and asset prices. *Journal of Money, Credit and Banking*, 1-8.
- Giddings, L., Nunley, J. M., Schneebaum, A., & Zietz, J. (2014). Birth Cohort and the Specialization Gap Between Same-Sex and Different-Sex Couples. *Demography*, 51(2), 509-534.
- Graham, C., Eggers, A., & Sukhtankar, S. (2004). Does happiness pay?: An exploration based on panel data from Russia. *Journal of Economic Behavior & Organization*, 55(3), 319-342.
- Gray, R. S., Kramanon, R., & Thapsuwan, S. (2008). The determinants of happiness among Thai people: Some evidence from Chai Nat and Kanchanaburi. *Thammasat Economic Journal*, 26(2), 72-87.
- Grundy, E., & Sloggett, A. (2003). Health inequalities in the older population: the role of personal capital, social resources and socio-economic circumstances. *Social science & medicine*, 56(5), 935-947.
- Gujarati, D. N. (2004). *Basic Econometrics*. Singapore: McGraw Hill.
- Gutiérrez, J. L. G., Jiménez, B. M., Hernández, E. G., & Pcn, C. (2005). Personality and subjective well-being: Big five correlates and demographic variables. *Personality and Individual Differences*, 38(7), 1561-1569.
- Hagerty, M. R., & Veenhoven, R. (2003). Wealth and happiness revisited—growing national income does go with greater happiness. *Social indicators research*, 64(1), 1-27.
- Hall, R. E. (1979). Stochastic implications of the life cycle-permanent income hypothesis: theory and evidence. *NBER Working Paper*(R0015).
- Haller, M., & Hadler, M. (2006). How social relations and structures can produce happiness and unhappiness: An international comparative analysis. *Social indicators research*, 75(2), 169-216.
- Health, D. o. M. H. M. o. P. General Health Questionnaire in Thai Retrieved 20 January, 2012, from <http://www.dmh.go.th/test/download/files/ghq.pdf>
- Heffetz, O. (2011). A test of conspicuous consumption: Visibility and income elasticities. *Review of Economics and Statistics*, 93(4), 1101-1117.
- Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, 20(2), 331-360.
- Helliwell, J. F. (2006). Well-Being, Social Capital and Public Policy: What's New?*. *The Economic Journal*, 116(510), C34-C45.
- Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical transactions-royal society of London series B biological sciences*, 1435-1446.
- Hudders, L., & Pandelaere, M. (2012). The silver lining of materialism: the impact of luxury consumption on subjective well-being. *Journal of Happiness Studies*, 13(3), 411-437.
- Inc., W. F. Bangkok map. Retrieved 20 August, 2011, from <http://en.wikipedia.org/wiki/Bangkok>

- Jappelli, T., Marco Pagano, & Maggio, M. D. (2008). *Households' Indebtedness and Financial Fragility*. Paper presented at the 9th Jacques Polak Annual Research
- Kaewpijit, J. (2009). Debt Stress Happiness and the New Roles of Human Resource Development. *NIDA Development Journal*, 49(3), 251-274.
- Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Psychological and cognitive sciences*, 1-5.
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, 306(5702), 1776-1780.
- Kahneman, D., & Tversky, A. (2000). *Choices, values, and frames*: Cambridge University Press.
- Kahneman, D., Wakker, P. P., & Sarin, R. (1997). Back to Bentham? Explorations of experienced utility. *The quarterly journal of economics*, 375-405.
- Kasser, T. (2003). *The high price of materialism*: MIT Press.
- Kenny, C. (1999). Does growth cause happiness, or does happiness cause growth? *Kyklos*, 52(1), 3-25.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest, and Money*.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet paradox revisited. *Journal of social issues*, 58(1), 49-74.
- Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., . . . Ybarra, O. (2013). Facebook use predicts declines in subjective well-being in young adults. *PloS one*, 8(8), e69841.
- Kyrk, H. (1950). The income Distribution as a Measure of Economic welfare. *The American Economic Review*, 342-355.
- Lackey, N. R., & Wingate, A. L. (1998). The pilot study: One key to research success. *Advanced design in nursing research*, 375-384.
- Layard, R. (2005). *Happiness: lessons form a New Science*. London: Allen Lane.
- Linssen, R., van Kempen, L., & Kraaykamp, G. (2011). Subjective well-being in rural India: The curse of conspicuous consumption. *Social indicators research*, 101(1), 57-72.
- Littlejohn, S. W., & Foss, K. A. (2010). *Theories of human communication*: Waveland Press.
- Long, J. S., & Freese, J. (2006). *Regression models for categorical dependent variables using Stata*: Stata press.
- Lu, L. (2001). Understanding happiness: A look into the Chinese folk psychology. *Journal of Happiness Studies*, 2(4), 407-432.
- Luttmer, E. F. (2004). *Neighbors as negatives: Relative earnings and well-being*: National Bureau of Economic Research.
- Luttmer, E. F. P. (2005). Neighbors as negatives: Relative earnings and well-being. *The quarterly journal of economics*, 20(3), 963-1002.
- Magrabi, F. M. (1991). *The economics of household consumption*: Greenwood Publishing Group.
- Mankiw, G. (2009). *Essentials of economics*. Mason: South-Western Cengage Learning.
- Marks, N. F., Lambert, J. D., & Choi, H. (2002). Transitions to Caregiving, Gender, and Psychological Well-Being: A Prospective US National Study. *Journal of Marriage and Family*, 64(3), 657-667.

- Maslow, A. (1987). *Motivation and personality*: New York: Harper and Row.
- Meyer, B. D., & Sullivan, J. X. (2003). Measuring the well-being of the poor using income and consumption: National Bureau of Economic Research.
- Mills, M. B. (1997). Contesting the margins of modernity: Women, migration, and consumption in Thailand. *American ethnologist*, 24(1), 37-61.
- Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. *Franco Modigliani*, 1.
- Mongkol, A., Vongpiromsan, Y., Tangseree, T., Huttapanom, W., Romsai, P., & Chutha, W. (2009). The development and testing of Thai mental health indicator version 2007. *J Psychiatr Assoc Thailand*, 54(3), 299-316.
- Mukesh, M., & Goncalves, D. (2013). The Curse of Online Friends: The Detrimental Effects of Online Social Network Usage on Well-Being. Available at SSRN 2298328.
- Mullis, R. J. (1992). Measures of economic well-being as predictors of psychological well-being. *Social indicators research*, 26(2), 119-135.
- Multimedia, T. N. Internet Penetration in Thailand. Retrieved 17 April, 2011, from <http://www.nationmultimedia.com/2011/07/11/technology>
- Myers, D. G. (1993). *Pursuit of happiness: Discovering the pathway to fulfillment, well-being, and enduring personal joy*: Harper Paperbacks.
- National Economic and Social Development, P. R. S. (2006). Setting up 'Green and Happiness Society Index through the 5 Elements for People from all Walks of Life. *Monthly Report on National Economic and Social Development*, 23(5), 1-8.
- Nelson, C. R., & Plosser, C. R. (1982). Trends and random walks in macroeconomic time series: some evidence and implications. *Journal of monetary economics*, 10(2), 139-162.
- News, T. B. Thailand's Booming Smartphone Market to Grow. Retrieved 17 April, 2012, from <http://thailand-business-news.com/markets/31313-thailands-booming-smart-phone-market-to-grow>
- Ng, Y. K. (1997). A case for happiness, cardinalism, and interpersonal comparability. *The Economic Journal*, 107(445), 1848-1858.
- Nicholson, W., & Snyder, C. (2010). *Theory and application of intermediate microeconomics*: South-Western, Cengage Learning.
- Nicolao, L., Irwin, J. R., & Goodman, J. K. (2009). Happiness for sale: do experiential purchases make consumers happier than material purchases? *Journal of Consumer Research*, 36(2), 188-198.
- Nilchaikovit, T., Sukying, C., & Silpakit, C. (1996). Reliability and validity of the Thai version of the General Health Questionnaire. *Journal of the Psychiatric Association of Thailand*, 41(1), 2-17.
- Nitnitiphrut, K. (2007). *Happiness Concept and how Thai People Perceived: A Pilot Study Based on the Survey of Bangkokians, 2007*. Faculty of Economics, Thammasat University.
- Noll, H.-H., & Weick, S. (2014). Consumption expenditures and subjective well-being: empirical evidence from Germany. *International Review of Economics*, 1-19.
- Nozick, R. (1990). *Examined Life: Philosophical Meditations*: Simon and Schuster.

- Oswald, A. J. (1997). HAPPINESS AND ECONOMIC PERFORMANCE*. *The Economic Journal*, 107(445), 1815-1831.
- Oswald, A. J. (2008). On the curvature of the reporting function from objective reality to subjective feelings. *Economics Letters*, 100(3), 369-372.
- Pantasen, A. (2011). *From wealth to well-being and ultimately nirvana, mental development beyond mainstream economics to Buddhist economics*. Bangkok: Center of Study of Sufficiency Economy NIDA.
- Park, A., & Cai, S. (2015). Permanent Income and Subjective Well-Being: HKUST Institute for Emerging Market Studies.
- Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological assessment*, 5(2), 164.
- Peiró, A. (2006). Happiness, satisfaction and socio-economic conditions: Some international evidence. *The Journal of Socio-Economics*, 35(2), 348-365.
- Perez-Truglia, R. (2013). A test of the conspicuous-consumption model using subjective well-being data. Available at SSRN 1934007.
- Petrovčič, A., Fortunati, L., Vehovar, V., Kavčič, M., & Dolničar, V. (2015). Mobile phone communication in social support networks of older adults in Slovenia. *Telematics and Informatics*, 32(4), 642-655.
- Pholphirul, P., & Rukumnuaykit, P. (2008). *Happiness from social capital: An investigation from Kanchanaburi data*. Nakhonpathom: Population and Society Publishing.
- Poll, G. W. Strategic Consulting Indexes and Questions. Retrieved 5 December, 2012, from <http://www.gallup.com/strategicconsulting/en-us/worldpoll.aspx?ref=f>
- Powdthavee, N. (2005). *Essay on the Use of Subjective Well-Being Data in Economic Analysis: An Empirical Study Using Developed and Developing Countries Data*. Citeseer.
- Powdthavee, N. (2007). Economics of happiness: A review of literature and applications. *Chulalongkorn Journal of Economics*, 19(1), 51-73.
- Powdthavee, N. (2008). Putting a price tag on friends, relatives, and neighbours: Using surveys of life satisfaction to value social relationships. *The Journal of Socio-Economics*, 37(4), 1459-1480.
- Powdthavee, N. (2009). How important is rank to individual perception of economic standing? A within-community analysis. *The Journal of Economic Inequality*, 7(3), 225-248.
- Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of democracy*, 6(1), 65-78.
- Research, I. f. S. a. E. British Household Panel Survey (BHPS). Retrieved 5 December, 2012, from https://www.iser.essex.ac.uk/bhps/documentation/pdf_versions/index.html.
- Resnick, P. (2001). Beyond bowling together: Sociotechnical capital. *HCI in the New Millennium*(77), 247-272.
- Rojas, M. (2006). Life satisfaction and satisfaction in domains of life: is it a simple relationship? *Journal of Happiness Studies*, 7(4), 467-497.
- Rudd, N. M., & Kline, K. L. (1976). Money value of consumption and income of rural families: Two measures of economic status. *Social indicators research*, 3(2), 217-236.

- Sachayansrisakul, N. (2009). Sufficiency Economy: A Reasonable Approach for Thailand's Future. *NIDA Development Journal*, 49(2), 1-22.
- Salehan, M., & Negahban, A. (2013). Social networking on smartphones: When mobile phones become addictive. *Computers in Human Behavior*, 29(6), 2632-2639.
- Sandhikshetrin, K. (1988). *The civil and commercial code: books I-VI and glossary: Nitibannagarn*.
- Schneider, F., Feldmann, A., Krishnamurthy, B., & Willinger, W. (2009). *Understanding online social network usage from a network perspective*. Paper presented at the Proceedings of the 9th ACM SIGCOMM conference on Internet measurement conference.
- Schoon, I., Hansson, L., & Salmela-Aro, K. (2005). Combining work and family life: Life satisfaction among married and divorced men and women in Estonia, Finland, and the UK. *European Psychologist*, 10(4), 309.
- Scitovsky, T. (1992). *The joyless economy: The psychology of human satisfaction*: Oxford University Press Oxford.
- Scotchmer, S. (2005). Consumption externalities, rental markets and purchase clubs. *Economic Theory*, 25(1), 235-253.
- Shaw, L. H., & Gant, L. M. (2002). In defense of the Internet: The relationship between Internet communication and depression, loneliness, self-esteem, and perceived social support. *CyberPsychology & Behavior*, 5(2), 157-171.
- Shields, M. A., Frijters, P., & Haisken-DeNew, J. (2004). *Estimating the causal effect of income on health: Evidence from post-reunification Germany*. Paper presented at the Econometric Society 2004 Australasian Meetings.
- Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social indicators research*, 5(1-4), 475-492.
- Steinfeld, C., Ellison, N. B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 29(6), 434-445.
- Stevenson, B., & Wolfers, J. (2008). Economic growth and subjective well-being: Reassessing the Easterlin paradox: National Bureau of Economic Research.
- Stutzer, A. (2004). The role of income aspirations in individual happiness. *Journal of Economic Behavior & Organization*, 54(1), 89-109.
- Subrahmanyam, K., Reich, S. M., Waechter, N., & Espinoza, G. (2008). Online and offline social networks: Use of social networking sites by emerging adults. *Journal of Applied Developmental Psychology*, 29(6), 420-433.
- Surveys, E. C. E. Standard Eurobarometer 71. Retrieved 5 December, 2012, from http://ec.europa.eu/public_opinion/archives/eb/eb71/eb71_en.htm
- Tarı, R., & Çalışkan, Ş. (2005). KOCAELİ İLİNDE TÜKETİMİN GELİR HİPOTEZLERİNİN ANALİZİ. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 19(2).
- Tepperman, L., & Curtis, J. (1995). A life satisfaction scale for use with national adult samples from the USA, Canada and Mexico. *Social indicators research*, 35(3), 255-270.
- Thoits, P. A., & Hewitt, L. N. (2001). Volunteer work and well-being. *Journal of health and social behavior*, 115-131.

- Tsou, M.-W., & Liu, J.-T. (2001). Happiness and domain satisfaction in Taiwan. *Journal of Happiness Studies*, 2(3), 269-288.
- Tunsuchat, R., & Kumkaew, T. (2009). Happiness and well-being measurement index of the membership in the royal project foundation. *Chiangmai Journal of Economics*, 4-30.
- Tuntiwarodom, L., & Potipiti, T. (2008). Determinants of Happiness and Academic Performance of Economics Students. *Chulalongkorn Journal of Economics*, 20(3), 183-200.
- Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *CyberPsychology & Behavior*, 9(5), 584-590.
- Van Boven, L. (2005). Experientialism, materialism, and the pursuit of happiness. *Review of General Psychology*, 9(2), 132.
- Van Boven, L., & Gilovich, T. (2003). To do or to have? That is the question. *Journal of personality and social psychology*, 85(6), 1193.
- Van Praag, B. M., Frijters, P., & Ferrer-i-Carbonell, A. (2003). The anatomy of subjective well-being. *Journal of Economic Behavior & Organization*, 51(1), 29-49.
- Vanichbuncha, K. (2010). *Advanced Statistical Analysis with SPSS for Windows*. Bangkok: Chulalongkorn University.
- Veenhoven, R. (1988). The utility of happiness. *Social indicators research*, 20(4), 333-354.
- Veenhoven, R. (2000). The Four Qualities of Life: Ordering Concepts and Measures of the Good Life. *Journal of Happiness Studies*, 1, 1-39.
- Vermunt, R., Spaans, E., & Zorge, F. (1989). Satisfaction, happiness and well-being of Dutch students. *Social indicators research*, 21(1), 1-33.
- Wang, J., Novemsky, N., & Dhar, R. (2009). Anticipating adaptation to products. *Journal of Consumer Research*, 36(2), 149-159.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, 54(6), 1063.
- Weiss, A., Bates, T. C., & Luciano, M. (2008). Happiness is a personal (ity) thing the genetics of personality and well-being in a representative sample. *Psychological Science*, 19(3), 205-210.
- White, A. (2007). A global projection of subjective well-being: A challenge to positive psychology. *Psychtalk*, 56, 17-20.
- Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? Evidence from panel data. *Economica*, 65(257), 1-15.
- Winkelmann, R. (2005). Subjective well-being and the family: Results from an ordered probit model with multiple random effects. *Empirical Economics*, 30(3), 749-761.
- Yamane, T. (1967). *Statistics: an introductory analysis*.
- Yusoff, M. S. B., Rahim, A. F. A., & Yaacob, M. J. (2010). The sensitivity, specificity and reliability of the Malay version 12-items General Health Questionnaire (GHQ-12) in detecting distressed medical students. *ASEAN Journal of Psychiatry*, 11(1).

- Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2012). *Business research methods*: Cengage Learning.
- Zimmermann, S. (2014). The Pursuit of Subjective Well-Being through Specific Consumption Choice. *Available at SSRN 2484660*.
- Zung, W. W. (1965). A self-rating depression scale. *Archives of general psychiatry*, 12(1), 63-70.



APPENDIX 1

Questionnaire



Participant Information Sheet

Title of the Ph.D. dissertation project:

Consumption, Online Social Networking, and Subjective Well-being in Cosmopolitan Bangkok

Principal researcher's name: Nattaya Prapaipanich

Office address: Faculty of Economics, Chulalongkorn University, Bangkok 10330

Telephone (mobile): 081 903 0509

E-mail: nattayap@hotmail.co.th

Instruction:

You are being invited to take part in the project because you are our target population, who reside in Bangkok and whose age between 20 to 59 years old (i.e. born between 1956-1995). This participation information sheet provides basic information regarding this project and instructs why the project is being done and what it will involve.

It involves collecting data through a one-time survey, with questionnaires being self-administered. We will, however, introduce the questionnaire to you, give additional instructions and provide help whenever needed. The objective of this project is to identify and discuss the determinants of and explore individuals' relationship with their subjective well-being, focusing on the individual consumption of cosmopolitan Bangkok in correspond to these days a digital age.

The expected time needed for answering the questionnaire is 20-30 minutes and we will also take and record your blood pressure. All information collected about you during the course of the interview will be kept strictly confidential.

This research project does not carry any foreseeable discomforts, disadvantages and risks for you. You are free not to answer questions you do not wish to answer and to withdraw from the project at any time without having to provide an explanation. You can contact the principal researcher at any time, if you seek further clarification about the research project or wish to file a complaint.

You will receive small token of appreciation (i.e. a pen), not worth more than THB 40, as compensation for taking part in this research project.

Should the research project not be performed as indicated in this participant information sheet, you can report the incident to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4th Floor, Soi Chulalongkorn 62, Phayathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 Email: eccu@chula.ac.th

Thank you for taking part in this research project.



Happiness Questionnaire (please consider in the past 12 months)

12. Taken all things together, how happy would you say you are?

- 1) Very happy
- 2) Happy
- 3) Neutral
- 4) Unhappy
- 5) Very unhappy

Thai Mental Health Indicator (TMHI-15)

Question	Not at all	Little	Very	Most
13. You feel satisfied in life.	1)	2)	3)	4)
14. You feel pleasant.	1)	2)	3)	4)
15. You feel tired and frustrated with the daily life.	1)	2)	3)	4)
16. You feel disappointed with yourself.	1)	2)	3)	4)
17. You feel that your life is suffering.	1)	2)	3)	4)
18. You are able to overcome a difficult problem (when it occurs).	1)	2)	3)	4)
19. You are certain that you are able to control your emotions when the crisis occurs.	1)	2)	3)	4)
20. You are certain that you are able to face a serious incident that may occur in your life.	1)	2)	3)	4)
21. You feel sympathy when seeing others suffer.	1)	2)	3)	4)
22. You feel happy in assisting others, who have problems.	1)	2)	3)	4)
23. You provide assistance to others when the opportunity arises.	1)	2)	3)	4)

Experiential goods (See examples at the end of the questionnaire)	Price per piece (THB). Please consider the most recent one (within 12 months) and indicate it.					
	<1,000 ¹	1,000-5,000 ¹	5,000-10,000 ¹	10,000-100,000 ¹	100,000-1,000,000 ¹	>1,000,000 ¹
	(Please specify.....)	(Please specify.....)	(Please specify.....)	(Please specify.....)	(Please specify.....)	(Please specify.....)
	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased
38. Do you go because others have been so?	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No
39. How long did the feeling of the consumption last?	1) <1wk 2) 1 wk-1mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1wk 2) 1 wk-1mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1 mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1 mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1 mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths
40. How did you obtain it?	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 42)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 42)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 42)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 42)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 42)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 42)
41. How did you purchase it?	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....
42. If you did not purchase them by cash,	How long have you been having debt for how long?Mth /Yr How much amount outstanding at present?THB How do you feel about the debt incurred from these items at present? 1) Not feeling disturbed at all 2) Feeling disturbed to some extent 3) Feeling seriously disturbed					
43. Your life would be better if you had been in a place where you have never been to.	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree



Online social network goods (See examples at the end of the questionnaire)	Price per piece (THB). Please consider the most recent one (within 12 months) and indicate it.					
	1,000-10,000 ¹	5,000-10,000 ¹	10,000-100,000 ¹	100,000-1,000,000 ¹	>1,000,000 ¹	
	(Please specify.....)	(Please specify.....)	(Please specify.....)	(Please specify.....)	(Please specify.....)	
	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	<input type="checkbox"/> Not Purchased	
44. Do you purchase it because others have?	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No	1) Yes 2) No	
45. How long did the feeling of the consumption last?	1) <1 wk 2) 1 wk-1mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1 mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	1) <1 wk 2) 1 wk-1 mth 3) 2-4 mths 4) 7-12 mths 5) >12 mths	
46. How did you obtain it?	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 45)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 45)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 45)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 45)	1) Own money 2) Borrowed 3) Others (e.g. a gift skip to question 45)	
47. How did you purchase it?	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	1) Cash 2) Credit card 3) Others.....	
48. If you did not purchase them by cash,	How long have you been having debt for how long?Mth /Yr How much amount outstanding at present?THB How do you feel about the debt incurred from these items at present? 1) Not feeling disturbed at all 2) Feeling disturbed to some extent 3) Feeling seriously disturbed					
49. Your life would be better if you owned another online social network goods which you do not have.	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree	

50. Do you usually surf internet from which devices? (Can choose more than 1 answer)

- 1) Mobile phone
- 2) Tablet
- 3) Home computer

- 4) Office/School computer
- 5) Internet café
- 6) Not use internet

51. What are the reasons you purchase a social network goods? (Can choose more than 1 answer)

- 1) Staying in touch with friend (e.g. Whatsapp, Line, BB chat, Instagram, Msn, Skype, Facebook, Twitter)
- 2) For work (e.g. Check email, Edit documents, Read book)
- 3) Entertainment (e.g. Games, YouTube, Music, Movies, Online shopping)
- 4) Navigation
- 5) To be trendy/ To upgrade status
- 6) Others (pls specify).....

52. Please rank the impact from social network goods on you from 1 to 14 (1 is the most important and 14 is the least important impact).

- ___ Keep in touch with existing friends and family
- ___ Make new friends
- ___ Update your status to let your friends know what you are up to e.g. marriage invitation on Facebook
- ___ Explore the world and entertainment e.g. update news, trend, fashion, e-book
- ___ Work e.g. search data, share idea with colleagues, to do homework
- ___ Reduce phone bills e.g. international calls
- ___ Reduce noise at work places or public places
- ___ Lack of face to face interaction
- ___ No concentration on what you are doing e.g. addict (using social network goods all the time)
- ___ Health deterioration
- ___ Involve yourself in danger e.g. chat while walking or driving, create risk situations (check in Facebook where you are which may attract criminals)
- ___ Make others in danger e.g. drive and chat may make a car crash
- ___ Information hacked e.g. bank account
- ___ Feel having less personal security

53. Please indicate, on the scale below, how much you agree with the following statement "I do not think it is necessary to often meet my friends in person to strengthen my personal bonds with them, because online communication replaces that necessity".

1. Strongly Disagree
2. Disagree
3. Neither Agree nor Disagree
4. Agree
5. Strongly Agree

54. How long do you use internethours per day

55. Please indicate which personalities match you the most?

1. Neuroticism
2. Extraversion
3. Agreeableness
4. Conscientiousness

เอกสารชี้แจงผู้เข้าร่วมการวิจัย

ชื่อโครงการวิจัย: การบริโภคเครือข่ายสังคมออนไลน์ และความอยู่ดีมีสุขของคนในตัวเมือง กรุงเทพมหานคร

หัวหน้าโครงการ: นส.ณัฐญา ประไพพานิช

ที่อยู่: คณะเศรษฐศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

เบอร์โทรศัพท์: 081 903 0509

อีเมล: nattayap@hotmail.co.th

คำชี้แนะ:

ขอเรียนเชิญท่านเข้าร่วมในการวิจัย ซึ่งก่อนที่ท่านจะตัดสินใจเข้าร่วมนั้นผู้วิจัยขออนุญาตทำการชี้แจงเบื้องต้นถึงสาเหตุจำเป็นที่ต้องดำเนินโครงการและสิ่งใดที่จำเป็นบ้างในการดำเนินการวิจัยครั้งนี้ กรุณาใช้เวลาในการอ่านข้อมูลต่อไปนี้อย่างละเอียดรอบคอบ และสอบถามข้อมูลเพิ่มเติมหรือข้อมูลที่ไม่ชัดเจนได้ตลอดเวลา

โครงการวิจัยนี้เป็นการเก็บข้อมูลโดยผ่านแบบสอบถามเพียงครั้งเดียว วัตถุประสงค์ของการวิจัยนี้เพื่อที่จะบ่งชี้และอธิบายตัวกำหนดและศึกษาความสัมพันธ์ของตัวแปรเหล่านั้นกับความอยู่ดีมีสุข โดยมุ่งเน้นไปยังสังคมยุคใหม่หรือยุคแห่งเทคโนโลยี

เกณฑ์การคัดเลือกกลุ่มประชากรมีดังนี้กลุ่มประชากรในเป้าหมายของการวิจัยนี้นั้นเป็นบุคคลผู้ซึ่งพักอาศัยอยู่ในกรุงเทพมหานครและมีอายุระหว่าง 20-59 ปี หรือเกิดตั้งแต่ พ.ศ. 2499 ถึง พ.ศ. 2538 โดยการวิจัยนี้มุ่งหวังที่จะมีผู้มีส่วนร่วมในการวิจัยทั้งหมด 500 คน ทางโครงการยินดีที่ท่านได้มีส่วนร่วมในโครงการนี้ในฐานะเป็นหนึ่งในกลุ่มเป้าหมายของการศึกษา

แบบสอบถามนี้เกี่ยวกับการกินดีอยู่ดี การบริโภค เครือข่ายสังคมออนไลน์ และความอยู่ดีมีสุขของคนในตัวเมืองกรุงเทพมหานคร สอบถามข้อมูลทั่วไป ข้อมูลที่เกี่ยวกับความสุข ความสัมพันธ์กับเพื่อน การบริโภค สินค้าวัตถุดิบ สินค้าสิ้นทางการ สินค้าเครือข่ายสังคมออนไลน์และการใช้อินเทอร์เน็ตมีทั้งหมด 8 หน้า, 57 ข้อระยะเวลาในการทำแบบสอบถามนี้ใช้เวลาประมาณ 20-30 นาทีและจะมีการวัดพร้อมทั้งบันทึกข้อมูลความดันโลหิตควบคู่กัน

ประโยชน์ของโครงการวิจัยนี้ เพื่อศึกษาปัจจัยที่ส่งผลต่อความสุข โดยเฉพาะอย่างยิ่งปัจจัยทางด้านการบริโภค ซึ่งนอกเหนือจากปัจจัยทุนทางสังคมแบบดั้งเดิมแล้ว โครงการวิจัยได้พยายามนำวิถีชีวิตของคนในสังคมยุคใหม่หรือยุคแห่งเทคโนโลยีมาร่วมพิจารณาด้วย เนื่องจากสินค้าเครือข่ายสังคมออนไลน์ได้กลายเป็นส่วนสำคัญส่วนหนึ่งของการดำเนินชีวิตสำหรับบุคคลจำนวนมากในปัจจุบัน โครงการจึงพิจารณาความสุขในสังคมร่วมสมัยในมุมมองของโลกาภิวัตน์และการใช้อุปกรณ์และเทคโนโลยีที่เกิดขึ้นใหม่อย่างแพร่หลาย ผู้วิจัยเชื่อว่าการเคลื่อนไหวเหล่านี้มีผลกระทบต่อความอยู่ดีมีสุขของประชาชนที่อาศัยอยู่ในกรุงเทพมหานครในทุกวันนี้ และหวังที่จะให้ประชาชนตระหนักถึงผลกระทบที่อาจจะเกิดจากการบริโภคสินค้าของพวกเขา โดยเฉพาะการบริโภควัตถุดิบ ซึ่งอาจไม่ก่อให้เกิดความสุข ไม่ควรบริโภคมากเกินไป โดยทั่วไปมีหลายงานวิจัยที่ศึกษาความสัมพันธ์ระหว่างความสุขและปัจจัยต่างๆ แต่งานวิจัยที่มีอยู่ส่วนใหญ่มุ่งเน้นไปที่ประเทศที่พัฒนาแล้วมีไม่มากนักที่ศึกษาความสุขในประเทศกำลังพัฒนารวมทั้งประเทศไทย

โครงการวิจัยนี้จะไม่ก่อให้เกิดความไม่สบายใจ ความเสี่ยง หรือผลกระทบใดๆทั้งสิ้น ในกรณีที่ท่านรู้สึกอึดอัด ไม่สบายใจหรือเครียดกับบางคำถามท่านสามารถปฏิเสธที่จะเข้าร่วมหรือถอนตัวจากการวิจัยได้ทุกขณะ โดยไม่ต้องให้เหตุผลและไม่สูญเสียประโยชน์ใดๆ หากท่านมีข้อสงสัยให้สอบถามเพิ่มเติมได้โดยสามารถติดต่อผู้วิจัยได้ตลอดเวลา

ทางโครงการจะเก็บข้อมูลของท่านเป็นความลับอย่างยิ่งและแบบสอบถามจะถูกทำลายเมื่อเสร็จสิ้นการวิจัยข้อมูลของท่านจะถูกนำไปใช้เพื่องานวิจัยเท่านั้นและจะไม่เปิดเผยต่อบุคคลภายนอก

เพื่อเป็นการตอบแทนน้ำใจทางคณะนักวิจัยขอมอบของที่ระลึกเล็กน้อยแก่ท่าน ในวงเงินไม่เกิน 40 บาท ซึ่งทางคณะวิจัยได้จัดเตรียมปากกาเป็นของตอบแทน

หากท่านไม่ได้รับการปฏิบัติตามข้อมูลดังกล่าวสามารถร้องเรียนได้ที่ คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย ชั้น 4 อาคารสถาบัน 2 ซอยจุฬาลงกรณ์ 62 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330 โทรศัพท์ 0-2218-8147 หรือ 0-2218-8141 โทรสาร 0-2218-8147 E-mail: eccu@chula.ac.th

ขอขอบพระคุณที่เป็นส่วนหนึ่งของโครงการวิจัย

แบบสอบถามเรื่องความอยู่ดีมีสุข

แบบสอบถามนี้เป็นส่วนหนึ่งของวิทยานิพนธ์ปริญญาคุณวุฒิบัณฑิต คณะเศรษฐศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ภายใต้หัวข้อ “การบริโภค เครือข่ายสังคมออนไลน์ และความอยู่ดีมีสุขของผู้อาศัยในกรุงเทพมหานคร” โดยขอรับรองว่าจะใช้ข้อมูลที่ได้จากแบบสอบถามครั้งนี้เพื่อการศึกษาวิจัย และจะไม่เผยแพร่ข้อมูลของท่านสู่บุคคลอื่นๆ (สาธารณะชน) ข้อมูลทั้งหมดจะถูกเก็บเป็นความลับและใช้ในการวิจัยนี้เท่านั้น

คุณมีทะเบียนบ้านอยู่ในกรุงเทพฯ ใช่ ไม่ใช่

คุณอาศัยอยู่ในกรุงเทพมหานครนานเท่าไร.....ปี

เวลาเริ่มทำแบบสอบถาม.....นาฬิกา.....นาที

เวลาทำแบบสอบถามเสร็จ.....นาฬิกา.....นาที

กรุณาทำเครื่องหมาย วงกลม ล้อมรอบหรือเติมคำตอบที่ตรงกับตัวท่านมากที่สุด

1. เพศ 1) ชาย 2) หญิง
2. วัน/เดือน/ปีเกิด วัน เดือน ปี (พ.ศ.)
3. สถานภาพสมรส 1) แต่งงาน 2) โสด 3) อื่นๆ.....
4. จำนวนบุตร 1) ไม่มี 2) มีระบุ.....
5. จำนวนปีที่เข้ารับการศึกษ.....ปี (ไม่รวมอนุบาล)
6. การจ้างงาน 1)ว่างงาน 2) ทำงานประจำ 3) นิสิต นักศึกษา 4)ทำงานนอกเวลาหรือพาร์ทไทม์
7. รายได้เฉลี่ยต่อเดือนของท่าน
 - 1) 60,000 บาทขึ้นไป 2) 50,000-60,000 บาท
 - 3) 25,000- 49,999บาท 4) 15,000-24,999บาท
 - 5) น้อยกว่า 15,000บาท
8. รายได้เฉลี่ยต่อเดือนของครอบครัวท่าน
 - 1) 60,000 บาทขึ้นไป 2) 50,000-60,000 บาท
 - 3) 25,000- 49,999บาท 4) 15,000-24,999บาท
 - 5) น้อยกว่า 15,000บาท
9. หนี้สิน(12 เดือนที่ผ่านมา)
 - 1) ไม่มี 2) มี ของตัวเอง
 - 3)มี ของบุคคลในครอบครัว
 - 4) มี ของตัวเองและบุคคลในครอบครัว
10. ถ้าท่านมีหนี้สิน, ท่านรู้สึกอย่างไรกับหนี้สินของท่าน
 - 1) ไม่รู้สึกกังวลว่าเป็นหนี้ 2) รู้สึกกังวลว่าเป็นหนี้บ้างเล็กน้อย
 - 3) รู้สึกกังวลอย่างมากว่าเป็นหนี้
11. ท่านมีโรคประจำตัวหรือไม่(เช่น โรคหัวใจ เบาหวาน โรคไต มะเร็งหรือทุกผลภาพ)
 - 1) มี 2) ไม่มี

แบบสอบถามความสุข (โปรดพิจารณาใน 12 เดือนที่ผ่านมา)

12. ท่านมีความสุขมากน้อยเพียงใดเมื่อพิจารณาโดยรวม
 - 1) มีความสุขอย่างมาก
 - 2) มีความสุข
 - 3) ไม่มีความสุข
 - 4) ไม่มีความสุขอย่างมาก

แบบสอบถามดัชนีชี้วัดสุขภาพจิตคนไทยฉบับสั้น(TMHI-15)

คำถาม	ไม่เลย	เล็กน้อย	มาก	มากที่สุด
13. ท่านรู้สึกพึงพอใจในชีวิต	1)	2)	3)	4)
14. ท่านรู้สึกสบายใจ	1)	2)	3)	4)
15. ท่านรู้สึกเมื่อนายท้อแท้กับการดำเนินชีวิตประจำวัน	1)	2)	3)	4)
16. ท่านรู้สึกผิดหวังในตัวเอง	1)	2)	3)	4)
17. ท่านรู้สึกว่าชีวิตของท่านมีแต่ความทุกข์	1)	2)	3)	4)
18. ท่านสามารถทำใจยอมรับได้สำหรับปัญหาที่ยากจะแก้ไข (เมื่อมีปัญหา)	1)	2)	3)	4)
19. ท่านมั่นใจว่าจะสามารถควบคุมอารมณ์ได้เมื่อมีเหตุการณ์กลับชั้นหรือร้ายแรงเกิดขึ้น	1)	2)	3)	4)
20. ท่านมั่นใจที่จะเผชิญกับเหตุการณ์ร้ายแรงที่เกิดขึ้นในชีวิต	1)	2)	3)	4)
21. ท่านรู้สึกเห็นอกเห็นใจเมื่อผู้อื่นมีทุกข์	1)	2)	3)	4)
22. ท่านรู้สึกเป็นสุขในการช่วยเหลือผู้อื่นที่มีปัญหา	1)	2)	3)	4)
23. ท่านให้ความช่วยเหลือแก่ผู้อื่นเมื่อมีโอกาส	1)	2)	3)	4)
24. ท่านรู้สึกภูมิใจในตนเอง	1)	2)	3)	4)
25. ท่านรู้สึกมั่นคงปลอดภัยเมื่ออยู่ในครอบครัว	1)	2)	3)	4)
26. หากท่านป่วยหนัก ท่านเชื่อว่าครอบครัวจะดูแลท่านเป็นอย่างดี	1)	2)	3)	4)
27. สมาชิกในครอบครัวมีความรักและผูกพันต่อกัน	1)	2)	3)	4)

ความสัมพันธ์กับเพื่อน

28. ท่านมีเพื่อนแท้ (เพื่อนสนิทที่เชื่อใจ ไว้ใจ และบอกความลับได้) และติดต่อกันทางสมาร์ทโฟนหรือแท็บเล็ต.....คน
29. ท่านมีเพื่อนทั่วไป (เพื่อนกินที่ ไม่สามารถเชื่อใจและบอกความลับ ไม่ได้)และติดต่อกันทางสมาร์ทโฟนหรือแท็บเล็ต.....คน

สินค้าเครือข่ายสังคมออนไลน์ (สามารถเลือกเพียงหนึ่งรายการที่สะดวก ตอบคำถาม)	ราคาเครื่อง(บาท) โปรดพิจารณาสินค้าเครือข่ายสังคมออนไลน์ที่ท่านได้ซื้อภายใน 12 เดือน และกฎระเบียบ "ชื่อ" และ "ชนิด"สินค้าลงในทุกช่องของราคาสินค้า				
	1,000-5,000** ระบุ	5,001-10,000** ระบุ	10,001-100,000** ระบุ	100,001-1,000,000** ระบุ	>1,000,000** ระบุ
	<input type="checkbox"/> ไม่ใช้ชื่อ	<input type="checkbox"/> ไม่ใช้ชื่อ	<input type="checkbox"/> ไม่ใช้ชื่อ	<input type="checkbox"/> ไม่ใช้ชื่อ	<input type="checkbox"/> ไม่ใช้ชื่อ
44. ท่านซื้อสินค้าบนกระดองเครื่องคอมพิวเตอร์	1) ใช่ 2) ไม่ใช่	1) ใช่ 2) ไม่ใช่	1) ใช่ 2) ไม่ใช่	1) ใช่ 2) ไม่ใช่	1) ใช่ 2) ไม่ใช่
45. สินค้าที่ท่านซื้อมาจากผู้ถือทะเลหรือโรงโม่หินสินค้าเป็นเวลานานแค่ไหน	1) <1 สัปดาห์ 2) 1 สัปดาห์-1 เดือน 3) 2-6 เดือน 4) 7-12 เดือน 5) >12 เดือน	1) <1 สัปดาห์ 2) 1 สัปดาห์-1 เดือน 3) 2-6 เดือน 4) 7-12 เดือน 5) >12 เดือน	1) <1 สัปดาห์ 2) 1 สัปดาห์-1 เดือน 3) 2-6 เดือน 4) 7-12 เดือน 5) >12 เดือน	1) <1 สัปดาห์ 2) 1 สัปดาห์-1 เดือน 3) 2-6 เดือน 4) 7-12 เดือน 5) >12 เดือน	1) <1 สัปดาห์ 2) 1 สัปดาห์-1 เดือน 3) 2-6 เดือน 4) 7-12 เดือน 5) >12 เดือน
46. ท่านใช้สินค้าบนมือถือ	1) เห็นของวิเศษ 2) มีเวลาสั้น 3) อื่นๆ (เช่น ใช้คอมพิวเตอร์ข้ามไปข้อ43)	1) เห็นของวิเศษ 2) มีเวลาสั้น 3) อื่นๆ (เช่น ใช้คอมพิวเตอร์ข้ามไปข้อ43)	1) เห็นของวิเศษ 2) มีเวลาสั้น 3) อื่นๆ (เช่น ใช้คอมพิวเตอร์ข้ามไปข้อ43)	1) เห็นของวิเศษ 2) มีเวลาสั้น 3) อื่นๆ (เช่น ใช้คอมพิวเตอร์ข้ามไปข้อ43)	1) เห็นของวิเศษ 2) มีเวลาสั้น 3) อื่นๆ (เช่น ใช้คอมพิวเตอร์ข้ามไปข้อ43)
47. ท่านซื้อสินค้าบนมือถือ	1) เห็นสด 2) บัตรเครดิต 3) อื่นๆ.....	1) เห็นสด 2) บัตรเครดิต 3) อื่นๆ.....	1) เห็นสด 2) บัตรเครดิต 3) อื่นๆ.....	1) เห็นสด 2) บัตรเครดิต 3) อื่นๆ.....	1) เห็นสด 2) บัตรเครดิต 3) อื่นๆ.....
48. ถ้าท่านไม่ได้ซื้อสินค้าบนมือถือ - ท่านใช้บัตรเครดิตหรือเป็นเวลานานเท่าไร - ปัจจุบันท่านยังใช้บัตรเครดิตอยู่หรือไม่ - ปัจจุบันท่านใช้บัตรเครดิตหรือไม่วัน /.....เดือน /.....ปี บาท 1) ไม่ใช้บัตรเครดิต 2) ใช้บัตรเครดิตบ้าง 3) ใช้บัตรเครดิตอย่างมากวัน /.....เดือน /.....ปี บาท 1) ไม่ใช้บัตรเครดิต 2) ใช้บัตรเครดิตบ้าง 3) ใช้บัตรเครดิตอย่างมากวัน /.....เดือน /.....ปี บาท 1) ไม่ใช้บัตรเครดิต 2) ใช้บัตรเครดิตบ้าง 3) ใช้บัตรเครดิตอย่างมากวัน /.....เดือน /.....ปี บาท 1) ไม่ใช้บัตรเครดิต 2) ใช้บัตรเครดิตบ้าง 3) ใช้บัตรเครดิตอย่างมากวัน /.....เดือน /.....ปี บาท 1) ไม่ใช้บัตรเครดิต 2) ใช้บัตรเครดิตบ้าง 3) ใช้บัตรเครดิตอย่างมาก
49. ท่านรู้สึกอย่างไรต่อสินค้าเครือข่ายสังคมออนไลน์บางอย่าง	1) ไม่เห็นด้วยอย่างมาก 2) ไม่เห็นด้วย 3) เฉลยๆ 4) เห็นด้วย 5) เห็นด้วยอย่างมาก	1) ไม่เห็นด้วยอย่างมาก 2) ไม่เห็นด้วย 3) เฉลยๆ 4) เห็นด้วย 5) เห็นด้วยอย่างมาก	1) ไม่เห็นด้วยอย่างมาก 2) ไม่เห็นด้วย 3) เฉลยๆ 4) เห็นด้วย 5) เห็นด้วยอย่างมาก	1) ไม่เห็นด้วยอย่างมาก 2) ไม่เห็นด้วย 3) เฉลยๆ 4) เห็นด้วย 5) เห็นด้วยอย่างมาก	1) ไม่เห็นด้วยอย่างมาก 2) ไม่เห็นด้วย 3) เฉลยๆ 4) เห็นด้วย 5) เห็นด้วยอย่างมาก

50.ท่านใช้อินเทอร์เน็ตจากที่ใด (สามารถเลือกได้มากกว่า 1 คำตอบ)

- 1)มือถือ
- 2)แท็บเล็ต
- 3)คอมพิวเตอร์ที่บ้าน
- 4)คอมพิวเตอร์ที่ทำงาน/โรงเรียน
- 5)อินเทอร์เน็ตคาเฟ่
- 6)ไม่ใช้อินเทอร์เน็ต

51.ท่านตัดสินใจซื้อสินค้าเครือข่ายสังคมออนไลน์เพื่อวัตถุประสงค์ใด โปรดพิจารณาใน 12 เดือนที่ผ่านมา (ตอบได้มากกว่า 1 ตัวเลือก)

- 1)เพื่อติดต่อกับเพื่อน (เช่น Whatsapp, Line, Instagram, Skype, Facebook, Twitter)
- 2)เพื่อทำงาน (เช่น เช็คอีเมล, แก้อัปเดตเอกสาร, อ่านหนังสือ)
- 3)เพื่อความบันเทิง (เช่น เล่นเกมส์, ยูทูป, ดูหนัง, ฟังเพลง, ซื้อสินค้าออนไลน์)
- 4)เพื่อค้นหาเส้นทาง นำทาง
- 5)เพื่อความทันสมัย/หน้าตาทางสังคม
- 6)อื่นๆ (โปรดระบุ).....

52.กรุณาเรียงลำดับผลกระทบที่ท่านได้รับจากสินค้าเครือข่ายสังคมออนไลน์จาก 1 ถึง 14 (1 สำคัญมากที่สุด, 14 สำคัญน้อยที่สุด)

- ช่วยให้ติดต่อกับครอบครัว เพื่อนและญาติพี่น้องได้มากขึ้น
- ช่วยให้ได้พบและรู้จักเพื่อนใหม่
- ช่วยให้อัปเดตข้อมูลส่วนตัวได้สะดวกและรวดเร็ว เช่นเชิญไปร่วมงานแต่งงานผ่านทางเฟซบุ๊ก
- ช่วยเปิดโลกทัศน์และให้ความบันเทิง เช่น อัปเดตข่าว แฟชั่น อ่านหนังสือ ดูหนังฟังเพลง
- ช่วยให้ทำงานได้ง่ายขึ้น เช่น ค้นหาข้อมูล แร่ความคิดเห็นกับผู้ร่วมงาน ทำรายงาน การบ้าน
- ช่วยลดค่าโทรศัพท์ เช่น ค่าโทรไปต่างประเทศ

- ช่วยลดการใช้เสียงขณะทำงานหรือเมื่ออยู่ในที่สาธารณะ
- ทำให้ท่านมีปฏิสัมพันธ์กับผู้อื่นน้อยลง
- ทำให้ท่านหรือผู้คนรอบข้างท่านขาดสมาธิในสิ่งที่ทำ เช่น มีนิสัยคิดมือถือ แท็บเล็ต
- ทำให้ท่านหรือผู้คนรอบข้างท่านสุขภาพเสื่อมโทรม
- ก่อให้เกิดอันตรายต่อตัวท่านเอง เช่น แผลขณะเดินหรือขับรถจึงถูกรถชน เซ็คอินบนเฟสบุ๊คทำให้
- อาชญากรรู้สถานที่อยู่ของท่านก่อให้เกิดอาชญากรรม
- ทำให้เกิดอันตรายต่อผู้อื่น เช่น แผลขณะขับรถจึงเกิดอุบัติเหตุต่อผู้อื่น
- ท่านหรือผู้คนรอบข้างท่านถูกลักลอบข้อมูลหรือโดน โกงจากการซื้อสินค้าออนไลน์
- ทำให้ท่านมีความเป็นส่วนตัวน้อยลง

53. ท่านเห็นด้วยกับข้อความดังกล่าวมากน้อยเพียงใด “ท่านไม่คิดว่ามีความจำเป็นที่จะต้องออกมาพบปะสังสรรค์กับเพื่อนเพื่อสานความสัมพันธ์ให้แน่นแฟ้นมากขึ้น เพราะเราสามารถติดต่อกันผ่านทางอินเทอร์เน็ตได้”

- 1) ไม่เห็นด้วยอย่างมาก
- 2) ไม่เห็นด้วย
- 3) เฉยๆ
- 4) เห็นด้วย
- 5) เห็นด้วยอย่างมาก

54. ท่านใช้อินเตอร์เน็ตกี่ชั่วโมงต่อวัน..... ชั่วโมง

55. กรุณาระบุคุณลักษณะข้อใดต่อไปนี้ที่อธิบายเกี่ยวกับคุณมากที่สุด

- 1) มีความมั่นคงในอารมณ์
- 2) ชอบสังคม
- 3) เข้ากับผู้อื่นได้ง่าย
- 4) มีความยุติธรรม
- 5) เปิดรับประสบการณ์

56. ท่านได้สูบบุหรี่ ดื่มเหล้า หรือ ดื่มกาแฟ ก่อนหน้าทำแบบสอบถาม 30 นาทีหรือไม่

- 1) ใช่
- 2) ไม่ใช่

57. ความดันโลหิต 1) ปกติ 2) สูง 3) ต่ำ

ความดันช่วงหัวใจบีบตัว (ตัวบน)

ความดันช่วงหัวใจคลายตัว (ตัวล่าง)

–จบแบบสอบถาม–

ขอขอบพระคุณการสละเวลาของท่านในการตอบแบบสอบถามนี้เป็นอย่างสูง

ตัวอย่างสินค้าตามชนิดและช่วงราคา

สินค้า วัตถุดิบ	ⁱ เช่น street fashion แฟชั่นบนท้องถนน ตลาดนัด รวมถึง เสื้อผ้า, กระเป๋าถือ, เข็มขัด, รองเท้า, แว่นตากันแดด, เครื่องประดับต่างๆ, เครื่องสำอาง, น้ำหอม
	ⁱⁱ เช่น middle class fashion แฟชั่นแบบรสนิยมระดับกลาง รวมถึง เสื้อผ้า, กระเป๋าถือ, เข็มขัด, รองเท้า, แว่นตากันแดด, เครื่องประดับต่างๆ, เครื่องสำอาง, น้ำหอม, เครื่องเสียง (stereos)
	ⁱⁱⁱ เช่น middle to hi-end class fashion แฟชั่นแบบรสนิยมระดับกลางถึงระดับสูง รวมถึง เสื้อผ้า, กระเป๋าถือ (เช่น หลุยส์วิตตอง Louis Vuitton), เข็มขัด (เช่น Dunhill), รองเท้า (เช่น Bally), แว่นตากันแดด, เครื่องประดับต่างๆ, เครื่องสำอาง, น้ำหอม, เครื่องเสียง (stereos), กล้องถ่ายรูป, ของแต่งบ้าน
	^{iv} เช่น hi-end class fashion แฟชั่นแบบรสนิยมระดับสูง รวมถึง เสื้อผ้า, กระเป๋าถือ (เช่น แอร์เมส Hermes), เข็มขัด, รองเท้า, แว่นตากันแดด, เครื่องประดับต่างๆ (เช่น กำไลหยก), LED TV, นาฬิกาโรเล็กซ์ (Rolex), ของแต่งบ้าน
	^v เช่น big bike motorcycles, choppers, เครื่องประดับต่างๆ (เช่น เพชร), กล้องถ่ายรูป
สินค้า การ	^{vi} เช่น รถยนต์ BMW รุ่นใหม่, Mercedes-Benz, Audi, Lexus, sport cars (Ferrari, Jaguar, Porsche, Lamborghini)
	^{vii} เช่น คำศัพท์ทางดนตรี, ศัพท์ดนตรี, ศัพท์สวนสนุก, ห้องที่ฮิวโนประเทศไทย
	^{viii} เช่น คำเรียนโยคะต่อเนื่อง, ห้องเรียนโยคะภาคเอเชียตะวันออกเฉียงใต้ (เช่น หน่า, กัมพูชา), ที่พักโรงแรมระดับกลาง
	^{ix} เช่น คำสมาธิฝึกฝนต่อเนื่อง, ห้องเรียนโยคะภาคเอเชีย (เช่น ฮองกง, สิงคโปร์), ที่พักโรงแรมระดับกลางถึงระดับสูง
	^x เช่น คำศัพท์ไปชม Superbowl, คำเรียน summer course, ห้องเรียนยุโรปอเมริกา, ที่พักโรงแรมระดับสูงราคา
สินค้า เครือข่าย สังคม	^{xi} เช่น เสื้อถัก Alpaca, Mediterranean, รับประทานอาหารในภัตตาคาร Michelin star
	^{xii} เช่น ปีนภูเขา Everest, นั่งเครื่องบินเจ็ตส่วนตัว, ทัวร์รอบโลก, ทัวร์อวกาศ
	^{xiii} เช่น nokia x, nokia asha, samsung galaxy s, innovo tablet i-tab 704
	^{xiv} เช่น nokia lumia, sony xperia, hp slate 7 extreme, i mobile iq x3
	^{xv} เช่น samsung galaxy s 5, apple iphone, apple ipad, samsung galaxy grand 2
สินค้า	^{xvi} เช่น Tag heuer smartphone, Vertu Ti Ferrari limited edition, Vertu Ti android 4 ice cream sandwich
	^{xvii} เช่น nokia 8800 arte with pink diamonds, sony ericsson black diamond, peter aloisson's iphone princess plus, ullysse nardin's the chairman



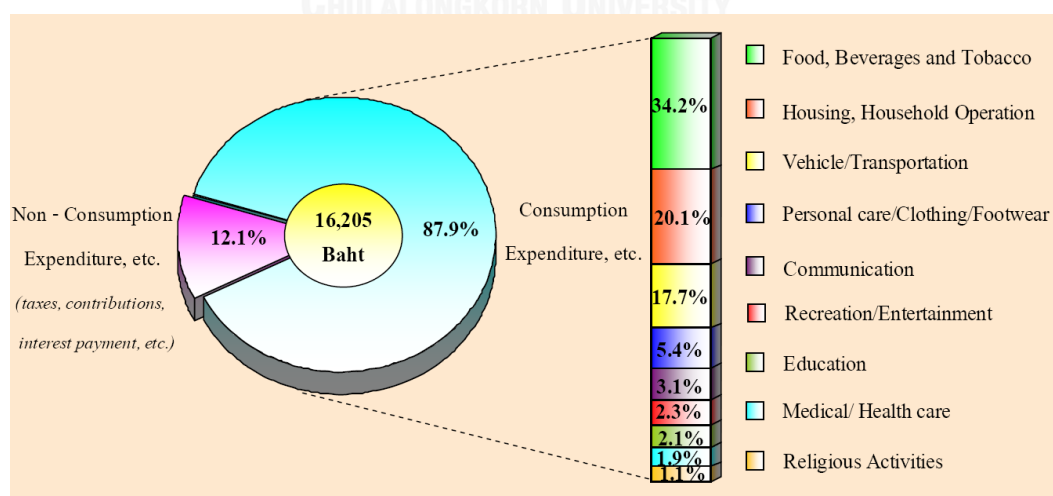
APPENDIX 2

Consumption

A2.1 Consumption Categories

Following the standard classification of NSO, there are nine consumption categories, which are (1) Food, Beverages, and Tobacco (2) Housing, Household Appliances (3) Vehicle and Transportation (4) Personal care, Clothing, Footwear (5) Communication (6) Recreation, Entertainment (7) Education (8) Medical, Health care (9) Religious Activities. According to the figure below, it can be seen that there is 34.2 percent paid on food and beverages, including 1.4 percent spending on alcoholic drinking. Expense on housing and household appliances is 20.1 percent, follows by vehicles and transportation 17.7 percent, personal care/clothing/footwear 5.4 percent, communication 3.1 percent, recreation/entertainment 2.3 percent, education 2.1 percent, medical 1.9 percent, and activities related to religious 1.1 percent.

Figure A2.1-1: Percentage Distribution of Monthly Household Expenditure by Type of Expenditure (2009)



Source: NSO (2009)

This section attempts to consider each NSO consumption categories and relate them to material, experiential and social network goods. NSO classifies consumption into nine categories.

First, “Food, Beverages, and Tobacco” are food and drinks including alcoholic beverages, dining or drinking at home or in restaurants, cafes, and diners (NSO 2009; DeLeire and Kalil 2010). They can be regarded as basic goods if they are needed to consume and drink in order to survive. However, they can also be experiential goods if it is used as to obtain pleasure in the atmosphere of restaurant dinners.

Second, “Housing and Household Appliances” consist of the amount spent on purchasing goods and services used in a home. These include repair and maintenance dwelling, lighting and water supply, furniture and major equipment such as refrigerators, microwave, washing machine, televisions, computers, and kitchen appliances (NSO 2009; DeLeire and Kalil 2010). For Housing and Household Appliances, they can be considered as basic goods or material goods. If one purchases standard refrigerators for food storage or kitchen appliances used in preparing food or to save time for household work, then they are basic goods. However, if one purchases them for decoration, they also can be considered as material goods.

Third, “Vehicle and Transportation” include vehicles purchase, vehicle repairing and maintenance, local transportation, special occasion travelling and tour (NSO 2009). It means a medium or a system for carrying individuals or goods from one place to another. These include both personal and public transportation such as buses and trains. For Vehicle and Transportation, they can be basic goods, experiential goods, or material goods depending on intention of purchase. If one purchases a vehicle to commute to work, it is basic goods. However, if an automobile is used as a symbolic realm to express messages about class, status and identity, then the automobile is material goods. If one purchases a motorcycle with the purpose of travelling, it also can be regarded as experiential goods.

Fourth, “Personal care, Clothing, and Footwear” are products that are used by individuals in the topical care and grooming of the body. For Personal care, Clothing, and Footwear, they can be basic goods, experiential goods, or material goods. It is the same as other goods that needed to consider the intention of the purchases. If the purposes of purchases are to wear or to cover for the body, they are basic goods.

However, they can be material goods if one purchases for use in such activities as beautifying, promoting attractiveness, or altering the appearance. For example, brand name clothing to reflect modesty or to express of personal taste, style, and social status. If the purposes of purchases are to be used as exercise or leisure equipment, they can be considered as experiential goods.

Fifth, “Communication” is the process that links discontinuous parts of the living world to one another (Littlejohn and Foss 2008). Using data from the October Household Survey (OHS) study of South Africa, Powdthavee (2005) find that on average individuals with a telephone connection in their dwellings have reported higher Perceived Quality Of Life (PQOL).

Communication can be conveyed through, for example, telephones or social media as a modern channel for these days. These include social networking service via internet connection such as Window Messenger, Yahoo, Facebook, Twitter, Friendster, You Tube, Google Talk, Skype; and Smart phones. For Communication, it can be either regarded as material goods or social network goods depending on intention of purchases. In a case one purchases an android phone to communicate with friends or to work, it can be considered as social networks goods. This is because social network goods are goods that associated with social participation. However, if the aim of the purchase is to gain the newest version of Apple’s iPhone and RIM’s Blackberry in order to standouts from others, then it also can be regarded as material goods. This is because that communication device is exploited as relational consumption goods.

Sixth, “Recreation and Entertainment” include recreation equipment and sports; admission, sports fee; and reading (NSO 2009). According to DeLeire and Kalil (2010), they refer these goods as leisure goods which comprise trips and vacations, movie theaters, sports events, and performing arts, sports (including gym membership and exercise equipment), hobbies, and leisure equipment. For Recreation and Entertainment, they can be considered either as experiential goods or material goods. However, most recreation and entertainment are not tangible. As a result, mostly they can be regarded as experiential goods.

Seventh, “Education” includes education attainment. Both private and public general education schools are included (NSO 2009). Basic education is compulsory by

the government and normally it is needs for every individual. Consequently, education can be regarded as basic goods.

Eighth, “Medical and Health care” consist of medicine and supplies; medical services both outpatients and inpatients (NSO 2009). According to DeLeire and Kalil (2010), they refer this term as “Health care” which includes health care services, prescription and non-prescription medications, medical supplies, and health insurance. Since medical and health care is needed for individuals, they can be considered as basic goods. This medical and health care does not include things for beauty. They can be referred as material goods if one purchases for use in such activities as beautifying, promoting attractiveness, or altering the appearance.

Ninth, “Religious activities” include activities relating to religious. This incorporates praying, offering food and necessities to the monk, practicing primary basic doctrines, and meditation (NSO 2008). However, DeLeire and Kalil (2010) include contributions to religious as “charity and gifts” which encompass charitable organizations, cash or gifts to family and friends outside the household. Moreover, NSO (2009) categorizes “money and material give to other person” as non-consumption goods. Nonetheless, it can be concluded that activities related to religious can be regarded as experiential goods; and this is because these activities are consumed without receiving any tangible object.

A2.2 Grouping Consumption Items

To group consumption expenditures by aiming to answer the first dissertation questions, the correlation test is applied. This is analyzed by applying seven years data from NSO. The average monthly expenditure per individual by expenditure group from 2000, 2001, 2002, 2004, 2006, 2007, and 2009 are included. The results are demonstrated in the table below.

Table A2.2-1: Correlation Test

	<i>Food and Beverages (excluding alcoholic)</i>	<i>Alcoholic Beverages</i>	<i>Tobacco Products</i>	<i>Housing and Household Operation</i>	<i>Apparel and Footwear</i>	<i>Personal Care</i>	<i>Medical and Health Care</i>	<i>Transport and Communication</i>	<i>Education</i>	<i>Recreation Reading and Religious Activity</i>
(Bait)										
Food and Beverages (excluding alcoholic)	1									
Alcoholic Beverages	0.49355	1								
Tobacco Products	-0.11903	0.63513	1							
Housing and Household Operation	0.93938	0.72371	0.14835	1						
Apparel and Footwear	0.73395	0.70811	0.29575	0.79674	1					
Personal Care	0.97365	0.59887	-0.03457	0.98003	0.81390	1				
Medical and Health Care	0.84642	0.81475	0.36314	0.94579	0.73931	0.91129	1			
Transport and Communication	0.92434	0.62784	-0.04673	0.94948	0.80545	0.94208	0.80590	1		
Education	0.98973	0.50606	-0.12852	0.91937	0.71849	0.96228	0.85424	0.88958	1	
Recreation Reading and Religious Activity	0.92071	0.66190	0.09279	0.98416	0.79861	0.96299	0.88457	0.96691	0.88155	1

Source: Author

Table A2.2-1 demonstrates the correlation among consumption items, which some are highly correlated with its correlation of more than 0.95. It can be seen that “Food and Beverages” is greatly related with “Education” which is 0.9897. The highly correlation between “Food and Beverages” and “Education” may be because the high costs of “Food and Beverages” may associate with its nutrients. This may create the intelligence and it may lead a person to have a high level of education. With the high level of education, it may cause higher education expenditure from, for example, a more expensive of tuition fee. In the same way, individuals with a high education level may select to consume nutritious food and beverages which may cost more expensive than normal goods.

For “Housing and Household Operation”, it is largely correlated with “Recreation” which represents 0.9842; and abides by “Personal care” which is 0.9800. Since “Housing and Household Operation” consists of the amount spent on purchasing goods and services used in a home. The high cost of the house and household operation might relate to a size of the house, which may use to indicate the wealth of the person. In a relation to the large house, it may indicate that the person who lives in is wealthy. Because the person is wealthy, he may have money to spend on recreation and personal care. The same analysis on wealthy can also be applied with the high correlation

between “Personal care” and “Recreation” 0.9630, and “Personal care” and “Education” represents approximately 0.9623.

For “Transportation and Communication”, it highly correlates with “Recreation” of about 0.9670. It may be because individuals need transportation to their recreation activities.

Although the analyzed correlation does not provide sufficient information to conclude the consumption categorization, it assists to realize that the consumption expenditures are relatively interrelated.

In addition, Van Boven (2005) studies indicate that there is a distinction between experiential and material purchases, as previously discussed in the above section of material versus experiential goods. The difference is reliable and can be recognized. As a result, separately categorizing between these goods can be practically done with meaningful distinction.

Therefore, this dissertation classifies consumption components into four specific categories, namely, basic, material, experiential, and social network goods. For basic goods, this dissertation applies food as a representative. For material goods and experiential goods, they are somewhat inherent to the purchase intention. Unfortunately, their properties are not completely based on idiosyncratic categorizations (Van Boven 2005). As a result, this dissertation classifies material and experiential goods based on respondents’ intention-based distinction. In addition, the dissertation questionnaire provides examples of material goods and experiential goods. A list of material goods includes, for example, brand name and fashionable products. A list of experiential goods includes, for example, movies, restaurant dinners, and travel (Van Boven 2005; Nicolao, Irwin and Goodman 2009)

Appendix 3

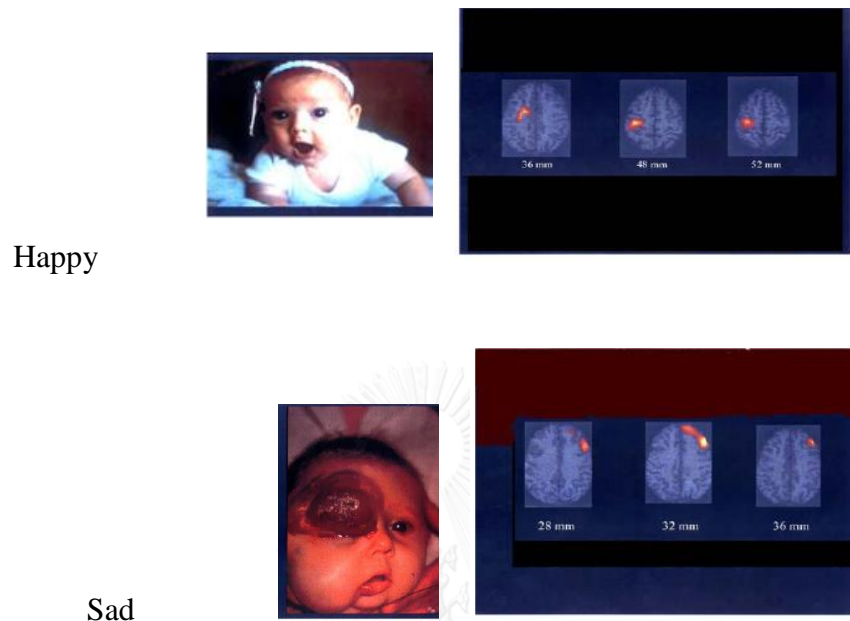
Objective Well-being Measurement

A3.1 Brainwaves

Modern brain physiology figures out a way to measure happiness physically as an objective view which happiness levels between individuals can be compared accurately. Richard Davidson of the University of Wisconsin was the first pioneer of this work and believed that subjective feeling and brain measurement has some correlations. He measured the happiness or unhappiness feeling of individuals by putting electrodes over the scalp and reading the feelings of individuals in the electrical activity. This method is called as EEG measurements. It works in these ways. The left front of the brain is sent electrical activity when individuals feel happy. However, the right front of the brain is sent the activity, when individuals feel unhappy (Layard 2005).

Layard (2005) also stated that this measurement is the similar to MRI or PET scanner which directly scans inside the brain to see what is going on. The Neuroscience evidence has shown that the left-side of the pre-frontal cortex, above and in front of the ear relates to positive feelings or when they are happy corresponding to brain activity (Powdthavee 2007). However, at the same place but in the right side of the brain relates to negative feelings corresponding to brain activity (Powdthavee 2007). The example of brain activity is shown in the figure below showing the brain scan of happy and sad child. It can be seen that the brain scanning for the “happy child” the corresponding light is in the left-side of the brain (Layard 2005). On the other hand, the MRI scan for the “sad child” – the right-side of the brain is active using the light as verification (Layard 2005).

Figure A3.1-1: The brain's response to two pictures



Source: Layard (2005)

As a result, brain science confirms that we can measure happiness in physical way and happy persons disclose that there is a characteristic pattern of electrical activity. These brain scan techniques do not measure the same aspects of individual well-being in a sense that life satisfaction survey, for instance, is best suited to capture long-term global life evaluations while brain scanning captures short term positive and negative effects.

A3.2 The Day Reconstruction Method (DRM)

The Day Reconstruction Method (DRM) of measuring happiness is designed to reduce recall biases while participants are systematically asked to reconstruct their activities and experiences of the preceding day with procedures of filling out a structured self-administered questionnaire. The respondents are asked in a set of

questions to carefully split their past day into episodes and the questions assist them to think carefully on how they felt at each time period (Kahneman et al. 2004).

First set of questions, respondents are asked about some general questions about their life on how satisfy they are including their life as a whole, their life at home, their present job, their mood at home, and their mood at work after that respondents background information are asked such as age, gender, education level, marital status, race, and household income (Kahneman et al. 2004).

Second set of questions, the respondents are asked to describe about their yesterday in detail by identifying when, what, where, and with whom the episode took place but many individuals may felt hard to remember exactly what they have done so the questions are divided into three steps aiming to help respondents to produce accurate emotional recall. First step, respondents' yesterday woke up and slept times are asked. Second step, respondents are asked to produce a short diary consisting of a sequence of episodes on where they were; what did they do and feel aiming to help respondents remember what happened and this diary do not need to send to the researcher. It is for respondents to keep. Third step, after finishing reconstruct their day in the diary they can go to the third set of questions and the respondents are encouraged to consult with their dairy page when answering the questions to remind their memory (Kahneman et al. 2004).

Third set of questions, the respondents are asked in details on how did they feel yesterday by encouraging to consult with their confidential diary notes to answer series of questions. These questions ask them on more details to describe key characteristics of each episode, including (1) when the episode began and ended, (2) what they were doing, (3) where they were, (4) whom they were interacting with, and (5) how they felt on multiple affect dimensions in a ways that the respondents then rate these episodes in terms of positive affect (happy, warm/friendly, enjoying myself) or negative affect (frustrated/annoyed, depressed/blue, hassled/pushed around, angry/hostile, worried/anxious, criticized/put down). Moreover, the feeling during the episode and for

the episode to end such as the feeling of being competent, impatient, or tired is also asked (Kahneman et al. 2004).

Fourth set of questions, the survey asks the respondents to self assess in a few more general questions about yesterday after known about the respondents' past day in detail. For example, overall how they felt and what their mood was like yesterday in percentage of the time which total sum of 100% (Kahneman et al. 2004).

To conclude, the DRM method helps to assess respondents' well-being by taking recall biases into a consideration. The recall biases can be eliminated by asking the respondents to describe detailed of their previous day. The procedures of systematic ask respondents' into different episodes by jotting down on their short diary notes assist to support accurate retrieval of memory in each specific episode. After taking note on the dairy, the respondents are encouraged to refer back to their diaries when answering the specific details on their feeling at that specific occasion and that make the respondents to be able to recall their feeling at that specific occasion accurately. As a result, this method makes the respondents are less likely to distortions of their memory (Kahneman et al. 2004).

In addition, the Day Reconstruction Method is a good method in a sense that this technique can capture large samples and information compared with the experience sampling methods (ESM) which will be discussed in the following.

A3.3 Experience sampling methods (ESM)

Different from DRM, ESM does not require participants to recall anything so that there are no recall biases. Edgeworth (1877) was confident that happiness can be measured by a 'hedonometer' which is physiological approaches to capture subjective well-being immediate experience in that particular moment. Participants in ESM studies are prompted to fill out several brief questionnaires about their current activities and feelings such as where they are, what they are doing, and how they feel several

times throughout the day by responding to alerts. Below table is shown major alerting choices for the researcher.

Table A3.3-1: Major alerting choices for the researcher

Categories	Considerations	Description	Drawbacks
Type of alert	Random	Alerts are delivered randomly.	Requires a flexible tool.
	Scheduled	Alerts are delivered on specified schedule.	Might introduce cognitive bias.
	Event-based	Alerts are triggered when event of interest occurs.	Might introduce cognitive bias if triggered by participant.
Scheduling requirements	Daily time period	Deliver alerts within a specified daily time frame only.	Requires a flexible tool. If time frame isn't well chosen, might miss interesting situations.
	Number of alerts per day	Deliver a specified number of alerts per day	Requires a flexible tool. Might introduce bias if participants know how many alerts they will receive.
	Number of alerts overall	Deliver a specified number of alerts for the study's duration.	Requires a flexible tool.
Delivery mechanism	Audible	Deliver alerts the participant can hear.	Might be inappropriate in certain situations (such as a movie theater or meeting).
	Tactile	Deliver alerts the participant can feel.	Participant might not feel alert. Requires a flexible tool.

Source: Consolvo and Walker (2003)

It can be seen from the table that there are three types of alerts which are random, scheduled, and event-based. Random is when alerts are popped up randomly, for example, 10 randomly spaced alerts every day. The downside is that a flexible tool is required for this type. Scheduled alert is delivered when there is a specified schedule, for example, 10 evenly timed alerts every day. This alerting choice might bring in cognitive bias. Event-based alert is alarm the participants when a particular event of interest occurs. The cognitive bias might occur if the trigger can be done by participants.

Also, there are three scheduling requirements which are daily time period, number of alerts per day, number of alerts overall. For daily time period, a researcher needs to consider having specific time period for the alerts to be triggered throughout the specific time frame of a day. If there is no need to test the participants in the middle of the night so a researcher should not disturb the participants at the night time to complete their questionnaire. However, they might set up the alerts only within a day time. The drawback is that if the time frame is not well selected then the researcher might overlook some interesting events. For number of alerts per day, the researcher sets up a specific number of alerts per day. In case that the participants prefer to have different schedules on weekdays and weekends, the researchers will need a flexible tool

to be able to specify different schedules for different days or different participants. For example, the researcher may set that each participant should receive 10 alerts per day. For number of alerts overall, the researcher might have a specific number of alerts for the overall study's period such as aiming to have a total alert of 140. ESM studies usually take about one to three weeks and involve 30 to 80 participants, with each participant receiving up to 10 alerts per day and total alert of 140.

There are two types of delivery mechanism of this approach including audible and tactile. The alert of audible deliver through hearing such as a beeper while tactile delivers by feeling such as telephone vibrating alert. They both have drawbacks, for example, the audible mechanism may not be appropriate in a movie theater or meeting. For tactile, participants may not feel the alert.

Generally, the type of tools used will depend on the study of researcher needed. The table below shows commonly used tools.

Table A3.3- 2: Commonly used ESM tools

	Alerting	Delivering	Capturing
PDAs	x	x	x
Paper booklets		x	x
Mobile phones	x	x	x
Traditional phones		x	x
Audio player/recorder		x	x
Pagers	x		
Watches	x		
Cameras			x
Custom devices	x	x	x

Source: Consolvo and Walker (2003)

Commonly used tools for capturing participant responses include PDAs, paper booklets, phones (traditional or mobile), audio recordings, pagers, watches, cameras, and custom devices. It can be seen that PDAs, mobile phones, and custom devices are the best tools in terms of alerting, delivering, and capturing. Traditional phones, audio

recordings, and paper and pencil method are second best methods in term of delivering and capturing.

In fact, there are two main basic methods that widely used in an experience sampling study which are computerized methods and paper and pencil methods thus this paragraph chooses to pick these two methods to discuss on their pros and cons in details. Even though paper and pencil methods cannot alert by itself, a researcher can fix it by applying electronic devices such as pager or programmable watch to give the signal for participants to answer their paper survey. The advantage of using paper and pencil methods is that it is cheaper than using PDAs. However, there are some advantages of using a PDA compared to the paper and pencil method. Although a PDA is expensive and costly, a researcher can use it over and over. By exploiting PDAs, participants are ensured to answer the survey questions because a researcher can set the signaling device to go off after respondents finish the questionnaire after pre-arranged time. On the other hand, paper and pencil method can also use pager as signaling device but the device may go off by that time the respondents may not yet record their data.

However, the disadvantage of this method is that it is not possible to apply on a large scale sampling and it is more costly than the self-report well-being survey methods.

Appendix 4

A4.1 Subjective Well-being Measurement

Generally, there are many ways to measure SWB; but in this section five types, which are widely used, are discussed. They include (1) Crawford and Henry (2004) study on the positive and negative affect schedule (PANAS), (2) Pavot and Diener (1993) study on the satisfaction with life scale (SWLS), (3) Zuge (1965) study on self-rating depression scale, (4) General Health Questionnaire (GHQ), (5) Thai Mental Health Indicator (TMHI). The table below compares the SWB measurement of each type. Their characteristics and merits are included.

Table A4-1: SWB compared

SWB's studies	SWB's Rating	Characteristics	Merits
Positive and negative affect schedule (PANAS) – Developed by Watson, Clark, and Tellegen (1988)–Evaluated by Crawford and Henry (2004)	5-point Likert's scales	<ul style="list-style-type: none"> – Item selection: Two 10 items mood scales – Dimension: Two dominant affects, positive and negative dimensions; and relatively independent with each others. 	<ul style="list-style-type: none"> – Reliability and validity with such measures as general distress and dysfunction, depression, and state anxiety. –Efficient means for measuring PA and NA mood. – Stability over a 2- month time period –Precise and largely uncorrelated measures of PA and NA. – Widely used, although the hypothesis of complete independence between PA and NA must be rejected.
Satisfaction with life scale (SWLS) –Developed by Pavot and Diener (1993)	7-point Likert's scale	<ul style="list-style-type: none"> – Item selection: 48 items – Dimension: Developed the SWLS, to assess satisfaction with the respondent's life as a whole. 	<ul style="list-style-type: none"> – Global rather than specific in nature. – Open scale for respondents to weight their own life domains, e.g., health, marriage, and hobbies. –Strong internal reliability. –Apply normative data: make it available for diverse populations, e.g., older adults, prisoners, and abused women.
Zuge (1965)	4-point Likert's scale	<ul style="list-style-type: none"> – Item selection: 20 items – Dimension: items are framed in terms of positive and negative statements. – Scores: ranges from 20 to 80. Most individuals with 	<ul style="list-style-type: none"> –It is effectively used in a variety of sectors, including primary care, psychiatric, drug trials and various research situations. – Widely use as a screening tool, covering affective, psychological and somatic symptoms associated with depression.

SWB's studies	SWB's Rating	Characteristics	Merits
		<p>depression score between 50 and 69, while a score of 70 and above indicates severe depression.</p> <p>–Time: Takes about 10 minutes to complete the questionnaire.</p>	<p>–Simple tool in research studies for monitoring changes in depression severity over time.</p> <p>– However, the Zung's scale cannot take the place of a comprehensive clinical interview for confirming a diagnosis of depression.</p>
<p>The General Health Questionnaire (GHQ)</p> <p>–Developed by Goldberg (1972)</p>	<p>Dummy¹³ Variable</p> <p>0-0-1-1 score</p>	<p>– Item selection: 12-28-30-60 items</p> <p>– Dimension: The questions are separated into two sets. Half of them are asked for positive effect and another half are asked for negative effect.</p> <p>– Scores: For GHQ-60, the total score more than 12 is abnormal. For GHQ-30, the total score more than 4 is abnormal. For GHQ-28, the total score more than 6 is abnormal. For GHQ-12, the total score more than 2 is abnormal.</p> <p>–Time: GHQ-60 takes about 5-10 minutes to complete the questionnaire. The shorter questionnaire takes less time respectively. GHQ-12 takes on average of 5 minutes to complete.</p>	<p>– Internationally use.</p> <p>– Reliability and validity.</p> <p>– Internal consistency.</p> <p>– Screening instrument to detect four main problems; unhappiness, anxiety, social impairment, and hypochondria.</p> <p>–GHQ-60 has the highest reliability. To compare, the validity of GHQ-60 is similar to GHQ-30. However, GHQ-60 has the longest length. As a result, in practical GHQ-30 is more suitable. For GHQ-28, it is useful when the scores of each sub-scale are needed to detect the symptoms associated with depression. Even though GHQ-12 has the lowest reliability and validity compared to the others, it is not significant. It has the goodness on its preciseness and shortness.</p>
<p>Thai Mental Health Indicator (TMHI) –version 2007</p>	<p>4-point Likert's scale</p>	<p>– Item selection: 15 and 55 items</p> <p>– Dimension: The questions are separated into positive and negative dimensions. Four domains included (mental state¹⁴, mental capacity¹⁵,</p>	<p>–To compare between the long and short version TMHI, the substantial agreement is found with the kappa statistics 0.66, $p < 0.001$.</p>

¹³ The GHQ can be scored in a variety of ways.

¹⁴ Include (1) general well-being positive affect, (2) general well-being negative affect, (3) perceived ill-health and mental illness.

¹⁵ Include (1) interpersonal relationships (2) expectation achievement congruence (3) confidence in coping (4) adequate mental mastery.

SWB's studies	SWB's Rating	Characteristics	Merits
		mental quality ¹⁶ , supporting factors ¹⁷). – Scores: For TMHI–55, total score is 220. The scores are divided into 3 groups: better than average mental health (179-220), average mental health (158-178), and below average (≤ 157). For TMHI–15, total score is 60. The scores are divided into 3 groups: better than average mental health (51-60), average mental health (44-50), and below average (≤ 43).	

A4.2 Subjective Well-being Assumption Test

Ordinary Least Square (OLS): TMHI is used as a dependent variable.

Summary of Models Assumption Test

	OLS (TMHI)		
	Violated	Not Violated	Details
Outlier			
Scatter Plot, model1-56	-	√	Graphical Methods
Linearity			
Scatter Plot, model1-56	-	√	Graphical Methods
Normality of Residuals			
Kernel Density Plot, model1-56	-	√	Graphical Methods
Heteroskedasticity			
Breusch-Pagan / Cook-Weisberg Test			
Model 1	-	√	Prob > $\chi^2 = 0.6714$
Model 2	-	√	Prob > $\chi^2 = 0.3643$
Model 3	-	√	Prob > $\chi^2 = 0.1725$
Model 4	-	√	Prob > $\chi^2 = 0.0613$
Model 5	-	√	Prob > $\chi^2 = 0.3408$
Model 6	-	√	Prob > $\chi^2 = 0.9855$

¹⁶ Include (1) kindness and altruism (2) self esteem (3) faith (4) creative thinking and enthusiasm.

¹⁷ Include (1) social support (2) family support (3) physical safety and security (4) health and social care.

	OLS (TMHI)		
	Violated	Not Violated	Details
Model 7	-	√	Prob > chi ² = 0.1995
Model 8	-	√	Prob > chi ² = 0.3805
Model 9	-	√	Prob > chi ² = 0.0909
Model 10	-	√	Prob > chi ² = 0.0613
Model 11	-	√	Prob > chi ² = 0.9855
Model 12	-	√	Prob > chi ² = 0.3802
Model 13	-	√	Prob > chi ² = 0.0613
Model 14	-	√	Prob > chi ² = 0.2196
Model 15	-	√	Prob > chi ² = 0.9854
Model 16	-	√	Prob > chi ² = 0.9659
Model 17	-	√	Prob > chi ² = 0.3807
Model 18	-	√	Prob > chi ² = 0.5589
Model 19	-	√	Prob > chi ² = 0.0613
Model 20	-	√	Prob > chi ² = 0.4595
Model 21	-	√	Prob > chi ² = 0.9855
Model 22	-	√	Prob > chi ² = 0.9695
Model 23	-	√	Prob > chi ² = 0.3804
Model 24	-	√	Prob > chi ² = 0.4850
Model 25	-	√	Prob > chi ² = 0.1995
Model 26	-	√	Prob > chi ² = 0.7492
Model 27	-	√	Prob > chi ² = 0.7485
Model 28	-	√	Prob > chi ² = 0.7530
Model 29	-	√	Prob > chi ² = 0.1886
Model 30	-	√	Prob > chi ² = 0.3366
Model 31	-	√	Prob > chi ² = 0.1243
Model 32	-	√	Prob > chi ² = 0.3311
Model 33	-	√	Prob > chi ² = 0.2552
Model 34	-	√	Prob > chi ² = 0.3823
Model 35	-	√	Prob > chi ² = 0.2980
Model 36	-	√	Prob > chi ² = 0.3677
Model 37	-	√	Prob > chi ² = 0.3081
Model 38	-	√	Prob > chi ² = 0.4299
Model 39	-	√	Prob > chi ² = 0.1338
Model 40	-	√	Prob > chi ² = 0.2473
Model 41	-	√	Prob > chi ² = 0.1215
Model 42	-	√	Prob > chi ² = 0.2091

	OLS (TMHI)		
	Violated	Not Violated	Details
Model 43	-	√	Prob > $\chi^2 = 0.1343$
Model 44	-	√	Prob > $\chi^2 = 0.2372$
Model 45	-	√	Prob > $\chi^2 = 0.1203$
Model 46	-	√	Prob > $\chi^2 = 0.2099$
Model 47	-	√	Prob > $\chi^2 = 0.1767$
Model 48	-	√	Prob > $\chi^2 = 0.2575$
Model 49	-	√	Prob > $\chi^2 = 0.0900$
Model 50	-	√	Prob > $\chi^2 = 0.1666$
Model 51	-	√	Prob > $\chi^2 = 0.2119$
Model 52	-	√	Prob > $\chi^2 = 0.3238$
Model 53	-	√	Prob > $\chi^2 = 0.1573$
Model 54	-	√	Prob > $\chi^2 = 0.2483$
Model 55	-	√	Prob > $\chi^2 = 0.4112$
Model 56	-	√	Prob > $\chi^2 = 0.4835$
Multicollinearity			
Correlation Matrix, , model 1-56	> 0.4	< 0.4	High Correlations: Age ² , Children, and Casual friends are dropped.

Ordered Logistic: WVS is used as a dependent variable.

Approximate likelihood-ratio test of proportionality of odds across response categories	Ordered logistic (WVS)		
	Violated	Not Violated	Details
Model 1		√	Prob > $\chi^2 = 0.0510$
Model 2		√	Prob > $\chi^2 = 0.3154$
Model 3	√		Prob > $\chi^2 = 0.0080$
Model 4	√		Prob > $\chi^2 = 0.0024$
Model 5	√		Prob > $\chi^2 = 0.0082$
Model 6	√		Prob > $\chi^2 = 0.0000$
Model 7	√		Prob > $\chi^2 = 0.0075$
Model 8		√	Prob > $\chi^2 = 0.0812$
Model 9	√		Prob > $\chi^2 = 0.0060$

Approximate likelihood-ratio test of proportionality of odds across response categories	Ordered logistic (WVS)		
	Violated	Not Violated	Details
Model 10	√		Prob > $\chi^2 = 0.0075$
Model 11		√	Prob > $\chi^2 = 0.0940$
Model 12	√		Prob > $\chi^2 = 0.0024$
Model 13		√	Prob > $\chi^2 = 0.2259$
Model 14		√	Prob > $\chi^2 = 0.0811$
Model 15	√		Prob > $\chi^2 = 0.0024$
Model 16	√		Prob > $\chi^2 = 0.0015$
Model 17		√	Prob > $\chi^2 = 0.2255$
Model 18	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 19		√	Prob > $\chi^2 = 0.0812$
Model 20		√	Prob > $\chi^2 = 0.0543$
Model 21	√		Prob > $\chi^2 = 0.0024$
Model 22	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 23		√	Prob > $\chi^2 = 0.2254$
Model 24	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 25		√	Prob > $\chi^2 = 0.0812$
Model 26	√		Prob > $\chi^2 = 0.0000$
Model 27	√		Prob > $\chi^2 = 0.0000$
Model 28	√		Prob > $\chi^2 = 0.0000$
Model 29	√		Prob > $\chi^2 = 0.0000$
Model 30	√		Prob > $\chi^2 = 0.0000$
Model 31	-	-	Ordered logit estimates convergence not

Approximate likelihood-ratio test of proportionality of odds across response categories	Ordered logistic (WVS)		
	Violated	Not Violated	Details
			achieved (estimated coefficients questionable)
Model 32	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 33			Prob > $\chi^2 = 0.0001$
Model 34	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 35	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 36	-	-	Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 37	√		Prob > $\chi^2 = 0.0000$
Model 38	√		Prob > $\chi^2 = 0.0000$
Model 39	√		Prob > $\chi^2 = 0.0000$
Model 40	√		Prob > $\chi^2 = 0.0000$
Model 41	√		Prob > $\chi^2 = 0.0000$
Model 42	√		Prob > $\chi^2 = 0.0000$
Model 43	√		Prob > $\chi^2 = 0.0000$
Model 44	√		Prob > $\chi^2 = 0.0000$
Model 45	√		Prob > $\chi^2 = 0.0000$
Model 46	√		Prob > $\chi^2 = 0.0000$
Model 47	√		Prob > $\chi^2 = 0.0000$
Model 48	√		Prob > $\chi^2 = 0.0000$
Model 49	√		Prob > $\chi^2 = 0.0000$
Model 50	√		Prob > $\chi^2 = 0.0000$
Model 51	√		Prob > $\chi^2 = 0.0000$
Model 52	√		Prob > $\chi^2 = 0.0000$

Approximate likelihood-ratio test of proportionality of odds across response categories	Ordered logistic (WVS)		
	Violated	Not Violated	Details
Model 53	√		Prob > $\chi^2 = 0.0000$
Model 54	√		Prob > $\chi^2 = 0.0000$
Model 55	√		Prob > $\chi^2 = 0.0000$
Model 56	√		Prob > $\chi^2 = 0.0000$

Since the assumption of an ordered probit is the same as an ordered logistic regression and the test is only available for ordered logit, the ordered logit is applied to test the assumption. Some models are violated the proportional odd assumption. Therefore, generalized ordered logistic is considered to be used.



Appendix 5

Sampling

A5.1 Probability sampling

- Stratified Random Sampling

The stratified sampling is one of the probability sampling techniques which randomly selected sample from strata. A population who has the same outstanding characteristic is grouped into the same strata. Each stratum is differences and independent with each other.

For this study, a stratified random sample will be chosen because this sampling technique is often employed in complex interview surveys in a sense that it does not only examine the results from the overall population, but also understands the differences between key demographic subgroups within the population. It is conducted by grouping units of the population into homogenous strata and a sample is taken from each stratum. It looks at distinct subgroups within the population to understand the differences, for example, between males and females, or senior managers and regular employees. This means that a separate random sample is selected from each of the subgroups rather than taking a single random sample from the entire group.

The stratified sampling can be categorized into two features which are proportionate and disproportionate stratification. With proportionate stratification, each stratum has the same sampling fraction. On the other hand, with disproportionate stratification, the sampling fraction may vary from one stratum to the next. It is recommended that if costs and variances are equal across strata, a researcher should choose proportionate stratification over disproportionate stratification. However, if the variances or costs differ across strata, a researcher should consider disproportionate stratification.

There are both advantage and disadvantage of applying stratification sampling. The advantage of a stratified sample is that proportionate stratification provides equal or better precision than a simple random sample of the same size. Stratification achieves greater precision when values within strata are homogeneous. However, there are some disadvantages. The main disadvantage of a stratified sample is that it is difficult to identify appropriate strata. It may also require more administrative effort than a simple random sample.

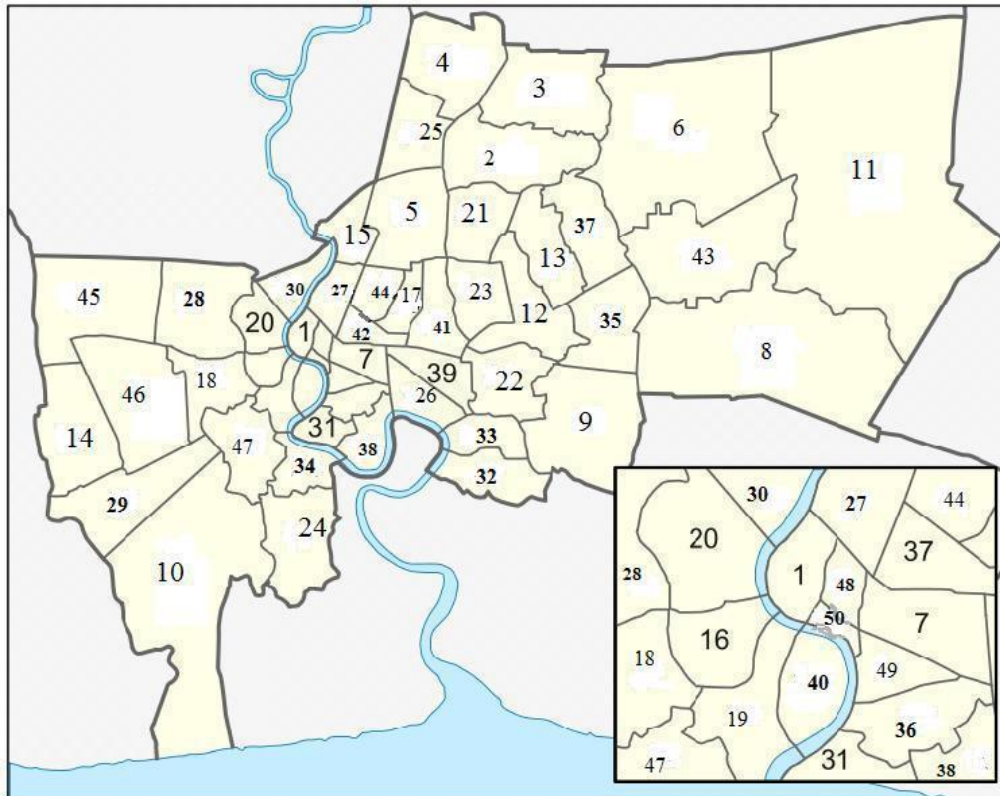
To examine the level of happiness of Thai individuals in Chainat and Kanchanaburi provinces, Gray, Kramanon, and Thapsuwan (2008) applied data from the survey data under a research project of Mahidol University on poverty elimination in Thailand. The method of Face to Face interviews of individuals aged 20 years and older –from 1,440 sample households in each Chainat and Kanchanaburi provinces– was used in the survey. The interview was done with 2,519 persons in Chainat and 2,841 samples in Kanchanaburi. This survey employed stratified two-stage sampling method and used self-report of their feeling by scaling in eleven points (0-10) to measure the level of happiness.

- Multi-stage Sampling

The multistage sampling is usually applied with a research in a national level. Mongkol et al. (2004) conducted an interesting study on “The Development and Testing of a New Thai Mental Health Indicator (TMHI-54, 2004)”. The key element of this research was the study on representatives across Thailand (Mongkol et al. 2004). The selected representatives, divided into three groups following the form of Multi-stage Sampling, included those who aged 1 – 60 years and lived in both urban and suburban areas (Mongkol et al. 2004). Those regions will be divided into three groups, which are rich, middle and poor (Mongkol et al. 2004). The total 2,400 selected representatives were chosen from 15 provinces in 5 regions, 480 individuals were drawn from each region (Mongkol et al. 2004). The second part of the research explained the characteristics of the mental and physical happiness (Mongkol et al. 2004). The result came from the comparison between individuals in each region and between individuals who lived in city and suburban areas (Mongkol et al. 2004).

A5.2 Bangkok Districts

Map A5.3-1: Bangkok Districts



Source: Wikipedia (2011) adapted by author

Arrange in descending order

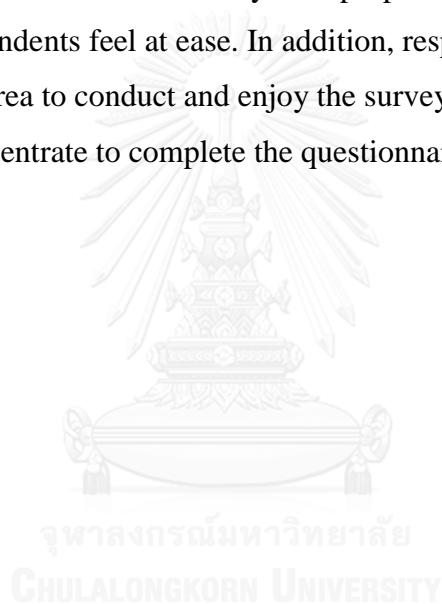
- | | |
|------------------------------|-----------------------------------|
| 1. Bang Khae (193,190) | 26. Khlong Toei (112,906) |
| 2. Bang Khen (188,164) | 27. Dusit (111,496) |
| 3. Sai Mai (183,333) | 28. Taling Chan (106,753) |
| 4. Don Mueang (166,354) | 29. Bang Bon (104,535) |
| 5. Chatuchak (162,838) | 30. Bang Phlat (101,276) |
| 6. Khlong Sam Wa (160,480) | 31. Bang Kho Laem (98,870) |
| 7. Chom Thong (160,451) | 32. Bang Na (98,869) |
| 8. Lat Krabang (157,477) | 33. Phra Khanong (95,661) |
| 9. Prawet (156,567) | 34. Rat Burana (89,297) |
| 10. Bang Khun Thian(155,821) | 35. Saphan Sung (88,578) |
| 11. Nong Chok (151,292) | 36. Sathon (88,179) |
| 12. Bang Kapi (149,606) | 37. Khan Na Yao (86,340) |
| 13. Bueng Kum (147,030) | 38. Yan Nawa (84,286) |
| 14. Nong Khaem (145,361) | 39. Vadhana (80,929) |
| 15. Bang Sue (138,653) | 40. Khlong San (79,546) |
| 16. Min Buri (135,032) | 41. Huai Khwang (77,292) |
| 17. Din Daeng (134,480) | 42. Ratchathewi (76,233) |
| 18. Phasi Charoen (131,363) | 43. Bangkok Yai (75,621) |
| 19. Thon Buri (124,499) | 44. Phaya Thai (74,693) |
| 20. Bangkok Noi (124,352) | 45. Thawi Watthana (74,592) |
| 21. Lat Phrao (122,520) | 46. Phra Nakhon (60,313) |
| 22. Suan Luang (115,966) | 47. Pathum Wan (57,368) |
| 23. Wang Thonglang (115,697) | 48. Pom Prap Sattru Phai (53,526) |
| 24. Thung Khru (115,131) | 49. Bang Rak (47,053) |
| 25. Lak Si (112,908) | 50. Samphanthawong (28,617) |

Source: Bangkok Metropolitan Administration (2011) adapted by author

A5.3 Pilot survey results

- *Backup plan*

As a result of good responses from a shopping mall, the researcher envisages it as the alternative plan. The sampling design is first to select a large shopping mall in each 25 districts, where the NSO has selected prior. Second, individuals who tend to be in the target population are invited to conduct the survey. Conducting a survey in a shopping mall would be possible because individuals may have time and willingness to do the survey. The proper temperature in shopping malls would establish respondents feel at ease. In addition, respondents would be possible to have an appropriate area to conduct and enjoy the survey. As a result, respondents would be able to concentrate to complete the questionnaire.



Appendix 6

Descriptive Statistics

A6.1 The purchase of material goods

According to Table A6.1, it can be noticed that all of the respondents (100%) purchased material goods, which the value is less than 1,000 baht per piece within 12 months. The goods respondents purchased most in this category are street clothes and shoes. 84.6% of the respondents purchased material goods, which the value is between 1,000 baht to 5,000 baht per piece. The goods respondents purchased most in this category are handbags and shoes. 72.6% of the respondents purchased material goods, which the value is between 5,001 baht to 10,000 baht per piece. The goods respondents purchased in this category are, for example, brand name sunglasses, clothes, and handbags. 15.40% and 27.40% of respondents who do not purchase the material goods between 1,000 to 5,000 baht and 5,001 to 10,000 baht within 12 months respectively.

Table A6.1 The purchase of Mat, Exp, and OSN <1,000 to 10,000 baht

Price (Baht)	<1,000			1,000-5,000			5,001-10,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase	100%	87.40%	-	84.60%	39.40%	23.60%	72.60%	34.80%	39%
Not purchase	-	12.60%	-	15.40%	60.60%	76.40%	27.40%	65.20%	61%

According to Table 2.7, 58.8% of the respondents purchased material goods, which the value is between 10,001 baht to 100,000 baht per piece. The goods respondents purchased in this category are, for example, LED TV, and TAG Heuer watches. 36.4% of the respondents purchased material goods, which the value is between 100,001 baht to 1,000,000 baht per piece. The goods respondents purchased in this category are, for example, jewelry and big bike motorcycles. 3% of the respondents purchased material goods, which the value is more than 1,000,000 baht per piece. The goods respondents purchased most in this category are luxury automobiles.

It can be pointed out that the percentages of respondents purchased material goods decrease when the price is high. There are 41.2%, 63.60%, and 97% of respondents who do not purchase the material goods between 10,001 to 100,000 baht, 100,001 to 1,000,000 baht and more than 1,000,000 baht within 12 months respectively.

Table A6.2 The purchase of Mat, Exp, and OSN 10,001 to >1,000,000 baht

Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase	58.80%	21.80%	60.80%	36.40%	24.20%	1.20%	3%	-	-
Not purchase	41.20%	78.20%	39.20%	63.60%	75.80%	98.80%	97%	100%	100%

Bangkok individuals are observed their extravagant spending behavior. According to the 2014 NSO Social and Cultural Survey data, it is found that 60.1% of individuals whose age 13 years and over have extravagant spending behavior. 37.1% have never had extravagant spending behavior and 2.9% have no chance to do it. The NSO classifies extravagant spending as a purchase of brand name clothes and appliances. Regarding to material goods, the percentage of the survey estimates is fairly in line with the 2014 NSO Social and Cultural Survey data. This is in a sense that most of the samplings purchase material goods more than other goods by comparing at the same price ranges. This can be implied that most of the samplings have extravagant spending behavior.

It can be seen that all of respondents purchase material goods which value is less than 1,000 baht per piece. On the other hand, a number of questionnaire respondents do not purchase material goods which value is more than 100,000 baht per piece.

A6.2 The purchase of experiential goods

According to Table A6.1, 87.4% of the respondents purchased experiential goods, which the value is less than 1,000 baht. The percentage is relatively similar to the purchase of material goods at the same range price. The goods respondents purchased most in this category are movies. 39.4% of the respondents purchased

experiential goods, which the value is between 1,000 baht to 5,000 baht per piece. The goods respondents purchased in this category are, for example, payment for yoga classes per month and travelling to border Thailand (e.g. Laos, Myanmar). 34.8% of the respondents purchased experiential goods, which the value is between 5,001 baht to 10,000 baht per piece. The goods respondents purchased in this category are, for example, sport club membership per month and travelling in Southeast Asia (e.g. Malaysia and Philippine). There are 12.6%, 60.60%, and 65.20% of respondents who do not purchase experiential goods less than 1,000 baht, between 1,000 to 5,000 baht, and 5,001 to 10,000 baht within 12 months respectively.

According to Table A6.2, 21.8% of the respondents purchased experiential goods, which the value is between 10,001 baht to 100,000 baht per piece. The goods respondents purchased in this category are, for example, travelling to Japan and Korea. 24.0% of the respondents purchased experiential goods, which the value is between 100,001 baht to 1,000,000 baht per piece. The goods respondents purchased in this category are, for example, travelling to Europe and United States. None of the respondents purchased experiential goods, which the value is more than 1,000,000 baht per times within 12 months. There are 78.20%, 75.80%, and 100% of respondents who do not purchase experiential goods between 10,001 to 100,000 baht, 100,001 to 1,000,000 baht and more than 1,000,000 baht within 12 months respectively. It can be noticed that at the same price ranges respondents purchase less amount of experiential goods comparing to material goods.

Hence, to analyze the relationship between SWB and the consumption of experiential goods, two scenarios are applied. First, the status of purchasing or not is used. Second, the regression is applied to all different prices specifically to observe debt associated with, and psychological processes.

A6.3 The purchase of online social network goods

According to Table A6.1, 23.6% of the respondents purchased online social network goods, which the value is between 1,000 baht to 5,000 baht per piece. The goods in this category are, for example, Nokia Asha, and Samsung galaxy S. 39% of

the respondents purchased online social network goods, which the value is between 5,001 baht to 10,000 baht per piece. The goods respondents purchased in this category is, for example, I mobile iq x3. There are 76.40%, and 61% of respondents who do not purchase OSN goods between 1,000 to 5,000 baht, and 5,001 to 10,000 baht within 12 months respectively.

According to Table A6.2, 60.8% of the respondents purchased OSN goods, which the value is between 10,001 baht to 100,000 baht per piece. The goods respondents purchased in this category are, for example, iPhone6, iPad, and Samsung galaxy. 1.2% of the respondents purchased OSN goods, which the value is between 100,001 baht to 1,000,000 baht per piece. The goods respondents purchased in this category are, for example, Vertu Ti Ferrari limited edition, and iPhone6 Gold. None of the respondents purchased OSN goods, which the value is more than 1,000,000 baht per times within 12 months. It can be noticed that most of the respondents purchased OSN goods between 10,001 baht to 100,000 baht per piece.

Hence, to analyze the relationship between SWB and the consumption of OSN goods, two scenarios are applied. First, the status of purchasing or not is used. Second, the regression is applied to all different prices specifically to observe debt associated with, and psychological processes.

A6.4 Debt, Feel burden Factors

Debt factors include the overall respondents' debt outstanding and their feeling of debt burden. It also includes debt outstanding specifically deriving from each goods, including material goods, experiential goods, and online social network goods. The feeling of debt burden of those goods is also analyzed.

According to Table A6.3, material goods price less than 1,000, most of them (96.8%) purchases by their own money, while 2.0% is borrowing others, and 1.2% is receiving as a gift. It can be observed that most of the purchases are paid by credit card (75.2%). 23.6% of respondents use cash and the rest 1.2% pay by installment. For material goods price less than 1,000 baht, in light of 68.4% of the ones who pay by

credit card and installment, they do not feel they have debt burden. For material goods price 1,000 baht to 5,000 baht, most of them purchase by their own money (82%), while 1.6% is borrowing others, and 1.0% is receiving as a gift. It can be revealed that most of the purchases are paid by credit card (72.4%). 11.2% of respondents use cash and the rest 1.0% pay by installment. For material goods price 1,000 baht to 5,000 baht, in light of 70.6% of the ones who pay by credit card and installment, they feel they have debt burden to some extent. For material goods price 5,001 baht to 10,000 baht, most of them purchase by their own money (71%), while 1.0% is borrowing others, and 0.6% is receiving as a gift. It can be revealed that most of the purchases are paid by credit card (65.6%). 6.2% of respondents use cash and the rest 0.8% pay by installment. For material goods price 5,001 baht to 10,000 baht, in light of 65.8% of the ones who pay by credit card and installment, they feel they have debt burden to some extent.

Table A6.3 Debt, Feeling Burden of Mat, Exp, and OSN <1,000 to 10,000 baht

Price (Baht)	<1,000			1,000-5,000			5,001-10,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase by	%	%	%	%	%	%	%	%	%
Own money	96.8	85.6	-	82.0	37.6	8.0	71.0	32.8	26.8
Borrowing	2.0	0.6	-	1.6	0.8	15.6	1.0	1.2	12.2
Gift	1.2	1.2	-	1.0	1.0	0.0	0.6	0.8	0.0
Purchase from									
Cash	23.6	74.8	-	11.2	30.2	12.8	6.2	24.8	12.6
Credit	75.2	11.2	-	72.4	8.0	10.8	65.6	9.2	26.4
Installment	1.2	1.4	-	1.0	1.2	0.0	0.8	0.8	0.0
Feeling Burden									
Not Feel	68.4	83.4	-	12.0	34.6	6.0	6.2	30.0	3.4
Some extent	29.6	4.0	-	70.6	4.8	14.2	65.8	4.4	33.6
Big burden	2.0	0.0	-	2.0	0.0	3.4	0.6	0.4	2.0
Not Purchase	0.0	12.6	-	15.4	60.6	76.4	27.4	65.2	61.0

According to Table A6.4, material goods price 10,001 baht to 100,000 baht, most of them purchase by their own money (58.5%), while there are no borrowing and no receiving as a gift. It can be revealed that most of the purchases are paid by credit card (52.6%). 5.0% of respondents use cash and the rest 1.2% pay by installment. For material goods price 10,001 baht to 100,000 baht, in light of 52.8% of the ones who pay by credit card and installment, they feel they have debt burden to some extent. For material goods price 100,001 baht to 1,000,000 baht, most of them purchase by their own money (36.4%), while there are no borrowing and no receiving as a gift. It can be

revealed that most of the purchases are paid by credit card (30.6%). 4.4% of respondents use cash and the rest 1.4% pay by installment. For material goods price 100,001 baht to 1,000,000 baht, in light of 31.4% of the ones who pay by credit card and installment, they feel they have debt burden to some extent. Only 3% of respondents who spend more than 1,000,000 baht for material goods and they feel some extent of debt burden. It can be revealed that most of the purchases are paid by credit card (1.6%). 0.6% of respondents use cash and the rest 0.8% pay by installment. For material goods price more than 1,000,000 baht, in light of 1.8% of the ones who pay by credit card and installment, they feel they have debt burden to some extent.

Table A6.4 Debt, Feeling Burden of Mat, Exp, and OSN 10,001 to >1,000,000 baht

Price (Baht)	10,001-100,000			100,001-1,000,000			>1,000,000		
	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.	Mat.	Exp.	OSN.
Purchase by	%	%	%	%	%	%	%	%	%
Own money	58.8	19.4	50.4	36.4	22.6	0.8	3.0	0.0	0.0
Borrowing	0.0	2.0	10.4	0.0	0.0	0.4	0.0	0.0	0.0
Gift	0.0	0.4	0.0	0.0	1.6	0.0	0.0	0.0	0.0
Purchase from									
Cash	5.0	6.6	5.2	4.4	5.8	0.8	0.6	0.0	0.0
Credit	52.6	14.8	54.4	30.6	18.4	0.4	1.6	0.0	0.0
Installment	1.2	0.4	1.2	1.4	0.0	0.0	0.8	0.0	0.0
Feeling Burden									
Not Feel	5.0	18.6	6.6	4.4	21.4	0.8	0.6	0.0	0.0
Some extent	52.8	2.4	46.8	31.4	1.4	0.4	1.6	0.0	0.0
Big burden	1.0	0.8	7.4	0.6	1.4	0.0	0.8	0.0	0.0
Not Purchase	41.2	78.2	39.2	63.6	75.8	98.8	97.0	100.0	100.0

According to Table A6.3, experiential goods price less than 1,000, most of them (85.6%) purchases by their own money while 0.6% is borrowing others, and 1.2% is receiving as a gift. It can be observed that most of the purchases are paid by cash (74.8%). 11.2% of respondents use credit card and the rest 1.4% pay by installment. For experiential goods price less than 1,000 baht, in light of 83.4% of the ones who pay by credit card and installment, they do not feel they have debt burden. For experiential goods price 1,000 baht to 5,000 baht, most of them purchase by their own money (37.6%), while 0.8% is borrowing others, and 1% is receiving as a gift. It can be revealed that most of the purchases are paid by cash (30.2%). 8.0% of respondents use cash and the rest 1.2% pay by installment. For experiential goods price 1,000 baht to 5,000 baht, in light of 34.6% of the ones who pay by credit card and installment, they

do not feel they have debt burden. For experiential goods price 5,001 baht to 10,000 baht, most of them purchase by their own money (32.8%), while 1.2% is borrowing others, and 0.8% is receiving as a gift. It can be revealed that most of the purchases are paid by cash (24.8%). 9.2% of respondents use credit card and the rest 0.8% pay by installment. For experiential goods price 5,001 baht to 10,000 baht, in light of 30.0% of the ones who pay by credit card and installment, they do not feel they have debt burden.

According to Table A6.4, experiential goods price 10,001 baht to 100,000 baht, most of them purchase by their own money (19.4%), while 2.0% is borrowing others, and 0.4% is receiving as a gift. It can be revealed that most of the purchases are paid by credit card (14.8%). 6.6% of respondents use cash and the rest 0.4% pay by installment. For experiential goods price 10,001 baht to 100,000 baht, in light of 18.6% of the ones who pay by credit card and installment, they do not feel they have debt burden. For experiential goods price 100,001 baht to 1,000,000 baht, most of them purchase by their own money (22.6%), while no respondent is borrowing others, and 1.6% is receiving as a gift. It can be revealed that most of the purchases are paid by credit card (18.4%). 5.8% of respondents use cash and the rest 0.4% pay by installment. For experiential goods price 100,001 baht to 1,000,000 baht, in light of 21.4% of the ones who pay by credit card and installment, they do not feel they have debt burden. None of the respondent has purchased more than 1,000,000 baht for experiential goods.

According to Table A6.3, OSN price 1,000 baht to 5,000 baht, most of them purchase by borrowing (15.6%), while 8.0% purchases by their own money. It can be revealed that most of the purchases are paid by cash (12.8%). 10.8% of respondents use credit card and the rest 0% pay by installment. For OSN goods price 1,000 baht to 5,000 baht, in light of 14.2% of the ones who pay by credit card, they feel they have debt burden to some extent. For OSN goods price 5,001 baht to 10,000 baht, most of them purchase by their own money (26.8%), while 12.2% purchases by borrowing. It can be revealed that most of the purchases are paid by credit card (26.4%). 12.6% of respondents use cash and the rest 0% pay by installment. For OSN goods price 5,001

baht to 10,000 baht, in light of 33.6% of the ones who pay by credit card, they feel they have debt burden to some extent.

According to Table A6.4, for OSN goods price 10,001 baht to 100,000 baht, most of them purchase by their own money (50.4%), whereas 10.4% purchases by borrowing. It can be revealed that most of the purchases are paid by credit card (54.4%). 5.2% of respondents use cash and the rest 1.2% pay by installment. For OSN goods price 10,001 baht to 100,000 baht, in light of 46.8% of the ones who pay by credit card and installment, they feel they have debt burden to some extent. For OSN goods price 100,001 baht to 1,000,000 baht, most of them purchase by their own money (0.8%), and while 0.4% purchases by borrowing. It can be revealed that most of the purchases are paid by cash (0.8%). 0.4% of respondents use credit card and the rest 0% pay by installment. For OSN goods price 100,001 baht to 1,000,000 baht, in light of 0.8% of the ones who pay by credit card, they do not feel they have debt burden. None of the respondent has purchased more than 1,000,000 baht for OSN goods.

Respondents who purchase either material or OSN goods at the price between 10,001 and 1,000,000 baht feel debt burden for some extent while most of them do not feel burden for experiential goods. This indicates that for most of debt incurred from purchases between 10,001 and 1,000,000 baht, respondents are willing to accept debt if they purchase experiential goods. In other word, respondents may have higher SWB in consuming experiential goods rather than material or OSN goods.

Appendix 7

A Cross tabulation between types of consumption and key explanatory variables

Material goods Purchased * Gender Crosstabulation

Count

		Gender		Total
		Male	Female	
Material goods	Not Purchase	7	11	18
Purchased	Purchase	223	259	482
Total		230	270	500

Material goods Purchased * Employment - Full Time Crosstabulation

Count

		Employment - Full Time		Total
		Other	Full-time employed	
Material goods	Not Purchase	6	12	18
Purchased	Purchase	179	303	482
Total		185	315	500

Material goods Purchased * Age by group Crosstabulation

Count

		Age by group			Total
		Generati on Y	Generation X	Baby Boomer	
Material goods	Not	2	8	8	18
Purchased	Purchase	178	187	117	482
Total	Purchase	180	195	125	500

Material goods Purchased * Income rich Crosstabulation

Count

		Income rich		Total
		poor	rich	
Material goods	Not Purchase	3	15	18
Purchased	Purchase	218	264	482
Total		221	279	500

Material goods Purchased * Income rich 2 Crosstabulation

Count

		Income rich 2		Total
		poor	rich	
Material goods Purchased	Not Purchase	11	7	18
	Purchase	356	126	482
Total		367	133	500

Experiential Goods Purchase * Gender Crosstabulation

Count

		Gender		Total
		Male	Female	
Experiential Goods Purchase	not purchase	11	14	25
	purchase	219	256	475
Total		230	270	500

Experiential Goods Purchase * Employment - Full Time Crosstabulation

Count

		Employment - Full Time		Total
		Other	Full-time employed	
Experiential Goods Purchase	not purchase	11	14	25
	purchase	174	301	475
Total		185	315	500

Experiential Goods Purchase * Age by group Crosstabulation

Count

		Age by group			Total
		Generation Y	Generation X	Baby Boomer	
Experiential Goods Purchase	not purchase	4	19	2	25
	purchase	176	176	123	475
Total		180	195	125	500

Experiential Goods Purchase * Income rich Crosstabulation

Count

		Income rich		Total
		poor	rich	
Experiential Goods	not purchase	6	19	25
Purchase	purchase	215	260	475
Total		221	279	500

Experiential Goods Purchase * Income rich 2 Crosstabulation

Count

		Income rich 2		Total
		poor	rich	
Experiential Goods	not purchase	18	7	25
Purchase	purchase	349	126	475
Total		367	133	500

Online Social Network goods Purchased * Gender Crosstabulation

Count

		Gender		Total
		Male	Female	
Online Social	not purchase	38	49	87
Network goods	purchase	192	221	413
Purchased				
Total		230	270	500

Online Social Network goods Purchased * Employment - Full Time Crosstabulation

Count

		Employment - Full Time		Total
		Other	Full-time employed	
Online Social	not purchase	33	54	87
Network goods	purchase	152	261	413
Purchased				
Total		185	315	500

Online Social Network goods Purchased * Age by group Crosstabulation

Count

		Age by group			Total
		Generation Y	Generation X	Baby Boomer	
Online Social Network goods Purchased	not purchase	28	31	28	87
	purchase	152	164	97	413
	Total	180	195	125	500

Online Social Network goods Purchased * Income rich Crosstabulation

Count

		Income rich		Total
		poor	rich	
Online Social Network goods Purchased	not purchase	28	59	87
	purchase	193	220	413
	Total	221	279	500

Online Social Network goods Purchased * Income rich 2 Crosstabulation

Count

		Income rich 2		Total
		poor	rich	
Online Social Network goods Purchased	not purchase	59	28	87
	purchase	308	105	413
	Total	367	133	500

Appendix 8

Regression results

Material goods (Mat) Purchased, Experiential goods (Exp) Purchased,
Online Social Network (OSN) goods Purchased

P1=goods price <100,

P2=goods price 1000-5000,

P3=goods price 5001-10000,

P4=goods price 10001-100000,

P5=goods price 100001-1000000,

P6=goods price >1000000 baht per piece

A8.1 Regression results: Each Types of Consumption (binary and price purchased)

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
age	-0.0267 (0.0206)	-0.0199 (0.0201)	-0.0194 (0.0207)	-0.0520*** (0.0166)	-0.0270 (0.0199)	-0.0254 (0.0199)
male	0.895** (0.373)	0.844** (0.361)	0.874** (0.377)	0.636** (0.301)	0.893** (0.363)	0.927** (0.359)
high_bloodpressure	-1.102** (0.548)	-1.036* (0.531)	-1.046* (0.555)	-0.514 (0.446)	-1.307** (0.534)	-1.042** (0.528)
education	0.169*** (0.0580)	0.165*** (0.0561)	0.162*** (0.0586)	0.206*** (0.0469)	0.149*** (0.0564)	0.135** (0.0573)
fulltimeemployment	0.502 (0.440)	0.452 (0.428)	0.455 (0.446)	1.150*** (0.359)	0.552 (0.428)	0.399 (0.425)
extraversion	5.711*** (0.543)	5.395*** (0.527)	5.926*** (0.550)	4.411*** (0.447)	5.737*** (0.524)	5.519*** (0.521)
income_rich	-0.0871 (0.460)	0.0642 (0.447)	-0.113 (0.465)	0.140 (0.372)	-0.00122 (0.447)	0.147 (0.446)
married	0.552 (0.405)	0.499 (0.393)	0.541 (0.410)	0.953*** (0.328)	0.584 (0.394)	0.420 (0.390)
virtual_not_close_friends	-0.0129 (0.00823)	-0.0152* (0.00800)	-0.0141* (0.00833)	-0.0102 (0.00665)	-0.0166** (0.00802)	-0.0156* (0.00792)
having_virtual_as_close_friend	-0.000299 (0.00554)	0.00131 (0.00537)	-0.00208 (0.00559)	0.00132 (0.00447)	-0.00292 (0.00537)	-0.00152 (0.00533)
bkkinner	-1.026** (0.464)	-1.159** (0.451)	-0.990** (0.470)	-0.938** (0.375)	-1.032** (0.452)	-0.893** (0.447)
bkkmid	-0.667 (0.455)	-0.670 (0.441)	-0.655 (0.460)	-0.300 (0.368)	-0.694 (0.442)	-0.604 (0.438)
mat2purchased		-1.206** (0.487)				
mat3purchased		-1.517*** (0.397)				
mat4purchased		-1.720*** (0.356)				
mat5purchased		-0.559 (0.364)				
mat6purchased		-1.456 (1.043)				
matpurchased	-3.458*** (0.981)					
exppurchased			-0.669 (0.842)			

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
exp1purchased				0.0141 (0.447)		
exp2purchased				0.211 (0.302)		
exp3purchased				-0.751** (0.305)		
exp4purchased				-6.028*** (0.365)		
exp5purchased				-0.119 (0.342)		
osnpurchased					-2.951*** (0.463)	
osn2purchased						-1.558*** (0.408)
osn3purchased						-1.751*** (0.360)
osn4purchased						-1.562*** (0.355)
osn5purchased						0.849 (1.650)
Constant	51.04*** (1.608)	51.12*** (1.384)	48.30*** (1.569)	48.80*** (1.137)	50.79*** (1.339)	50.41*** (1.308)
Observations	500	500	500	500	500	500
R-squared	0.271	0.323	0.253	0.529	0.310	0.331

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.2 Regression results: All Types of Consumption (binary and price purchased)

VARIABLES	(1) model 9	(2) model 10
age	-0.0354* (0.0198)	-0.0563*** (0.0151)
male	0.911** (0.359)	0.660** (0.266)
high_bloodpressure	-1.336** (0.529)	-0.535 (0.395)
education	0.155*** (0.0558)	0.186*** (0.0426)
fulltimeemployment	0.618 (0.424)	1.074*** (0.320)
extraversion	5.435*** (0.530)	3.681*** (0.401)
income_rich	0.0149 (0.442)	0.523 (0.333)
married	0.598 (0.389)	0.808*** (0.292)
virtual_not_close_friends	-0.0156** (0.00793)	-0.0122** (0.00590)
having_virtual_as_close_friend	-0.00125 (0.00533)	0.00384 (0.00398)
bkkinner	-1.091** (0.447)	-1.064*** (0.333)
bkkmid	-0.721 (0.438)	-0.352 (0.326)
mat2purchased		-1.370*** (0.364)
mat3purchased		-1.521*** (0.296)
mat4purchased		-0.858*** (0.268)
mat5purchased		-0.864*** (0.271)
mat6purchased		-1.575**

VARIABLES	(1) model 9	(2) model 10
exp1purchased		(0.773) 0.128 (0.403)
exp2purchased		-0.128 (0.272)
exp3purchased		-0.223 (0.278)
exp4purchased		-5.825*** (0.329)
exp5purchased		-0.218 (0.308)
osn2purchased		-1.460*** (0.306)
osn3purchased		-1.430*** (0.281)
osn4purchased		-1.530*** (0.264)
osn5purchased		-0.603 (1.235)
matpurchased	-3.427*** (0.944)	
exppurchased	-0.218 (0.804)	
osnpurchased	-2.929*** (0.461)	
Constant	54.42*** (1.819)	54.34*** (1.163)
Observations	500	500
R-squared	0.328	0.641

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.3 Regression results: Social Comparison

VARIABLES	(1) model 11	(2) model 12	(3) model 13	(4) model 14	(5) model 15	(6) model 16
age	-0.0307 (0.0194)	-0.0666*** (0.0151)	-0.0643*** (0.0159)	-0.0719*** (0.0147)	-0.0353* (0.0198)	- (0.0144)
male	0.868** (0.345)	0.659** (0.262)	0.668** (0.285)	0.684*** (0.255)	0.941*** (0.354)	0.791*** (0.249)
high_bloodpressure	-1.274** (0.509)	-0.681* (0.392)	-0.746* (0.424)	-0.527 (0.380)	-1.174** (0.524)	-0.392 (0.370)
education	0.152*** (0.0536)	0.186*** (0.0421)	0.196*** (0.0445)	0.188*** (0.0409)	0.136** (0.0566)	0.199*** (0.0398)
fulltimeemployment	0.581 (0.410)	1.091*** (0.317)	1.253*** (0.341)	1.017*** (0.308)	0.516 (0.421)	0.974*** (0.301)
extraversion	5.023*** (0.513)	3.484*** (0.398)	4.131*** (0.430)	3.418*** (0.387)	5.237*** (0.525)	3.383*** (0.376)
income_rich	0.159 (0.427)	0.482 (0.328)	0.222 (0.352)	0.700** (0.321)	0.165 (0.440)	0.602* (0.312)
married	0.568 (0.376)	0.781*** (0.288)	1.010*** (0.311)	0.635** (0.282)	0.476 (0.386)	0.642** (0.274)
virtual_not_close_friends	-0.0181** (0.00767)	-0.0115** (0.00584)	-0.0112* (0.00631)	-0.0157*** (0.00571)	-0.0151* (0.00783)	- (0.00553)
having_virtual_as_close_f riend	0.000638 (0.00514)	0.00381 (0.00393)	0.00191 (0.00425)	0.00313 (0.00383)	-4.85e-05 (0.00528)	0.00517 (0.00373)
bkkinner	-1.235*** (0.432)	-1.049*** (0.328)	-0.988*** (0.356)	-1.064*** (0.320)	-0.992** (0.442)	-1.192*** (0.311)
bkkmid	-0.733* (0.421)	-0.249 (0.324)	-0.340 (0.350)	-0.483 (0.313)	-0.638 (0.433)	-0.296 (0.305)
mat2purchased		-1,580***		-1.195***		-1.697***

VARIABLES	(1) model 11	(2) model 12	(3) model 13	(4) model 14	(5) model 15	(6) model 16
mat3purchased		(373.2) -417.1		(0.351) -1.618***		(0.344) -1.461***
mat4purchased		(433.0) -227.2		(0.285) -0.960***		(0.278) -0.860***
mat5purchased		(480.8) -657.0		(0.259) -0.792***		(0.250) -0.789***
mat6purchased		(468.0) -1,549		(0.261) -1.729**		(0.256) -1.600**
exp1purchased		(1,689) 0.0865		(0.742) -1,312***		(0.725) 0.0156
exp2purchased		(0.399) -0.0880		(316.2) -2,062***		(0.377) -0.0668
exp3purchased		(0.268) -0.232		(459.8) -1,252**		(0.254) -0.331
exp4purchased		(0.275) -5.737***		(498.6) -798.9		(0.261) -5.502***
exp5purchased		(0.332) -0.223		(761.7) -1,541		(0.310) -0.0800
osn2purchased		(0.305) -1.420***		(2,016) -1.531***		(0.289) -2,187***
osn3purchased		(0.303) -1.439***		(0.295) -1.029***		(505.1) -1,781***
osn4purchased		(0.277) -1.599***		(0.285) -1.533***		(412.5) -1,859***
osn5purchased		(0.261) -0.374		(0.255) -0.597		(334.4) -820.5
mat2socialcomparison	0.00119** (0.000489)	-1.583*** (0.374)		(1.185)		(2,366)
mat3socialcomparison	0.00142*** (0.000388)	-0.417 (0.434)				
mat4socialcomparison	0.00173*** (0.000350)	-0.227 (0.482)				
mat5socialcomparison	0.000436 (0.000351)	-0.658 (0.469)				
mat6socialcomparison	0.00163 (0.00100)	-1.552 (1.694)				
matpurchased	-1.001 (0.990)		-2.929*** (0.756)		-3.303*** (0.933)	
exppurchased	-0.347 (0.782)		1.268 (0.832)		-0.117 (0.797)	
osnpurchased	-3.041*** (0.443)		-2.453*** (0.372)		-1.299* (0.677)	
exp1socialcomparison			0.000311 (0.000530)	-1.315*** (0.317)		
exp2socialcomparison			0.000165 (0.000292)	-2.067*** (0.461)		
exp3socialcomparison			0.000526* (0.000297)	-1.255** (0.500)		
exp4socialcomparison			0.00590*** (0.000350)	-0.795 (0.763)		
exp5socialcomparison			0.000148 (0.000327)	-1.544 (2.020)		
osn2socialcomparison					0.00130*** (0.000428)	-2.191*** (0.506)
osn3socialcomparison					0.00129*** (0.000415)	-1.784*** (0.414)
osn4socialcomparison					0.000932** (0.000472)	-1.862*** (0.335)
osn5socialcomparison					-0.00136 (0.00164)	-0.821 (2.371)
Constant	49.25*** (2.140)	4,482** (1,937)	46.42*** (1.686)	7,017*** (2,141)	52.28*** (2.851)	6,701*** (2,418)
Observations	500	500	500	500	500	500
R-squared	0.387	0.656	0.581	0.674	0.352	0.690

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

A8.4 Regression results: Adaptation

VARIABLES	(1) model 17	(2) model 18	(3) model 19	(4) model 20	(5) model 21	(6) model 22
age	-0.0307 (0.0194)	-0.0606*** (0.0153)	-0.0449** (0.0197)	-0.0611*** (0.0159)	-0.0643*** (0.0159)	-0.0613*** (0.0149)
male	0.868** (0.345)	0.602** (0.278)	0.994** (0.409)	0.542* (0.324)	0.668** (0.285)	0.665** (0.262)
high_bloodpressur e	-1.274** (0.509)	-0.522 (0.396)	-1.149** (0.507)	-0.511 (0.401)	-0.745* (0.424)	-0.598 (0.388)
education	0.152*** (0.0536)	0.179*** (0.0428)	0.143*** (0.0533)	0.179*** (0.0431)	0.196*** (0.0445)	0.178*** (0.0421)
fulltimeemploye ment	0.581 (0.410)	1.032*** (0.321)	0.562 (0.408)	1.043*** (0.324)	1.253*** (0.341)	0.961*** (0.317)
extraversion	5.023*** (0.513)	3.640*** (0.402)	4.949*** (0.511)	3.652*** (0.405)	4.131*** (0.430)	3.598*** (0.394)
income_rich	0.159 (0.427)	0.483 (0.334)	0.0980 (0.423)	0.464 (0.336)	0.222 (0.352)	0.550* (0.327)
married	0.568 (0.376)	0.822*** (0.291)	0.593 (0.373)	0.789*** (0.294)	1.010*** (0.311)	0.758*** (0.289)
virtual_not_close_ friends	-0.0181** (0.00767)	-0.0111* (0.00594)	-0.0159** (0.00766)	-0.0116* (0.00600)	-0.0112* (0.00631)	-0.0129** (0.00583)
having_virtual_as_ close_friend	0.000637 (0.00514)	0.00396 (0.00398)	0.00135 (0.00508)	0.00417 (0.00400)	0.00191 (0.00425)	0.00386 (0.00393)
bkkinner	-1.235*** (0.432)	-1.067*** (0.332)	-1.265*** (0.426)	-1.079*** (0.334)	-0.988*** (0.356)	-1.010*** (0.329)
bkkmid	-0.733* (0.421)	-0.356 (0.326)	-0.777* (0.417)	-0.395 (0.328)	-0.340 (0.350)	-0.434 (0.321)
matpurchased	-0.999 (0.990)		-0.981 (0.995)		-2.929*** (0.756)	
exppurchased	-0.347 (0.782)		-0.472 (0.776)		1.270 (0.832)	
osnpurchased	-3.041*** (0.443)		-2.899*** (0.440)		-2.453*** (0.372)	
mat2adaptation1			-0.337 (0.996)	-0.708 (0.785)		
mat2adaptation2			-0.492 (0.459)	-0.141 (0.361)		
mat2adaptation3			1.072 (0.687)	0.842 (0.542)		
mat2adaptation4			-0.243 (0.880)	0.00705 (0.696)		
mat3adaptation1			-1.592** (0.761)	-1.638 (1.253)		
mat3adaptation2			-0.288 (0.558)	-0.532 (0.719)		
mat3adaptation3			1.036** (0.424)	-0.394 (0.952)		
mat3adaptation4			0.846 (0.667)	-0.530 (1.155)		
mat4adaptation1			4.292*** (1.447)	0.594 (1.164)		
mat4adaptation2			-3.585*** (1.263)	-0.822 (1.008)		
mat4adaptation3			-0.706 (0.515)	0.229 (0.411)		
o.mat4adaptation4			-	-		
mat5adaptation1			-2.297 (1.885)	-1.787 (1.485)		
o.mat5adaptation2			-	-		
o.mat5adaptation3			-	-		
mat5adaptation4			2.297	1.788		

VARIABLES	(1) model 17	(2) model 18	(3) model 19	(4) model 20	(5) model 21	(6) model 22
mat6adaptation1			(1.885) 0.00141 (0.000992)	(1.485) 0.00153* (0.000780)		
o.mat6adaptation2			-	-		
o.mat6adaptation3			-	-		
o.mat6adaptation4			-	-		
mat2purchased		-769.7 (487.0)				-1.379*** (0.358)
mat3purchased		-499.8 (447.3)		-3,089 (3,582)		-1.546*** (0.293)
mat4purchased		-950.6 (961.9)				-0.913*** (0.264)
o.mat5purchased		-		-		
o.mat6purchased		-		-		
exp1purchased		0.0783 (0.404)		0.0509 (0.407)		-1,121** (500.4)
exp2purchased		-0.137 (0.271)		-0.146 (0.276)		-4,069*** (1,436)
exp3purchased		-0.263 (0.278)		-0.289 (0.281)		-2,951** (1,318)
exp4purchased		-5.731*** (0.332)		-5.753*** (0.341)		-1,497 (2,071)
exp5purchased		-0.198 (0.309)		-0.172 (0.314)		
osn2purchased		-1.429*** (0.306)		-1.398*** (0.309)		-1.438*** (0.303)
osn3purchased		-1.374*** (0.283)		-1.364*** (0.286)		-1.497*** (0.281)
osn4purchased		-1.526*** (0.264)		-1.532*** (0.267)		-1.510*** (0.261)
osn5purchased		-0.572 (1.234)		-0.547 (1.252)		-0.692 (1.215)
mat2adaptation_s	0.00119** (0.000489)	-0.771 (0.488)				
mat3adaptation_s	0.00141*** (0.000388)	-0.499 (0.448)				
mat4adaptation_s	0.00173*** (0.000349)	-0.952 (0.964)				
mat5adaptation_s	0.000435 (0.000350)	0.000917* (0.000272)				
mat6adaptation_s	0.00163 (0.00100)	0.00147* (0.000775)				
o.mat2purchased				-		
o.mat4purchased				-		
exp1adaptation_s					0.000314 (0.000530)	-1.124** (0.501)
exp2adaptation_s					0.000165 (0.000292)	-4.077*** (1.438)
exp3adaptation_s					0.000526* (0.000297)	-2.957** (1.320)
exp4adaptation_s					0.00590*** (0.000350)	-1.494 (2.076)
exp5adaptation_s					0.000148 (0.000327)	0.000236 (0.000304)
mat5purchased						-0.850*** (0.268)
mat6purchased						-1.455* (0.763)
o.exp5purchased						-
Constant	49.25***	2,269**	49.87***	3,138	46.41***	9,687***

VARIABLES	(1) model 17 (2,140)	(2) model 18 (1,137)	(3) model 19 (2,183)	(4) model 20 (3,582)	(5) model 21 (1,686)	(6) model 22 (2,823)
Observations	500	500	500	500	500	500
R-squared	0.387	0.645	0.417	0.648	0.581	0.656

A8.5 Regression results: Adaptation (continuous)

VARIABLES	(1) model 23	(2) model 24	(3) model 25	(4) model 26	(5) model 27	(6) model 28
age	-0.0740*** (0.0159)	-0.0648*** (0.0151)	-0.0353* (0.0198)	-0.0564*** (0.0154)	-0.0281 (0.0201)	-0.0553*** (0.0152)
male	0.790*** (0.284)	0.752*** (0.263)	0.941*** (0.354)	0.676** (0.264)	0.985*** (0.347)	0.697*** (0.255)
high_bloodpressure	-0.652 (0.422)	-0.521 (0.388)	-1.174** (0.524)	-0.571 (0.392)	-1.063** (0.519)	-0.519 (0.382)
education	0.198*** (0.0438)	0.172*** (0.0418)	0.136** (0.0566)	0.182*** (0.0423)	0.138** (0.0559)	0.185*** (0.0411)
fulltimeemployment	1.164*** (0.336)	0.867*** (0.314)	0.516 (0.421)	1.044*** (0.319)	0.336 (0.420)	0.933*** (0.313)
extraversion	4.069*** (0.423)	3.581*** (0.388)	5.237*** (0.525)	3.629*** (0.399)	5.015*** (0.519)	3.417*** (0.388)
income_rich	0.242 (0.348)	0.578* (0.326)	0.165 (0.440)	0.420 (0.332)	0.134 (0.435)	0.493 (0.323)
married	1.003*** (0.309)	0.695** (0.289)	0.476 (0.386)	0.829*** (0.292)	0.505 (0.381)	0.824*** (0.282)
virtual_not_close_friends	-0.0104 (0.00630)	-0.0134** (0.00584)	-0.0151* (0.00783)	-0.0110* (0.00589)	-0.0138* (0.00777)	-0.0113** (0.00574)
having_virtual_as_close_friend	0.00337 (0.00419)	0.00468 (0.00387)	-4.80e-05 (0.00528)	0.00407 (0.00396)	0.00233 (0.00523)	0.00489 (0.00387)
bkkinner	-1.050*** (0.353)	-1.063*** (0.325)	-0.992** (0.442)	-1.106*** (0.331)	-0.944** (0.436)	-1.061*** (0.322)
bkkmid	-0.413 (0.345)	-0.477 (0.318)	-0.638 (0.433)	-0.342 (0.324)	-0.549 (0.425)	-0.293 (0.313)
mat2purchased		-1.203*** (0.357)		-1.338*** (0.362)		-1.473*** (0.358)
mat3purchased		-1.507*** (0.291)		-1.490*** (0.295)		-1.475*** (0.287)
mat4purchased		-0.979*** (0.265)		-0.887*** (0.267)		-0.854*** (0.261)
mat5purchased		-0.844*** (0.265)		-0.828*** (0.271)		-0.823*** (0.267)
mat6purchased		-1.263* (0.759)		-1.594** (0.769)		-1.615** (0.744)
exp1purchased		-295.5 (4,160)		0.143 (0.400)		0.0322 (0.391)
exp2purchased		-6,679 (4,857)		-0.139 (0.271)		-0.140 (0.264)
exp3purchased		-9,314*** (2,970)		-0.161 (0.277)		-0.0900 (0.273)
o.exp4purchased		-				
o.exp5purchased		-				
osn2purchased		-1.426*** (0.300)		-2,292** (961.7)		-627.8 (3,827)
osn3purchased		-1.513*** (0.281)		-1,984** (953.8)		-11,631*** (3,769)
osn4purchased		-1.486*** (0.259)		274.3 (1,212)		
osn5purchased		-0.403 (1.210)				

VARIABLES	(1) model 23	(2) model 24	(3) model 25	(4) model 26	(5) model 27	(6) model 28
exp1adaptation1	-0.118 (0.685)	-0.775 (1.313)				
exp1adaptation2	-0.289 (0.519)	-0.285 (1.149)				
exp1adaptation3	0.844*** (0.316)	0.717 (1.015)				
exp1adaptation4	-0.436 (0.506)	0.0469 (1.117)				
exp2adaptation1	-3.389** (1.639)	-5.496** (2.206)				
exp2adaptation2	0.915 (1.637)	-1.605 (2.220)				
exp2adaptation3	0.418 (0.743)	-0.773 (1.088)				
exp2adaptation4	2.058*** (0.661)	1.182 (1.016)				
exp3adaptation1	2.318 (1.522)	-2.949 (2.021)				
exp3adaptation2	-0.538 (1.468)	-3.505** (1.656)				
exp3adaptation3	-1.475 (1.066)	-2.657** (1.099)				
exp3adaptation4	-0.305 (0.571)	-0.221 (0.545)				
exp4adaptation1	8.764** (3.549)	6.410* (3.298)				
exp4adaptation2	-3.953* (2.207)	-2.066 (2.046)				
exp4adaptation3	-3.378 (2.196)	-3.547* (2.022)				
exp4adaptation4	-1.427 (1.399)	-0.791 (1.292)				
exp5adaptation1	-0.327 (1.545)	-0.935 (1.421)				
o.exp5adaptation2	-	-				
o.exp5adaptation3	-	-				
exp5adaptation4	0.327 (1.545)	0.936 (1.421)				
matpurchased	-2.885*** (0.739)		-3.303*** (0.933)		-3.149*** (0.916)	
exppurchased	1.014 (0.816)		-0.117 (0.797)		-0.194 (0.784)	
osnpurchased	-2.306*** (0.368)		-1.295* (0.677)		-1.050 (0.675)	
osn2adaptation_s			0.00130*** (0.000428)	-2.295** (0.964)		
osn3adaptation_s			0.00129*** (0.000414)	-1.986** (0.956)		
osn4adaptation_s			0.000935** (0.000471)	0.276 (1.214)		
osn5adaptation_s			-0.00136 (0.00164)	0.000711 (0.00123)		
exp4purchased				-5.817*** (0.327)		-5.785*** (0.318)
exp5purchased				-0.224 (0.308)		-0.154 (0.299)
o.osn5purchased				-		-
osn2adaptation1					1.695 (1.479)	-0.696 (1.604)
osn2adaptation2					-2.398* (1.281)	-0.860 (1.397)
osn2adaptation3					-1.606 (1.206)	-0.695 (1.299)
osn2adaptation4					2.312*** (0.672)	1.624* (0.851)
osn3adaptation1					1.341	-2.436

VARIABLES	(1) model 23	(2) model 24	(3) model 25	(4) model 26	(5) model 27	(6) model 28
osn3adaptation2					(1.902) -0.00525	(2.152) -3.993***
osn3adaptation3					(1.252) -1.190	(1.229) -3.117**
osn3adaptation4					(1.261) -0.144	(1.221) -2.108***
osn4adaptation1					(0.696) 7.492**	(0.756) 8.281***
osn4adaptation2					(2.910) -2.804	(2.153) -2.262*
osn4adaptation3					(1.743) -2.226	(1.297) -3.362***
osn4adaptation4					(1.449) -2.462***	(1.075) -2.658***
osn5adaptation1					(0.737) -0.590	(0.542) 1.458
o.osn5adaptation2					(3.315) -	(2.484) -
o.osn5adaptation3					-	-
osn5adaptation4					0.588 (3.316)	-1.458 (2.485)
o.osn4purchased						-
Constant	45.01*** (1.775)	16,336** (7,015)	52.28*** (2.850)	4,051** (1,766)	52.31*** (3.078)	12,312** (5,281)
Observations	500	500	500	500	500	500
R-squared	0.611	0.679	0.352	0.649	0.391	0.680

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.6 Regression results: Aspiration

VARIABLES	(1) model 29	(2) model 30	(3) model 31	(4) model 32	(5) model 33	(6) model 34
age	-0.0307 (0.0194)	-0.0593*** (0.0154)	-0.0425** (0.0200)	-0.0661*** (0.0158)	-0.0643*** (0.0159)	-0.0595*** (0.0145)
male	0.868** (0.345)	0.709*** (0.269)	0.967*** (0.370)	0.594** (0.289)	0.668** (0.285)	0.677*** (0.254)
high_bloodpressur e	-1.274** (0.509)	-0.545 (0.396)	-1.188** (0.517)	-0.469 (0.404)	-0.745* (0.424)	-0.509 (0.378)
education	0.152*** (0.0536)	0.183*** (0.0429)	0.144*** (0.0539)	0.195*** (0.0432)	0.196*** (0.0445)	0.175*** (0.0408)
fulltimeemploye ment	0.581 (0.410)	1.055*** (0.321)	0.596 (0.412)	1.068*** (0.324)	1.253*** (0.341)	1.061*** (0.306)
extraversion	5.023*** (0.513)	3.669*** (0.403)	4.779*** (0.517)	3.599*** (0.408)	4.131*** (0.430)	3.542*** (0.384)
income_rich	0.159 (0.427)	0.516 (0.334)	-0.0438 (0.431)	0.358 (0.339)	0.222 (0.352)	0.560* (0.317)
married	0.568 (0.376)	0.800*** (0.293)	0.718* (0.377)	0.715** (0.296)	1.010*** (0.311)	0.767*** (0.279)
virtual_not_close_ friends	-0.0181** (0.00767)	-0.0120** (0.00591)	-0.0148* (0.00767)	-0.0113* (0.00596)	-0.0112* (0.00631)	-0.0137** (0.00565)
having_virtual_as_ close_friend	0.000638 (0.00514)	0.00372 (0.00399)	-0.000693 (0.00518)	0.00355 (0.00405)	0.00191 (0.00425)	0.00474 (0.00382)
bkkiner	-1.235*** (0.432)	-1.072*** (0.334)	-1.232*** (0.433)	-1.084*** (0.339)	-0.988*** (0.356)	-0.918*** (0.320)
bkkmid	-0.733* (0.421)	-0.382 (0.327)	-0.688 (0.423)	-0.354 (0.331)	-0.340 (0.350)	-0.479 (0.312)
matpurchased	-0.999 (0.990)		-1.133 (0.982)		-2.929*** (0.756)	

VARIABLES	(1) model 29	(2) model 30	(3) model 31	(4) model 32	(5) model 33	(6) model 34
exppurchased	-0.348 (0.782)		-0.146 (0.783)		1.268 (0.832)	
osnpurchased	-3.041*** (0.443)		-2.949*** (0.448)		-2.453*** (0.372)	
mat2aspiration1			0.699 (0.939)	0.0598 (1.795)		
mat2aspiration2			0.131 (0.464)	-0.282 (1.533)		
mat2aspiration3			0.0155 (0.585)	-0.989 (1.583)		
mat2aspiration4			-0.844 (0.996)	-2.105 (1.801)		
mat3aspiration1			1.501 (0.940)	3.543 (2.249)		
mat3aspiration2			0.236 (0.458)	2.479 (2.037)		
mat3aspiration3			-1.307** (0.581)	1.888 (2.075)		
mat3aspiration4			-0.429 (0.948)	3.092 (2.228)		
mat4aspiration1			1.109 (1.038)	0.932 (0.815)		
mat4aspiration2			0.466 (0.510)	-0.394 (0.403)		
mat4aspiration3			-0.703 (0.562)	0.125 (0.441)		
mat4aspiration4			-0.871 (0.942)	-0.663 (0.735)		
mat5aspiration1			-0.324 (0.944)	-0.526 (0.774)		
mat5aspiration2			0.975* (0.581)	0.580 (0.455)		
mat5aspiration3			1.402** (0.583)	0.407 (0.463)		
mat5aspiration4			-2.051* (1.176)	-0.460 (0.930)		
mat6aspiration1			-0.00715* (0.00388)	-0.00680** (0.00309)		
mat6aspiration2			-6.453 (3.953)	-3.670 (3.098)		
mat6aspiration3			-5.555 (4.374)	-4.097 (3.429)		
mat6aspiration4			12.01 (7.971)	7.772 (6.249)		
mat2purchased		-1,246 (845.5)		-3,310 (6,247)		-1.318*** (0.348)
mat3purchased		41.10 (853.4)		10,977 (8,239)		-1.683*** (0.284)
mat4purchased		-647.1 (851.3)				-0.957*** (0.257)
mat5purchased		-585.7 (1,133)				-0.744*** (0.260)
o.mat6purchased		-		-		
exp1purchased		0.128 (0.404)		0.199 (0.412)		-2,178*** (400.1)
exp2purchased		-0.133 (0.273)		-0.188 (0.275)		-2,453*** (777.5)
exp3purchased		-0.222 (0.278)		-0.253 (0.282)		-1,517** (735.3)
exp4purchased		-5.807*** (0.332)		-5.845*** (0.344)		-2,605 (1,627)
exp5purchased		-0.187 (0.311)		-0.0754 (0.314)		-3,385* (1,975)
osn2purchased		-1.428*** (0.309)		-1.437*** (0.316)		-1,550*** (0.293)
osn3purchased		-1.438*** (0.282)		-1.476*** (0.288)		-0.995*** (0.277)
osn4purchased		-1.585***		-1.590***		-1.551***

VARIABLES	(1) model 29	(2) model 30	(3) model 31	(4) model 32	(5) model 33	(6) model 34
osn5purchased		(0.267) -0.576 (1.238)		(0.268) -0.359 (1.247)		(0.253) -0.541 (1.183)
mat2aspiration	0.00119** (0.000489)	-1.247 (0.847)				
mat3aspiration	0.00141*** (0.000387)	0.0428 (0.855)				
mat4aspiration	0.00173*** (0.000349)	-0.648 (0.853)				
mat5aspiration	0.000435 (0.000350)	-0.586 (1.135)				
mat6aspiration	0.00163 (0.00100)	0.00158** (0.000777)				
o.mat4purchased				-		
o.mat5purchased				-		
exp1aspiration					0.000311 (0.000530)	-2.182*** (0.401)
exp2aspiration					0.000165 (0.000292)	-2.458*** (0.779)
exp3aspiration					0.000526* (0.000297)	-1.519** (0.737)
exp4aspiration					0.00590*** (0.000350)	-2.605 (1.630)
exp5aspiration					0.000148 (0.000327)	-3.392* (1.979)
mat6purchased						-1.663** (0.738)
Constant	49.25*** (2.140)	2.486 (1,906)	53.88*** (4.366)	-7.618 (10,419)	46.42*** (1.686)	12,187*** (2,791)
Observations	500	500	500	500	500	500
R-squared	0.387	0.644	0.421	0.656	0.581	0.678

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.7 Regression results: Aspiration (continue)

VARIABLES	(1) model 35	(2) model 36	(3) model 37	(4) model 38	(5) model 39	(6) model 40
age	-0.0753*** (0.0158)	-0.0677*** (0.0148)	-0.0353* (0.0198)	-0.0620*** (0.0145)	-0.0349* (0.0202)	-0.0657*** (0.0150)
male	0.708** (0.274)	0.702*** (0.251)	0.941*** (0.354)	0.701*** (0.255)	0.985*** (0.353)	0.739*** (0.253)
high_bloodpressure	-0.752* (0.409)	-0.546 (0.376)	-1.174** (0.524)	-0.486 (0.379)	-1.201** (0.526)	-0.517 (0.379)
education	0.188*** (0.0431)	0.171*** (0.0408)	0.136** (0.0566)	0.168*** (0.0410)	0.122** (0.0567)	0.171*** (0.0408)
fulltimeemployment	1.237*** (0.329)	1.006*** (0.306)	0.516 (0.421)	1.058*** (0.309)	0.460 (0.423)	0.961*** (0.307)
extraversion	3.869*** (0.418)	3.470*** (0.382)	5.237*** (0.525)	3.544*** (0.387)	4.982*** (0.529)	3.527*** (0.385)
income_rich	0.314 (0.342)	0.539* (0.317)	0.165 (0.440)	0.525 (0.320)	0.208 (0.441)	0.525 (0.319)
married	0.923*** (0.301)	0.741*** (0.279)	0.476 (0.386)	0.704** (0.282)	0.351 (0.385)	0.745*** (0.279)
virtual_not_close_friends	-0.0141** (0.00616)	-0.0153*** (0.00569)	-0.0151* (0.00783)	-0.0113** (0.00567)	-0.0146* (0.00784)	-0.00984* (0.00566)
having_virtual_as_close_friend	0.00293 (0.00414)	0.00534 (0.00382)	-4.87e-05 (0.00528)	0.00534 (0.00384)	0.00134 (0.00532)	0.00632* (0.00383)
bkkinner	-0.902*** (0.347)	-0.953*** (0.318)	-0.992** (0.442)	-1.033*** (0.319)	-0.999** (0.443)	-1.181*** (0.319)

VARIABLES	(1) model 35	(2) model 36	(3) model 37	(4) model 38	(5) model 39	(6) model 40
bkkmid	-0.514 (0.338)	-0.498 (0.311)	-0.638 (0.433)	-0.225 (0.313)	-0.564 (0.432)	-0.282 (0.311)
mat2purchased		-1.301*** (0.349)		-1.562*** (0.351)		-1.566*** (0.350)
mat3purchased		-1.666*** (0.284)		-1.466*** (0.285)		-1.477*** (0.286)
mat4purchased		-1.029*** (0.258)		-0.884*** (0.258)		-0.799*** (0.256)
mat5purchased		-0.736*** (0.259)		-0.777*** (0.264)		-0.760*** (0.261)
mat6purchased		-1.618** (0.734)		-1.205 (0.744)		-1.257* (0.738)
exp1 purchased		13,289** (5,404)		0.128 (0.387)		0.00957 (0.390)
o.exp2purchased		-				
o.exp3purchased		-				
o.exp4purchased		-				
o.exp5purchased		-				
osn2purchased		-1.542*** (0.291)		-2,047*** (624.2)		17,510*** (3,865)
osn3purchased		-1.070*** (0.301)		-1,703*** (477.9)		
osn4purchased		-1.502*** (0.253)		-1,513*** (369.2)		9,008*** (2,657)
osn5purchased		-0.522 (1.173)				
exp1 aspiration1	0.479 (0.979)	3.967** (1.812)				
exp1 aspiration2	0.580 (0.371)	3.724*** (1.326)				
exp1 aspiration3	0.534 (0.410)	3.936*** (1.335)				
exp1 aspiration4	-1.593*** (0.454)	1.690 (1.356)				
exp2 aspiration1	-3.931** (1.577)	-3.964*** (1.455)				
exp2 aspiration2	2.423*** (0.597)	2.613*** (0.551)				
exp2 aspiration3	1.342** (0.681)	1.481** (0.631)				
exp2 aspiration4	0.169 (0.854)	-0.128 (0.785)				
exp3 aspiration1	-0.776 (1.768)	-0.858 (1.636)				
exp3 aspiration2	0.610 (0.653)	0.713 (0.602)				
exp3 aspiration3	0.856 (0.734)	0.792 (0.682)				
exp3 aspiration4	-0.689 (0.870)	-0.647 (0.801)				
exp4 aspiration1	-5.811 (3.680)	-4.198 (3.456)				
exp4 aspiration2	3.761** (1.757)	2.378 (1.675)				
exp4 aspiration3	2.059 (2.121)	1.828 (1.969)				
o.exp4 aspiration4	-	-				
exp5 aspiration1	1.674 (3.083)	2.199 (2.845)				
exp5 aspiration2	0.325 (0.994)	0.487 (0.923)				
o.exp5 aspiration3	-	-				
exp5 aspiration4	-1.998	-2.685				

VARIABLES	(1) model 35	(2) model 36	(3) model 37	(4) model 38	(5) model 39	(6) model 40
matpurchased	-3.276*** (0.732)	(2.392)	-3.303*** (0.933)		-3.367*** (0.933)	
exppurchased	0.925 (0.802)		-0.117 (0.797)		-0.178 (0.794)	
osnpurchased	-2.191*** (0.363)		-1.298* (0.677)		-1.195* (0.677)	
osn2aspiration			0.00130*** (0.000428)	-2.051*** (0.626)		
osn3aspiration			0.00129*** (0.000415)	-1.706*** (0.479)		
osn4aspiration			0.000934** (0.000472)	-1.516*** (0.370)		
osn5aspiration			-0.00136 (0.00164)	0.000686 (0.00119)		
exp2purchased				-0.159 (0.261)		-0.104 (0.259)
exp3purchased				-0.175 (0.268)		-0.120 (0.269)
exp4purchased				-5.703*** (0.317)		-5.750*** (0.315)
exp5purchased				-0.171 (0.299)		-0.113 (0.296)
o.osn5purchased				-		-
osn2aspiration1					-0.0743 (1.947)	8.386*** (2.146)
osn2aspiration2					-0.853 (1.487)	3.716** (1.437)
osn2aspiration3					1.212 (0.970)	3.406*** (0.988)
osn2aspiration4					-0.283 (0.757)	2.041** (0.815)
osn3aspiration1					-4.513 (3.265)	-6.704*** (2.390)
osn3aspiration2					2.305 (1.566)	2.879** (1.141)
osn3aspiration3					1.864 (1.183)	2.701*** (0.867)
osn3aspiration4					0.346 (1.032)	1.127 (0.754)
osn4aspiration1					0.263 (1.139)	4.258*** (1.259)
osn4aspiration2					0.217 (0.905)	2.573*** (0.947)
osn4aspiration3					0.537 (0.583)	1.672** (0.675)
osn4aspiration4					-1.017** (0.475)	0.526 (0.595)
osn5aspiration1					0.354 (3.301)	1.713 (2.402)
osn5aspiration2					-0.355 (3.302)	-1.712 (2.402)
o.osn5aspiration3					-	-
o.osn5aspiration4					-	-
o.osn3purchased						-
Constant	41.19*** (2.532)	-13,248** (5,405)	52.28*** (2.851)	5,317*** (836.5)	52.30*** (3.207)	-26,472*** (4,789)
Observations	500	500	500	500	500	500
R-squared	0.625	0.690	0.352	0.672	0.377	0.687

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.8 Regression results:FDB on OSN goods and SWB

VARIABLES	(1) model 41	(2) model 42	(3) model 43	(4) model 44	(5) model 45	(6) model 46
age	-0.0351* (0.0198)	-0.0285 (0.0191)	-0.0283 (0.0192)	-0.0217 (0.0185)	-0.0272 (0.0200)	-0.0215 (0.0192)
male	0.912** (0.358)	0.994*** (0.344)	0.863** (0.344)	0.949*** (0.330)	0.893** (0.363)	0.977*** (0.348)
high_bloodpressure	-1.343** (0.528)	-1.092** (0.506)	-1.273** (0.508)	-1.028** (0.487)	-1.302** (0.535)	-1.052** (0.513)
education	0.155*** (0.0557)	0.136** (0.0540)	0.151*** (0.0536)	0.136*** (0.0518)	0.149*** (0.0565)	0.130** (0.0547)
fulltimeemployment	0.614 (0.423)	0.438 (0.406)	0.556 (0.409)	0.365 (0.392)	0.556 (0.429)	0.383 (0.411)
extraversion	5.457*** (0.523)	5.139*** (0.506)	5.109*** (0.505)	4.794*** (0.488)	5.722*** (0.530)	5.365*** (0.512)
income_rich	0.0174 (0.442)	0.156 (0.426)	0.166 (0.427)	0.321 (0.412)	-0.00304 (0.448)	0.145 (0.432)
married	0.597 (0.389)	0.502 (0.374)	0.562 (0.375)	0.463 (0.361)	0.585 (0.394)	0.489 (0.378)
virtual_not_close_friends	-0.0156** (0.00792)	-0.0134* (0.00761)	-0.0184** (0.00765)	-0.0160** (0.00733)	-0.0166** (0.00803)	-0.0144* (0.00771)
having_virtual_as_close_friend	-0.00123 (0.00533)	0.00133 (0.00514)	0.000335 (0.00513)	0.00256 (0.00494)	-0.00294 (0.00538)	-0.000294 (0.00518)
bkkinner	-1.085** (0.446)	-1.030** (0.428)	-1.218*** (0.431)	-1.168*** (0.413)	-1.036** (0.453)	-0.987** (0.434)
bkkmid	-0.717 (0.437)	-0.664 (0.420)	-0.720* (0.420)	-0.684* (0.404)	-0.697 (0.443)	-0.646 (0.425)
matpurchased	-3.421*** (0.943)	-3.160*** (0.905)				
osn2_fdb_total		-2.402*** (0.439)		-2.221*** (0.427)		-2.388*** (0.444)
osn3_fdb_total		-2.003*** (0.354)		-2.082*** (0.341)		-2.058*** (0.361)
osn4_fdb_total		-1.978*** (0.334)		-2.060*** (0.322)		-2.000*** (0.338)
osn5_fdb_total		0.487 (2.661)		-0.708 (2.585)		0.335 (2.695)
osn_fdb_total	-2.941*** (0.458)		-3.070*** (0.441)		-2.942*** (0.466)	
mat2purchased			-1.314*** (0.465)	-1.308*** (0.450)		
mat3purchased			-1.467*** (0.379)	-1.423*** (0.365)		
mat4purchased			-1.811*** (0.340)	-1.663*** (0.327)		
mat5purchased			-0.472 (0.348)	-0.505 (0.338)		
mat6purchased			-1.696* (0.995)	-1.804* (0.955)		
exppurchased					-0.157 (0.814)	-0.205 (0.781)
Constant	54.20*** (1.621)	53.58*** (1.520)	54.55*** (1.409)	53.95*** (1.311)	50.95*** (1.567)	50.68*** (1.487)
Observations	500	500	500	500	500	500
R-squared	0.328	0.386	0.385	0.439	0.310	0.371

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.9 Regression results:FDB on OSN goods and SWB(Continue 1)

VARIABLES	(1) model 47	(2) model 48	(3) model 49	(4) model 50	(5) model 51	(6) model 52
age	-0.0578*** (0.0160)	-0.0514*** (0.0150)	-0.0270 (0.0199)	-0.0222 (0.0192)	-0.0272 (0.0198)	-0.0214 (0.0193)
male	0.654** (0.290)	0.740*** (0.271)	0.893** (0.363)	0.974*** (0.348)	0.924** (0.358)	0.981*** (0.349)
high_bloodpre ssure	-0.737* (0.430)	-0.595 (0.401)	-1.307** (0.534)	-1.092** (0.514)	-1.133** (0.529)	-1.043** (0.516)
education	0.193*** (0.0452)	0.178*** (0.0426)	0.149*** (0.0564)	0.130** (0.0546)	0.132** (0.0572)	0.122** (0.0559)
fulltimeemploy ment	1.231*** (0.345)	1.063*** (0.322)	0.552 (0.428)	0.399 (0.412)	0.445 (0.425)	0.388 (0.415)
extraversion	4.290*** (0.430)	4.011*** (0.404)	5.737*** (0.524)	5.386*** (0.507)	5.511*** (0.520)	5.391*** (0.511)
income_rich	0.206 (0.358)	0.353 (0.336)	-0.00122 (0.447)	0.146 (0.432)	0.150 (0.445)	0.173 (0.435)
married	0.991*** (0.316)	0.909*** (0.295)	0.584 (0.394)	0.499 (0.378)	0.461 (0.390)	0.490 (0.380)
virtual_not_clo se_friends	-0.0122* (0.00641)	-0.0100* (0.00599)	-0.0166** (0.00802)	-0.0146* (0.00771)	-0.0160** (0.00791)	-0.0135* (0.00775)
having_virtual _as_close_frie nd	0.000375 (0.00431)	0.00255 (0.00404)	-0.00292 (0.00537)	-0.000427 (0.00518)	-0.00170 (0.00532)	0.000297 (0.00523)
bkkinner	-0.987*** (0.361)	-0.969*** (0.337)	-1.032** (0.452)	-0.990** (0.433)	-0.935** (0.446)	-0.991** (0.435)
bkkmid	-0.359 (0.354)	-0.354 (0.331)	-0.694 (0.442)	-0.644 (0.425)	-0.614 (0.437)	-0.637 (0.426)
exp1purchased	0.163 (0.430)	0.314 (0.405)				
exp2purchased	-0.0147 (0.293)	0.0261 (0.273)				
exp3purchased	-0.531* (0.295)	-0.206 (0.284)				
exp4purchased	-5.859*** (0.352)	-5.841*** (0.328)				
exp5purchased	-0.0424 (0.330)	0.0634 (0.308)				
osn2_fdb_total		-2.161*** (0.345)		-2.291*** (0.464)		-2.971*** (0.799)
osn3_fdb_total		-1.838*** (0.293)		-1.932*** (0.405)		-2.228** (0.960)
osn4_fdb_total		-1.904*** (0.263)		-1.816*** (0.422)		-2.529*** (0.700)
osn5_fdb_total		-1.342 (2.098)		0.427 (2.697)		-0.797 (3.270)
osn_fdb_total	-2.387*** (0.377)				-1.219* (0.682)	
osnpurchased			-2.951*** (0.463)	-0.440 (0.603)		
o.osn_fdb_tota l			-			
osn2purchased					-1.304*** (0.432)	0.608 (0.714)
osn3purchased					-1.374*** (0.417)	0.116 (0.940)
osn4purchased					-0.998** (0.475)	0.619 (0.714)
osn5purchased					1.103 (1.653)	1.234 (1.949)
Constant	51.21*** (1.158)	50.84*** (1.054)	50.79*** (1.339)	50.73*** (1.297)	51.01*** (1.348)	50.39*** (1.272)

VARIABLES	(1) model 47	(2) model 48	(3) model 49	(4) model 50	(5) model 51	(6) model 52
Observations	500	500	500	500	500	500
R-squared	0.565	0.624	0.310	0.371	0.335	0.373

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A8.10 Regression results:FDB on OSN goods and SWB(Continue 2)

VARIABLES	(1) model 53	(2) model 54	(3) model 55	(4) model 56
age	-0.0354* (0.0198)	-0.0299 (0.0192)	-0.0571*** (0.0151)	-0.0526*** (0.0144)
male	0.911** (0.359)	0.988*** (0.344)	0.659** (0.266)	0.726*** (0.254)
high_bloodpressure	-1.336** (0.529)	-1.124** (0.510)	-0.576 (0.396)	-0.550 (0.378)
education	0.155*** (0.0558)	0.135** (0.0541)	0.184*** (0.0426)	0.174*** (0.0407)
fulltimeemployment	0.618 (0.424)	0.467 (0.408)	1.094*** (0.320)	1.022*** (0.307)
extraversion	5.435*** (0.530)	5.119*** (0.512)	3.679*** (0.400)	3.525*** (0.385)
income_rich	0.0149 (0.442)	0.150 (0.427)	0.521 (0.333)	0.602* (0.319)
married	0.598 (0.389)	0.516 (0.374)	0.830*** (0.292)	0.854*** (0.279)
virtual_not_close_friends	-0.0156** (0.00793)	-0.0138* (0.00764)	-0.0125** (0.00590)	-0.0106* (0.00566)
having_virtual_as_close_friend	-0.00125 (0.00533)	0.00115 (0.00515)	0.00373 (0.00398)	0.00491 (0.00382)
bkkinner	-1.091** (0.447)	-1.045** (0.430)	-1.082*** (0.333)	-1.168*** (0.318)
bkkmid	-0.721 (0.438)	-0.669 (0.421)	-0.356 (0.326)	-0.404 (0.311)
mat2purchased			-1.396*** (0.365)	-1.474*** (0.350)
mat3purchased			-1.521*** (0.296)	-1.546*** (0.284)
mat4purchased			-0.876*** (0.268)	-0.772*** (0.256)
mat5purchased			-0.837*** (0.272)	-0.836*** (0.263)
mat6purchased			-1.566** (0.773)	-1.441* (0.740)
exp1purchased			0.127 (0.403)	0.129 (0.385)
exp2purchased			-0.164 (0.273)	-0.172 (0.260)
exp3purchased			-0.227 (0.278)	-0.115 (0.269)
exp4purchased			-5.792*** (0.331)	-5.800*** (0.314)
exp5purchased			-0.225 (0.308)	-0.251 (0.297)
osn2purchased			-1.335*** (0.325)	-0.0695 (0.534)
osn3purchased			-1.251*** (0.321)	0.595 (0.689)
osn4purchased			-1.255*** (0.356)	0.784 (0.521)
osn5purchased			-0.485 (1.239)	0.0242 (1.433)
osn_fdb_total			-0.592 (0.514)	

VARIABLES	(1) model 53	(2) model 54	(3) model 55	(4) model 56
matpurchased	-3.427*** (0.944)	-3.187*** (0.907)		
exppurchased	-0.218 (0.804)	-0.224 (0.775)		
osnpurchased	-2.929*** (0.461)	-0.483 (0.599)		
osn2_fdb_total		-2.295*** (0.459)		-1.919*** (0.598)
osn3_fdb_total		-1.840*** (0.402)		-2.447*** (0.707)
osn4_fdb_total		-1.776*** (0.418)		-2.657*** (0.511)
osn5_fdb_total		0.630 (2.669)		-2.072 (2.413)
o.osn_fdb_total	-			
Constant	54.42*** (1.819)	54.13*** (1.759)	54.68*** (1.199)	54.42*** (1.111)
Observations	500	500	500	500
R-squared	0.328	0.387	0.642	0.677

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Appendix 9

A9.1 Ordered Probit: TMHI recoded

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
age	-0.00339 (0.00591)	-0.00700 (0.00614)	-0.00904 (0.00620)	-0.00718 (0.00635)	-0.00705 (0.00614)	-0.0221*** (0.00680)
male	0.255** (0.112)	0.235** (0.115)	0.243** (0.115)	0.229** (0.116)	0.235** (0.115)	0.227* (0.124)
high_bloodpressure	-0.309* (0.163)	-0.331** (0.164)	-0.333** (0.164)	-0.357** (0.166)	-0.329** (0.164)	-0.234 (0.179)
education	0.0282 (0.0184)	0.0307* (0.0186)	0.0358* (0.0187)	0.0360* (0.0189)	0.0309* (0.0186)	0.0604*** (0.0208)
fulltimeemployment	0.0691 (0.131)	0.122 (0.135)	0.146 (0.136)	0.134 (0.138)	0.123 (0.135)	0.445*** (0.150)
extraversion	5.722 (92.24)	5.777 (91.48)	5.723 (89.48)	5.810 (88.53)	5.777 (91.44)	5.749 (92.19)
income_rich	-0.0528 (0.129)	-0.0347 (0.140)	-0.0368 (0.141)	-0.00899 (0.143)	-0.0351 (0.140)	0.0695 (0.152)
married		0.0345 (0.122)	0.0339 (0.122)	0.00655 (0.124)	0.0335 (0.122)	0.210 (0.133)
virtual_not_close_friends		-0.00213	-0.00158	-0.00193	-0.00218	-0.00109
having_virtual_as_close_friend		(0.00255) -0.00298*	(0.00257) -0.00256	(0.00258) -0.00239	(0.00256) -0.00299*	(0.00277) -0.00275
bkkinner		(0.00170) -0.338**	(0.00171) -0.336**	(0.00173) -	(0.00170) -0.340**	(0.00185) -0.430***
				0.399***		
bkkmid		(0.144) -0.194 (0.141)	(0.144) -0.189 (0.142)	(0.147) -0.200 (0.144)	(0.144) -0.194 (0.142)	(0.156) -0.110 (0.153)
mat2purchased				-0.344** (0.160)		
mat3purchased				-0.335** (0.131)		
mat4purchased				-		
				0.546*** (0.117)		
mat5purchased				-0.127 (0.116)		
mat6purchased				-0.218 (0.318)		
matpurchased			-1.167*** (0.423)			
exppurchased					-0.0571 (0.291)	
exp1purchased						0.0219 (0.187)
exp2purchased						0.0300 (0.124)
exp3purchased						-0.0781 (0.123)
exp4purchased						-2.199*** (0.190)
exp5purchased						0.0601 (0.138)
Constant cut1	-0.765** (0.347)	-1.287*** (0.406)	-2.369*** (0.567)	-	-1.345*** (0.503)	-2.125*** (0.502)
Constant cut2	0.811** (0.347)	0.310 (0.403)	-0.757 (0.560)	2.205*** (0.458)	0.251 (0.500)	0.270 (0.483)
Observations	500	500	500	500	500	500

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
age	-0.00971 (0.00621)	-0.00942 (0.00628)	-0.0120* (0.00630)	-0.0263*** (0.00738)	-0.0109* (0.00649)	-0.0322*** (0.00767)
male	0.236** (0.116)	0.272** (0.116)	0.241** (0.116)	0.276** (0.131)	0.226* (0.118)	0.290** (0.133)
high_bloodpressure	-0.401** (0.166)	-0.309* (0.166)	-0.407** (0.167)	-0.261 (0.189)	-0.438*** (0.169)	-0.304 (0.192)
education	0.0300 (0.0188)	0.0221 (0.0193)	0.0355* (0.0190)	0.0624*** (0.0224)	0.0383** (0.0192)	0.0671*** (0.0230)
fulltimeemployment	0.134 (0.136)	0.102 (0.137)	0.160 (0.137)	0.443*** (0.160)	0.154 (0.140)	0.443*** (0.163)
extraversion	5.884 (89.36)	5.857 (89.55)	5.793 (87.41)	5.876 (169.9)	5.764 (86.09)	6.089 (166.8)
income_rich	-0.00809 (0.141)	0.0292 (0.142)	-0.00850 (0.142)	0.203 (0.162)	0.0160 (0.144)	0.163 (0.166)
married	0.0355 (0.123)	-0.0148 (0.124)	0.0390 (0.123)	0.153 (0.140)	0.0181 (0.125)	0.133 (0.141)
virtual_not_close_friends	-0.00284 (0.00257)	-0.00254 (0.00258)	-0.00225 (0.00261)	-0.00118 (0.00292)	-0.00256 (0.00264)	-0.000906 (0.00298)
having_virtual_as_close_friend	-0.00347** (0.00172)	-0.00293* (0.00173)	-0.00303* (0.00173)	-0.00228 (0.00197)	-0.00282 (0.00176)	-0.00223 (0.00200)
bkkinner	-0.353** (0.145)	-0.318** (0.146)	-0.349** (0.146)	-0.493*** (0.165)	-0.408*** (0.149)	-0.479*** (0.169)
bkkmid	-0.203 (0.143)	-0.175 (0.144)	-0.192 (0.144)	-0.105 (0.162)	-0.196 (0.146)	-0.0517 (0.167)
mat2purchased				-0.572*** (0.186)		-761.9*** (200.8)
mat3purchased				-0.438*** (0.148)		-148.2 (212.8)
mat4purchased				-0.420*** (0.135)		6.501 (246.5)
mat5purchased				-0.321** (0.134)		-372.9 (237.9)
mat6purchased				-0.285 (0.359)		-869.2 (853.0)
exp1purchased				0.0777 (0.202)		0.0339 (0.206)
exp2purchased				-0.0603 (0.132)		-0.0342 (0.135)
exp3purchased				0.105 (0.134)		0.115 (0.137)
exp4purchased				-2.416*** (0.213)		-2.484*** (0.223)
exp5purchased				0.0521 (0.148)		0.0472 (0.150)
osn2purchased		-0.384*** (0.128)		-0.526*** (0.149)		-0.536*** (0.152)
osn3purchased		-0.487*** (0.116)		-0.622*** (0.137)		-0.659*** (0.141)
osn4purchased		-0.275** (0.116)		-0.403*** (0.133)		-0.456*** (0.136)
osn5purchased		0.722 (0.591)		0.0487 (0.684)		0.246 (0.713)
osnpurchased	-0.761*** (0.159)		-0.775*** (0.161)		-0.836*** (0.165)	
matpurchased			-1.225*** (0.436)		-0.542 (0.461)	
exppurchased			0.0481 (0.298)		0.0697 (0.303)	
mat2socialcomparison					0.000327* (0.000168)	-0.763*** (0.201)
mat3socialcomparison					0.000310** (0.000134)	-0.148 (0.213)
mat4socialcomparison					0.000567*** (0.000122)	0.00696 (0.247)
mat5socialcomparison					0.000105 (0.000118)	-0.373 (0.239)

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
mat6socialcomparison					0.000288 (0.000321)	-0.871 (0.855)
Constant cut1	-2.159*** (0.450)	-2.056*** (0.442)	-3.259*** (0.675)	-4.323*** (0.627)	-1.969** (0.793)	-2,150** (998.5)
Constant cut2	-0.506 (0.442)	-0.373 (0.434)	-1.590** (0.665)	-1.570*** (0.579)	-0.213 (0.789)	-2,147** (998.5)
Observations	500	500	500	500	500	500

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 13	(2) model 14	(3) model 15	(4) model 16	(5) model 17	(6) model 18
age	-0.0287*** (0.00712)	-0.0351*** (0.00778)	-0.0125** (0.00638)	-0.0362*** (0.00784)	-0.0109* (0.00649)	-0.0279*** (0.00755)
male	0.221* (0.127)	0.282** (0.134)	0.268** (0.117)	0.327** (0.136)	0.226* (0.118)	0.224 (0.138)
high_bloodpressure	-0.314* (0.185)	-0.252 (0.192)	-0.356** (0.168)	-0.221 (0.196)	-0.438*** (0.169)	-0.243 (0.191)
education	0.0658*** (0.0214)	0.0648*** (0.0227)	0.0268 (0.0195)	0.0730*** (0.0230)	0.0383** (0.0192)	0.0596*** (0.0226)
fulltimeemployment	0.489*** (0.155)	0.431*** (0.163)	0.141 (0.139)	0.433*** (0.165)	0.155 (0.140)	0.416*** (0.161)
extraversion	5.760 (114.9)	5.559 (85.94)	5.841 (87.62)	5.953 (168.5)	5.764 (86.09)	5.916 (169.8)
income_rich	0.102 (0.157)	0.290* (0.168)	0.0322 (0.143)	0.268 (0.169)	0.0160 (0.144)	0.170 (0.164)
married	0.253* (0.136)	0.107 (0.144)	0.00513 (0.125)	0.112 (0.145)	0.0182 (0.125)	0.161 (0.140)
virtual_not_close_friends	-0.000525 (0.00287)	-0.00256 (0.00305)	-0.00206 (0.00262)	-0.00295 (0.00304)	-0.00256 (0.00264)	-0.000413 (0.00295)
having_virtual_as_close_friend	-0.00258 (0.00192)	-0.00237 (0.00203)	-0.00261 (0.00174)	-0.00162 (0.00204)	-0.00282 (0.00176)	-0.00207 (0.00198)
bkkinner	-0.418*** (0.160)	-0.515*** (0.170)	-0.330** (0.147)	-0.582*** (0.171)	-0.408*** (0.149)	-0.504*** (0.166)
bkkmid	-0.0752 (0.158)	-0.174 (0.166)	-0.168 (0.145)	-0.0949 (0.168)	-0.196 (0.146)	-0.120 (0.164)
mat2purchased		-0.508*** (0.190)		-0.750*** (0.193)		-246.6 (252.0)
mat3purchased		-0.545*** (0.156)		-0.446*** (0.154)		-389.3* (228.4)
mat4purchased		-0.480*** (0.139)		-0.431*** (0.139)		-544.6 (489.7)
mat5purchased		-0.303** (0.138)		-0.311** (0.140)		-0.346** (0.136)
mat6purchased		-0.356 (0.364)		-0.285 (0.373)		-0.257 (0.363)
exp1purchased		-545.1*** (166.1)		0.0229 (0.208)		0.0639 (0.204)
exp2purchased		-715.2*** (240.2)		-0.0642 (0.137)		-0.0671 (0.133)
exp3purchased		-374.6 (251.1)		0.0215 (0.139)		0.0872 (0.135)
exp4purchased		-760.5* (409.4)		-2.486*** (0.223)		-2.409*** (0.217)
exp5purchased		-978.1 (1,332)		0.123 (0.154)		0.0711 (0.149)
osn2purchased		-0.553*** (0.154)		-836.0*** (274.3)		-0.519*** (0.150)
osn3purchased		-0.473*** (0.148)		-832.6*** (222.5)		-0.591*** (0.139)
osn4purchased		-0.433*** (0.137)		-654.3*** (185.2)		-0.397*** (0.133)
osn5purchased		0.0867 (0.696)		-818.0 (1,404)		0.131 (0.693)
exp1socialcomparison	0.000218	-0.546***				

VARIABLES	(1) model 13	(2) model 14	(3) model 15	(4) model 16	(5) model 17	(6) model 18
exp2socialcomparison	(0.000224) 9.96e-05	(0.166) -0.717***				
exp3socialcomparison	(0.000129) 1.42e-05	(0.241) -0.376				
exp4socialcomparison	(0.000130) 0.00234***	(0.252) -0.760*				
exp5socialcomparison	(0.000204) -3.40e-05	(0.410) -0.980				
matpurchased	(0.000141) -1.510***	(1.334)	-1.235***		-0.541	
exppurchased	(0.480) 0.921**		(0.442) 0.0895		(0.461) 0.0697	
osnpurchased	(0.408) -0.866***		(0.301) -0.475**		(0.303) -0.836***	
osn2socialcomparison	(0.182)		(0.229)	-0.837***		
osn3socialcomparison			0.000325** (0.000135)	(0.275)		
osn4socialcomparison			0.000334** (0.000135)	-0.834*** (0.223)		
osn5socialcomparison			7.67e-05 (0.000151)	-0.656*** (0.186)		
mat2adaptation_s			-0.000883 (0.000602)	-0.820 (1.407)	0.000327* (0.000168)	-0.247 (0.253)
mat3adaptation_s					0.000310* *	-0.390* *
mat4adaptation_s					(0.000134) 0.000566*	(0.229) -0.545
mat5adaptation_s					** (0.000122)	(0.491)
mat6adaptation_s					0.000105 (0.000118)	
o.mat5adaptation_s					0.000288 (0.000321)	-
o.mat6adaptation_s						-
Constant cut1	-1.289 (0.818)	-3,377** (1,400)	-3.525*** (1.027)	-3,146** (1,437)	-1.969** (0.793)	-1,184** (588.6)
Constant cut2	1.277 (0.829)	-3,374** (1,400)	-1.816* (1.021)	-3,143** (1,437)	-0.213 (0.789)	-1,181** (588.6)
Observations	500	500	500	500	500	500

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 19	(2) model 20	(3) model 21	(4) model 22	(5) model 23	(6) model 24
age	-0.0153** (0.00681)	-0.0273*** (0.00785)	-0.0287*** (0.00712)	-0.0297*** (0.00757)	-0.0324*** (0.00741)	Error (Convergence not achieved)
male	0.335** (0.144)	0.292* (0.161)	0.221* (0.127)	0.279** (0.133)	0.263** (0.133)	
high_bloodpressure	-0.397** (0.173)	-0.247 (0.194)	-0.313* (0.185)	-0.311 (0.191)	-0.327* (0.191)	
education	0.0350* (0.0196)	0.0596*** (0.0229)	0.0658*** (0.0214)	0.0612*** (0.0228)	0.0679*** (0.0219)	
fulltimeemployment	0.158 (0.143)	0.438*** (0.163)	0.489*** (0.155)	0.417** (0.163)	0.458*** (0.160)	
extraversion	5.921	6.131	5.760	27.29	38.22	

VARIABLES	(1) model 19	(2) model 20	(3) model 21	(4) model 22	(5) model 23	(6) model 24
income_rich	(84.96) -0.0238 (0.147)	(166.8) 0.161 (0.166)	(114.9) 0.102 (0.157)	(0) 0.213 (0.165)	(0) 0.145 (0.162)	
married	0.0359 (0.128)	0.155 (0.143)	0.253* (0.136)	0.139 (0.142)	0.255* (0.140)	
virtual_not_close_friends	-0.00187 (0.00271)	-0.000593 (0.00300)	-0.000525 (0.00287)	-0.00166 (0.00298)	0.000540 (0.00299)	
having_virtual_as_close_friend	-0.00274 (0.00180)	-0.00208 (0.00202)	-0.00258 (0.00192)	-0.00217 (0.00200)	-0.00234 (0.00198)	
bkkinner	-0.441*** (0.152)	-0.515*** (0.168)	-0.417*** (0.160)	-0.501*** (0.168)	-0.485*** (0.165)	
bkkmid	-0.242 (0.149)	-0.132 (0.166)	-0.0751 (0.158)	-0.157 (0.165)	-0.128 (0.162)	
mat2purchased		2.985* (1,577)		-0.590*** (0.189)		
mat3purchased		-1,843 (1,811)		-0.465*** (0.151)		
mat4purchased		-747.1 (586.2)		-0.468*** (0.138)		
mat5purchased		1,084 (767.5)		-0.323** (0.136)		
mat6purchased		-0.258 (0.367)		-0.236 (0.365)		
exp1purchased		0.0482 (0.207)		-483.4* (251.3)		
exp2purchased		-0.0805 (0.136)		-2,036** (853.2)		
exp3purchased		0.0580 (0.136)		-1,192* (626.3)		
exp4purchased		-2.440*** (0.225)		-1,850* (1,064)		
exp5purchased		0.0504 (0.152)		0.0372 (0.149)		
osn2purchased		-0.529*** (0.153)		-0.525*** (0.152)		
osn3purchased		-0.584*** (0.141)		-0.665*** (0.142)		
osn4purchased		-0.407*** (0.137)		-0.413*** (0.135)		
osn5purchased		0.107 (0.701)		-0.0191 (0.691)		
mat2adaptation1	0.145 (0.344)	0.789 (0.684)				
mat2adaptation2	-0.0913 (0.166)	0.786 (0.499)				
mat2adaptation3	0.564** (0.250)	1.418** (0.573)				
o.mat2adaptation4		-				
mat3adaptation1	-0.495* (0.261)	-0.994 (0.652)				
mat3adaptation2	-0.220 (0.195)	-0.483 (0.356)				
mat3adaptation3	0.382** (0.149)	-0.244 (0.486)				
mat3adaptation4	0.334 (0.235)	-0.125 (0.582)				
o.mat4adaptation1		-				
mat4adaptation2	-1.260*** (0.436)	-0.648 (0.514)				
mat4adaptation3	-0.398** (0.176)	-0.0998 (0.200)				
o.mat4adaptation4		-				
o.mat5adaptation1		-				

VARIABLES	(1) model 19	(2) model 20	(3) model 21	(4) model 22	(5) model 23	(6) model 24
o.mat5adaptation2	-	-				
o.mat5adaptation3	-	-				
mat5adaptation4	0.899 (0.654)	1.086 (0.769)				
o.mat6adaptation1		-				
o.mat6adaptation2	-	-				
o.mat6adaptation3	-	-				
o.mat6adaptation4	-	-				
matpurchased	-0.610 (0.465)		-1.510*** (0.480)		-1.493*** (0.481)	
exppurchased	0.00616 (0.309)		0.923** (0.408)		0.872** (0.415)	
osnpurchased	-0.800*** (0.168)		-0.866*** (0.182)		-0.856*** (0.189)	
mat2adaptation4	-0.618* (0.336)					
mat4adaptation1	1.658*** (0.502)					
mat5adaptation1	-0.899 (0.654)					
mat6adaptation1	0.000209 (0.000326)					
exp1adaptation_s			0.000219 (0.000224)	-0.485* (0.252)		
exp2adaptation_s			9.96e-05 (0.000129)	-2.040** (0.855)		
exp3adaptation_s			1.43e-05 (0.000130)	-1.195* (0.628)		
exp4adaptation_s			0.00234*** (0.000204)	-1.851* (1.067)		
exp5adaptation_s			-3.39e-05 (0.000141)			
o.exp5adaptation_s				-		
exp1adaptation1					-0.189 (0.346)	
exp1adaptation2					-0.0817 (0.238)	
exp1adaptation3					0.248* (0.150)	
exp1adaptation4					0.0227 (0.231)	
exp2adaptation1					-0.293 (0.726)	
exp2adaptation2					-0.334 (0.734)	
exp2adaptation3					-0.0144 (0.335)	
exp2adaptation4					0.642** (0.297)	
exp3adaptation1					0.964 (0.641)	
exp3adaptation2					-0.202 (0.624)	
exp3adaptation3					-0.526 (0.475)	
exp3adaptation4					-0.236 (0.263)	
exp4adaptation1					4.902 (0)	
exp4adaptation2					-2.219 (1.415)	

VARIABLES	(1) model 19	(2) model 20	(3) model 21	(4) model 22	(5) model 23	(6) model 24
exp4adaptation3					-1.535 (1.417)	
exp4adaptation4					-1.147* (0.653)	
exp5adaptation1					0.0403 (0.627)	
o.exp5adaptation2					-	
o.exp5adaptation3					-	
exp5adaptation4					-0.0404 (0.627)	
Constant cut1	-2.302*** (0.826)	1,477 (2,576)	-1.288 (0.818)	-5,565*** (0.204)	-0.941 (0.877)	
Constant cut2	-0.452 (0.820)	1,480 (2,576)	1.278 (0.829)	-5,562 (0)	1.710* (0.887)	
Observations	500	500	500	500	500	

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 25	(2) model 26	(3) model 27	(4) model 28	(5) model 29	(6) model 30
age	-0.0126** (0.00638)	-0.0294*** (0.00763)	-0.0130* (0.00670)	-0.0320*** (0.00806)	-0.0109* (0.00649)	-0.0275*** (0.00754)
male	0.268** (0.117)	0.293** (0.132)	0.301** (0.119)	0.333** (0.137)	0.226* (0.118)	0.302** (0.133)
high_bloodpressure	-0.356** (0.168)	-0.269 (0.190)	-0.322* (0.171)	-0.287 (0.197)	-0.438*** (0.169)	-0.273 (0.190)
education	0.0268 (0.0195)	0.0607*** (0.0225)	0.0273 (0.0198)	0.0695*** (0.0234)	0.0383** (0.0192)	0.0608*** (0.0226)
fulltimeemployment	0.141 (0.139)	0.444*** (0.161)	0.0798 (0.142)	0.396** (0.168)	0.154 (0.140)	0.438*** (0.160)
extraversion	5.841 (87.61)	6.085 (169.0)	5.998 (86.84)	6.227 (120.0)	5.764 (86.09)	5.870 (169.7)
income_rich	0.0323 (0.143)	0.165 (0.164)	0.0325 (0.146)	0.221 (0.170)	0.0160 (0.144)	0.200 (0.164)
married	0.00507 (0.125)	0.136 (0.142)	-0.00498 (0.127)	0.134 (0.146)	0.0182 (0.125)	0.154 (0.141)
virtual_not_close_friends	-0.00206 (0.00262)	-0.000703 (0.00296)	-0.00172 (0.00268)	-0.000989 (0.00308)	-0.00256 (0.00264)	-0.00101 (0.00293)
having_virtual_as_close_friend	-0.00261 (0.00174)	-0.00224 (0.00199)	-0.00194 (0.00178)	-0.00201 (0.00207)	-0.00282 (0.00176)	-0.00241 (0.00198)
bkkinner	-0.330** (0.147)	-0.512*** (0.166)	-0.322** (0.149)	-0.532*** (0.173)	-0.408*** (0.149)	-0.498*** (0.166)
bkkmid	-0.168 (0.145)	-0.101 (0.164)	-0.146 (0.146)	-0.0773 (0.168)	-0.196 (0.146)	-0.118 (0.164)
mat2purchased		-0.577*** (0.186)		-0.741*** (0.202)		-372.3 (415.5)
mat3purchased		-0.448*** (0.149)		-0.454*** (0.155)		128.7 (457.4)
mat4purchased		-0.448*** (0.137)		-0.450*** (0.143)		-579.3 (410.3)
mat5purchased		-0.322** (0.135)		-0.302** (0.143)		-215.8 (547.7)
mat6purchased		-0.261 (0.362)		-0.271 (0.371)		-0.299 (0.361)
exp1purchased		0.0813 (0.203)		0.0389 (0.211)		0.0706 (0.202)
exp2purchased		-0.0763 (0.134)		-0.0859 (0.140)		-0.0679 (0.133)
exp3purchased		0.135 (0.136)		0.156 (0.143)		0.107 (0.134)
exp4purchased		-2.466***		-2.665***		-2.414***

VARIABLES	(1) model 25	(2) model 26	(3) model 27	(4) model 28	(5) model 29	(6) model 30
exp5purchased		(0.217) 0.0830		(0.239) 0.150		(0.214) 0.0506
osn2purchased		(0.150) -638.9		(0.157) 245.1		(0.149) -0.512***
osn3purchased		(518.7) -1,261**		(2,084) -7,293***		(0.150) -0.630***
osn4purchased		(505.3) -437.9		(2,247) -4,469***		(0.139) -0.433***
osn5purchased		(701.8) 0.0271		(1,335) -816.2		(0.135) 0.0635
osn2adaptation_s	0.000325* *	-0.640		(1,566)		(0.685)
osn3adaptation_s	(0.000135) 0.000334* *	(0.520) -1.263**				
osn4adaptation_s	(0.000135) 7.74e-05 (0.000151)	(0.506) -0.438 (0.703)				
o.osn5adaptation_s		-				
matpurchased	-1.235*** (0.442)		-1.166*** (0.444)		-0.541 (0.461)	
exppurchased	0.0894 (0.301)		0.100 (0.304)		0.0696 (0.303)	
osnpurchased	-0.474** (0.229)		-0.414* (0.235)		-0.836*** (0.165)	
osn5adaptation_s	-0.000882 (0.000602)					
osn2adaptation1			0.677 (0.468)	0.261 (0.872)		
osn2adaptation2			-0.493 (0.415)	-0.249 (0.868)		
osn2adaptation3			-0.685* (0.399)	-0.514 (0.704)		
osn2adaptation4			0.502** (0.217)	0.748* (0.450)		
osn3adaptation1			0.281 (0.597)	-2.181 (1.525)		
osn3adaptation2			0.00127 (0.387)	-2.222*** (0.668)		
osn3adaptation3			-0.370 (0.396)	-1.816*** (0.658)		
osn3adaptation4			0.0885 (0.223)	-1.089*** (0.391)		
osn4adaptation1			2.565** (1.093)			
osn4adaptation2			-1.219* (0.666)	-1.616* (0.839)		
osn4adaptation3			-0.727 (0.525)	-1.748*** (0.624)		
osn4adaptation4			-0.619** (0.270)	-1.114*** (0.321)		
osn5adaptation1			-0.139 (1.298)			
o.osn5adaptation2			-	-		
o.osn5adaptation3			-	-		
osn5adaptation4			0.138 (1.298)	-0.818 (1.570)		
o.osn4adaptation1				-		
o.osn5adaptation1				-		
mat2aspiration					0.000327* (0.000167)	-0.372 (0.416)
mat3aspiration					0.000310** (0.000134)	0.129 (0.458)

VARIABLES	(1) model 25	(2) model 26	(3) model 27	(4) model 28	(5) model 29	(6) model 30
mat4aspiration					0.000566*** (0.000122)	-0.580 (0.411)
mat5aspiration					0.000105 (0.000118)	-0.216 (0.549)
mat6aspiration					0.000288 (0.000321)	
o.mat6aspiration						-
Constant cut1	-3.523*** (1.027)	-2,341** (969.6)	-3.691*** (1.167)	-12,339*** (3,428)	-1.969** (0.793)	-1,041 (947.2)
Constant cut2	-1.814* (1.021)	-2,338** (969.6)	-1.927* (1.161)	-12,336*** (3,427)	-0.213 (0.789)	-1,038 (947.2)
Observations	500	500	500	500	500	500

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 31	(2) model 32	(3) model 33	(4) model 34	(5) model 35	(6) model 36
age	-0.0162** (0.00687)	-0.0266*** (0.00776)	-0.0287*** (0.00712)	-0.0301*** (0.00764)	-0.0360*** (0.00761)	Error (Convergence not achieved)
male	0.259** (0.129)	0.270* (0.144)	0.221* (0.127)	0.294** (0.136)	0.241* (0.132)	
high_bloodpressure	-0.373** (0.174)	-0.258 (0.193)	-0.313* (0.185)	-0.272 (0.195)	-0.352* (0.190)	
education	0.0331* (0.0198)	0.0626*** (0.0228)	0.0658*** (0.0214)	0.0606*** (0.0229)	0.0672*** (0.0223)	
fulltimeemployment	0.195 (0.145)	0.441*** (0.163)	0.489*** (0.155)	0.479*** (0.165)	0.522*** (0.162)	
extraversion	5.758 (86.23)	72.47 (0)	5.760 (114.9)	38.77 (0)	38.12 (0)	
income_rich	-0.0309 (0.150)	0.187 (0.166)	0.102 (0.157)	0.228 (0.168)	0.148 (0.164)	
married	0.0690 (0.130)	0.151 (0.144)	0.253* (0.136)	0.165 (0.145)	0.237* (0.142)	
virtual_not_close_friends	-0.00187 (0.00269)	-0.00113 (0.00295)	-0.000525 (0.00287)	-0.00217 (0.00304)	-0.00174 (0.00304)	
having_virtual_as_close_friend	-0.00329* (0.00180)	-0.00224 (0.00200)	-0.00258 (0.00192)	-0.00179 (0.00206)	-0.00242 (0.00203)	
bkkinner	-0.445*** (0.154)	-0.479*** (0.168)	-0.417*** (0.160)	-0.455*** (0.173)	-0.409** (0.170)	
bkkmid	-0.211 (0.151)	-0.0949 (0.166)	-0.0752 (0.158)	-0.171 (0.168)	-0.144 (0.164)	
mat2purchased		0.438 (0)		-0.550*** (0.191)		
mat3purchased		0.492 (0)		-0.590*** (0.158)		
mat4purchased		0.572 (0)		-0.508*** (0.141)		
mat5purchased		0.641 (1,791)		-0.293** (0.140)		
mat6purchased		-2.396 (1,790)		-0.337 (0.369)		
exp1purchased		0.110 (0.207)		-1,022*** (214.8)		
exp2purchased		-0.0736 (0.135)		-1,242*** (470.9)		
exp3purchased		0.0994 (0.135)		-293.6 (381.1)		
exp4purchased		-2.414*** (0.218)		-2,645* (1,390)		
exp5purchased		0.0557		-1,889		

VARIABLES	(1) model 31	(2) model 32	(3) model 33	(4) model 34	(5) model 35	(6) model 36
osn2purchased		(0.151) -0.518***		(1,224) -0.603***		
osn3purchased		(0.153) -0.635***		(0.155) -0.470***		
osn4purchased		(0.142) -0.410***		(0.145) -0.429***		
osn5purchased		0.0423 (0.692)		0.0674 (0.715)		
mat2aspiration1	0.000898 (0.346)	-0.00145 (0.380)				
mat2aspiration2	0.0737 (0.168)	0.0105 (0.185)				
mat2aspiration3	0.0138 (0.208)	-0.00647 (0.228)				
mat2aspiration4	-0.0879 (0.356)	-0.00158 (0.386)				
mat3aspiration1	1.051*** (0.375)	0.00367 (0.346)				
mat3aspiration2	-0.117 (0.170)	-0.000695 (0.177)				
mat3aspiration3	-0.557*** (0.209)	-0.00280 (0.226)				
mat3aspiration4	-0.377 (0.339)	0.000735 (0.384)				
mat4aspiration1	0.448 (0.358)	0.00109 (0.389)				
mat4aspiration2	0.214 (0.173)	0.000123 (0.193)				
mat4aspiration3	-0.267 (0.188)	0.000402 (0.209)				
mat4aspiration4	-0.394 (0.304)	-0.000613 (0.342)				
mat5aspiration1	0.0212 (0.305)	7.53e-05 (0.704)				
mat5aspiration2	0.283 (0.195)	0.000948 (0.601)				
mat5aspiration3	0.358* (0.197)	-4.89e-05 (0.600)				
o.mat5aspiration4		-				
mat6aspiration1	-0.00557 (0.747)	-0.00315 (0.0105)				
mat6aspiration2	-0.0656 (0.537)	0.000593 (0.995)				
mat6aspiration3	0.0714 (0.536)	0.000437 (0.987)				
o.mat6aspiration4		-				
matpurchased	-0.570 (0.466)		-1.510*** (0.480)		-1.716*** (0.489)	
exppurchased	0.120 (0.312)		0.922** (0.408)		0.902** (0.422)	
osnpurchased	-0.791*** (0.171)		-0.866*** (0.182)		-0.800*** (0.190)	
mat5aspiration4	-0.662* (0.394)					
exp1aspiration			0.000218 (0.000224)	-1.024*** (0.215)		
exp2aspiration			9.96e-05 (0.000129)	-1.245*** (0.472)		
exp3aspiration			1.43e-05 (0.000130)	-0.294 (0.382)		
exp4aspiration			0.00234*** (0.000204)	-2.647* (1.393)		
exp5aspiration			-3.40e-05 (0.000141)	-1.893 (1.226)		
exp1aspiration1					0.459 (0.560)	

VARIABLES	(1) model 31	(2) model 32	(3) model 33	(4) model 34	(5) model 35	(6) model 36
exp1aspiration2					0.180 (0.205)	
exp1aspiration3					0.171 (0.220)	
exp1aspiration4					-0.810*** (0.240)	
exp2aspiration1					-1.338 (0.819)	
exp2aspiration2					0.893*** (0.311)	
exp2aspiration3					0.549 (0.342)	
exp2aspiration4					-0.103 (0.465)	
exp3aspiration1					-0.101 (0.887)	
exp3aspiration2					0.132 (0.324)	
exp3aspiration3					0.0701 (0.356)	
exp3aspiration4					-0.102 (0.425)	
exp4aspiration1					-2.207 (0)	
exp4aspiration2					1.778*** (0.325)	
exp4aspiration3					0.433 (0.325)	
o.exp4aspiration4					-	
exp5aspiration1					-2.698 (2.765)	
exp5aspiration2					1.381 (1.373)	
exp5aspiration3					1.318 (1.430)	
o.exp5aspiration4					-	
Constant cut1	-1.918** (0.954)	-2.521 (0)	-1.289 (0.818)	-7,094 (0)	2.102 (1.507)	
Constant cut2	-0.0856 (0.950)	0.237 (0.198)	1.277 (0.829)	-7,091*** (0.222)	4.888*** (1.528)	
Observations	500	500	500	500	500	

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 37	(2) model 38	(3) model 39	(4) model 40	(5) model 41	(6) model 42
age	-0.0126** (0.00638)	-0.0297*** (0.00754)	-0.0146** (0.00666)	-0.0344*** (0.00799)	-0.0120* (0.00629)	-0.0108* (0.00637)
male	0.268** (0.117)	0.288** (0.133)	0.278** (0.119)	0.347** (0.137)	0.241** (0.116)	0.290** (0.118)
high_bloodpressure	-0.356** (0.168)	-0.249 (0.193)	-0.381** (0.172)	-0.279 (0.199)	-0.406** (0.167)	-0.339** (0.168)
education	0.0268 (0.0195)	0.0577** (0.0226)	0.0229 (0.0197)	0.0651*** (0.0234)	0.0357* (0.0189)	0.0291 (0.0192)
fulltimeemployment	0.141 (0.139)	0.443*** (0.162)	0.127 (0.141)	0.410** (0.167)	0.161 (0.137)	0.114 (0.139)
extraversion	5.841 (87.62)	5.822 (169.4)	5.783 (86.53)	38.69 (0)	5.795 (87.36)	5.950 (87.45)
income_rich	0.0323 (0.143)	0.221 (0.166)	0.0533 (0.145)	0.261 (0.171)	-0.00902 (0.142)	0.0202 (0.144)
married	0.00510 (0.125)	0.126 (0.143)	-0.0149 (0.126)	0.142 (0.145)	0.0381 (0.123)	0.00287 (0.125)
virtual_not_close_friends	-0.00206	-0.00136	-0.00220	-0.000579	-0.00229	-0.00185

VARIABLES	(1) model 37	(2) model 38	(3) model 39	(4) model 40	(5) model 41	(6) model 42
having_virtual_as_close_friend	(0.00262)	(0.00298)	(0.00267)	(0.00308)	(0.00260)	(0.00263)
	-0.00261	-0.00167	-0.00216	-0.00143	-0.00304*	-0.00228
	(0.00174)	(0.00201)	(0.00179)	(0.00208)	(0.00173)	(0.00175)
bkkinner	-0.330**	-0.500***	-0.326**	-0.598***	-0.351**	-0.331**
	(0.147)	(0.168)	(0.150)	(0.174)	(0.146)	(0.147)
bkkmid	-0.168	-0.0701	-0.148	-0.0974	-0.193	-0.173
	(0.145)	(0.165)	(0.146)	(0.169)	(0.144)	(0.145)
mat2purchased		-0.645***		-0.704***		
		(0.188)		(0.195)		
mat3purchased		-0.442***		-0.486***		
		(0.151)		(0.156)		
mat4purchased		-0.436***		-0.416***		
		(0.137)		(0.141)		
mat5purchased		-0.302**		-0.295**		
		(0.138)		(0.142)		
mat6purchased		-0.161		-0.201		
		(0.365)		(0.370)		
exp1purchased		0.0914		-0.0143		
		(0.205)		(0.214)		
exp2purchased		-0.0921		-0.0615		
		(0.135)		(0.139)		
exp3purchased		0.110		0.129		
		(0.136)		(0.141)		
exp4purchased		-2.482***		-2.653***		
		(0.220)		(0.236)		
exp5purchased		0.0819		0.136		
		(0.152)		(0.157)		
osn2purchased		-672.5**		8,031***		
		(307.8)		(1,972)		
osn3purchased		-684.2***		3,751***		
		(249.9)		(1,237)		
osn4purchased		-486.1**		3,968***		
		(195.0)		(1,357)		
osn5purchased		0.171		-1,405		
		(0.693)		(1,326)		
osn2aspiration	0.000325*	-0.674**				
	*					
	(0.000135)	(0.309)				
osn3aspiration	0.000334*	-0.685***				
	*					
	(0.000135)	(0.251)				
osn4aspiration	7.71e-05	-0.487**				
	(0.000151)	(0.196)				
o.osn5aspiration		-				
matpurchased	-1.235***		-1.315***		-1.223***	-1.268***
	(0.442)		(0.448)		(0.436)	(0.451)
exppurchased	0.0895		0.0973			
	(0.301)		(0.305)			
osnpurchased	-0.475**		-0.477**			
	(0.229)		(0.232)			
osn5aspiration	-0.000882					
	(0.000602)					
osn2aspiration1			0.474	4.880***		
			(0.611)	(1.872)		
osn2aspiration2			-0.506	1.065		
			(0.465)	(0.687)		
osn2aspiration3			0.198	1.244**		
			(0.306)	(0.500)		
osn2aspiration4			-0.166	0.859**		
			(0.238)	(0.429)		
osn3aspiration1			-1.843*			
			(1.018)			
osn3aspiration2			0.851*	1.583***		
			(0.499)	(0.585)		
osn3aspiration3			0.649*	1.361***		
			(0.378)	(0.459)		
osn3aspiration4			0.344	0.817**		
			(0.318)	(0.392)		

VARIABLES	(1) model 37	(2) model 38	(3) model 39	(4) model 40	(5) model 41	(6) model 42
osn4aspiration1			0.0898 (0.376)	1.983*** (0.633)		
osn4aspiration2			-0.138 (0.317)	0.899* (0.529)		
osn4aspiration3			0.235 (0.199)	0.719** (0.357)		
osn4aspiration4			-0.187 (0.160)	0.376 (0.314)		
osn5aspiration1			0.637 (1.194)			
osn5aspiration2			-0.638 (1.194)	-1.409 (1.330)		
o.osn5aspiration3			-	-		
o.osn5aspiration4			-	-		
o.osn3aspiration1				-		
o.osn5aspiration1				-		
osn_fdb_total					-0.773*** (0.161)	
osn2_fdb_total						-0.660*** (0.147)
osn3_fdb_total						-0.541*** (0.120)
osn4_fdb_total						-0.406*** (0.116)
osn5_fdb_total						0.440 (0.932)
Constant cut1	-3.523*** (1.027)	-1,847*** (432.2)	-3.930*** (1.189)	14,344 (0)	-3.305*** (0.612)	-3.297*** (0.612)
Constant cut2	-1.814* (1.021)	-1,844*** (432.2)	-2.178* (1.182)	14,347*** (0.227)	-1.636*** (0.602)	-1.545** (0.600)
Observations	500	500	500	500	500	500

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 43	(2) model 44	(3) model 45	(4) model 46	(5) model 47	(6) model 48
age	-0.0100 (0.00643)	-0.00863 (0.00653)	-0.00969 (0.00622)	-0.00863 (0.00631)	-0.0251*** (0.00693)	-0.0250*** (0.00715)
male	0.226* (0.118)	0.277** (0.119)	0.236** (0.116)	0.282** (0.117)	0.231* (0.126)	0.297** (0.130)
high_bloodpressure	-0.434** (0.169)	-0.365** (0.170)	-0.401** (0.166)	-0.333** (0.167)	-0.321* (0.183)	-0.263 (0.186)
education	0.0363* (0.0191)	0.0302 (0.0194)	0.0299 (0.0188)	0.0238 (0.0191)	0.0607*** (0.0211)	0.0600*** (0.0219)
fulltimeemployment	0.144 (0.139)	0.0879 (0.141)	0.134 (0.136)	0.0850 (0.138)	0.465*** (0.153)	0.416*** (0.157)
extraversion	5.862 (86.96)	5.913 (86.80)	5.884 (89.42)	5.941 (89.25)	5.928 (90.58)	5.771 (101.2)
income_rich	0.0184 (0.144)	0.0549 (0.146)	-0.00796 (0.141)	0.0254 (0.143)	0.0926 (0.154)	0.157 (0.160)
married	0.0138 (0.125)	-0.0201 (0.127)	0.0357 (0.123)	0.000560 (0.124)	0.220 (0.134)	0.191 (0.138)
virtual_not_close_friends	-0.00283 (0.00262)	-0.00237 (0.00265)	-0.00283 (0.00259)	-0.00248 (0.00262)	-0.00170 (0.00281)	-0.00120 (0.00291)
having_virtual_as_close_friend	-0.00299* (0.00175)	-0.00230 (0.00177)	-0.00346** (0.00172)	-0.00273 (0.00174)	-0.00327* (0.00189)	-0.00254 (0.00196)
bkkinner	-0.417*** (0.148)	-0.398*** (0.150)	-0.352** (0.145)	-0.331** (0.147)	-0.450*** (0.159)	-0.449*** (0.162)
bkkmid	-0.203	-0.185	-0.203	-0.181	-0.126	-0.115

VARIABLES	(1) model 43	(2) model 44	(3) model 45	(4) model 46	(5) model 47	(6) model 48
mat2purchased	(0.146) -0.371**	(0.147) -0.410**	(0.143)	(0.145)	(0.156)	(0.160)
mat3purchased	(0.163) -0.332**	(0.166) -0.317**				
mat4purchased	(0.132) -0.590***	(0.134) -0.567***				
mat5purchased	(0.119) -0.113	(0.120) -0.101				
mat6purchased	(0.117) -0.320	(0.120) -0.326				
osn2_fdb_total	(0.319)	(0.321) -0.618***		-0.625***		-0.786***
osn3_fdb_total		(0.150) -0.588***		(0.146) -0.558***		(0.167) -0.746***
osn4_fdb_total		(0.122) -0.431***		(0.120) -0.404***		(0.142) -0.544***
osn5_fdb_total		(0.117) -0.0673		(0.115) 0.382		(0.130) -0.248
osn_fdb_total	(0.319) -0.830***	(0.913)	-0.761***	(0.923)	-0.797***	(1.035)
exppurchased	(0.164)		(0.160) 0.0145	(0.298) 0.0277		
exp1purchased					0.0436	0.126
exp2purchased					(0.189) -0.0390	(0.196) -0.0304
exp3purchased					(0.126) -0.00675	(0.130) 0.111
exp4purchased					(0.125) -2.223***	(0.133) -2.410***
exp5purchased					(0.194) 0.0746	(0.209) 0.110
Constant cut1	(0.139) -3.200***	(0.497) -3.117***	(0.535) -2.145***	(0.533) -2.095***	(0.548) -3.017***	(0.552) -3.104***
Constant cut2	(0.491) -1.444***	(0.480) -1.281***	(0.528) -0.492	(0.525) -0.362	(0.521) -0.535	(0.519) -0.376
Observations	500	500	500	500	500	500

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 49	(2) model 50	(3) model 51	(4) model 52	(5) model 53	(6) model 54
age	-0.00971 (0.00621)	-0.00915 (0.00633)	-0.0104 (0.00631)	-0.00888 (0.00634)	-0.0120* (0.00630)	-0.0113* (0.00640)
male	0.236** (0.116)	0.277** (0.117)	0.262** (0.116)	0.287** (0.117)	0.241** (0.116)	0.283** (0.118)
high_bloodpressure	-0.401** (0.166)	-0.350** (0.168)	-0.346** (0.168)	-0.321* (0.168)	-0.407** (0.167)	-0.360** (0.169)
education	0.0300 (0.0188)	0.0243 (0.0191)	0.0219 (0.0193)	0.0182 (0.0195)	0.0355* (0.0190)	0.0295 (0.0193)
fulltimeemployment	0.134 (0.136)	0.0941 (0.138)	0.114 (0.137)	0.0840 (0.139)	0.160 (0.137)	0.122 (0.139)
extraversion	5.884 (89.36)	5.947 (89.33)	5.885 (89.31)	6.435 (263.9)	5.793 (87.41)	5.947 (87.31)
income_rich	-0.00809 (0.141)	0.0238 (0.143)	0.0330 (0.142)	0.0419 (0.144)	-0.00850 (0.142)	0.0200 (0.144)
married	0.0355 (0.123)	0.00561 (0.124)	0.000419 (0.124)	-0.000520 (0.125)	0.0390 (0.123)	0.0108 (0.125)
virtual_not_close_friends	-0.00284 (0.00257)	-0.00262 (0.00261)	-0.00275 (0.00259)	-0.00216 (0.00263)	-0.00225 (0.00261)	-0.00193 (0.00265)
having_virtual_as_close_friend	-0.00347** (0.00172)	-0.00284 (0.00174)	-0.00307* (0.00173)	-0.00241 (0.00175)	-0.00303* (0.00173)	-0.00237 (0.00176)

VARIABLES	(1) model 49	(2) model 50	(3) model 51	(4) model 52	(5) model 53	(6) model 54
bkkinner	-0.353** (0.145)	-0.336** (0.147)	-0.334** (0.146)	-0.339** (0.147)	-0.349** (0.146)	-0.333** (0.147)
bkkmid	-0.203 (0.143)	-0.181 (0.145)	-0.179 (0.144)	-0.183 (0.145)	-0.192 (0.144)	-0.170 (0.145)
osnpurchased	-0.761*** (0.159)	-0.205 (0.212)			-0.775*** (0.161)	-0.224 (0.214)
osn2_fdb_total		-0.586*** (0.151)		-0.830*** (0.258)		-0.616*** (0.152)
osn3_fdb_total		-0.495*** (0.135)		-0.529 (0.337)		-0.476*** (0.136)
osn4_fdb_total		-0.324** (0.141)		-0.650*** (0.251)		-0.318** (0.142)
osn5_fdb_total		0.438 (0.928)		-0.522 (1.188)		0.492 (0.938)
o.osn_fdb_total	-				-	
osn2purchased			-0.304** (0.134)	0.200 (0.229)		
osn3purchased			-0.355*** (0.134)	-0.0551 (0.332)		
osn4purchased			-0.0863 (0.150)	0.290 (0.254)		
osn5purchased			0.837 (0.597)	0.972 (0.778)		
osn_fdb_total			-0.448** (0.227)			
matpurchased					-1.225*** (0.436)	-1.282*** (0.452)
exppurchased					0.0481 (0.298)	0.0645 (0.303)
Constant cut1	-2.159*** (0.450)	-2.246*** (0.460)	-2.309*** (0.462)	-2.143*** (0.448)	-3.259*** (0.675)	-3.380*** (0.695)
Constant cut2	-0.506 (0.442)	-0.512 (0.451)	-0.617 (0.453)	-0.398 (0.438)	-1.590** (0.665)	-1.627** (0.684)
Observations	500	500	500	500	500	500

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 55	(2) model 56
age	-0.0270*** (0.00742)	-0.0275*** (0.00759)
male	0.270** (0.131)	0.306** (0.134)
high_bloodpressure	-0.285 (0.191)	-0.278 (0.194)
education	0.0623*** (0.0224)	0.0629*** (0.0230)
fulltimeemployment	0.451*** (0.160)	0.426*** (0.164)
extraversion	5.872 (169.8)	6.063 (168.0)
income_rich	0.203 (0.162)	0.264 (0.168)
married	0.167 (0.140)	0.185 (0.143)
virtual_not_close_friends	-0.00134 (0.00293)	-0.000964 (0.00303)
having_virtual_as_close_friend	-0.00237 (0.00198)	-0.00186 (0.00203)
bkkinner	-0.503*** (0.166)	-0.550*** (0.169)
bkkmid	-0.105 (0.163)	-0.133 (0.166)

VARIABLES	(1) model 55	(2) model 56
mat2purchased	-0.582*** (0.186)	-0.671*** (0.191)
mat3purchased	-0.438*** (0.148)	-0.453*** (0.152)
mat4purchased	-0.427*** (0.135)	-0.386*** (0.138)
mat5purchased	-0.313** (0.134)	-0.313** (0.140)
mat6purchased	-0.297 (0.359)	-0.238 (0.366)
exp1purchased	0.0734 (0.202)	0.104 (0.206)
exp2purchased	-0.0790 (0.134)	-0.100 (0.136)
exp3purchased	0.105 (0.134)	0.131 (0.138)
exp4purchased	-2.405*** (0.213)	-2.577*** (0.228)
exp5purchased	0.0472 (0.148)	0.0466 (0.152)
osn2purchased	-0.475*** (0.156)	-0.0221 (0.263)
osn3purchased	-0.539*** (0.156)	0.195 (0.368)
osn4purchased	-0.281 (0.173)	0.499* (0.293)
osn5purchased	0.117 (0.691)	0.501 (1.013)
osn2_fdb_total		-0.784*** (0.301)
osn3_fdb_total		-1.021*** (0.381)
osn4_fdb_total		-1.039*** (0.292)
osn5_fdb_total		-1.210 (1.447)
osn_fdb_total	-0.283 (0.259)	
Constant cut1	-4.502*** (0.650)	-4.663*** (0.655)
Constant cut2	-1.745*** (0.602)	-1.705*** (0.595)
Observations	500	500

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Compare between the Recode TMHI and OLS full model, and Assumption Test

	Compare Significance variables and Coefficient sign with the OLS full model		Proportional Odds Assumption Test		
	Ordered Probit (OP)		Violated	Not Violated	Details
	Same	Differences from the OLS			
		Significant variables	Not Significant variables		
Model 1	+ male, + education	x	x	√	Prob > chi2 = 0.4368
Model 2	+ male, + education	- having virtual friend as close friend	- virtual_friend	√	Prob > chi2 = 0.4107

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		<i>Significant variables</i>	<i>Not Significant variables</i>			
Model 3	+ male, -hihigh_bloodpressure,+education-bkkinner,-matpurchased,	-osnpurchased	+extraversion,		√	Prob > chi2 = 0.4208
Model 4	+male,-hi blood pressure,+education,-bkkinner,-mat2purchased,-mat3purchased,-mat4purchased,	-osnpurchased,	+extraversion,-virtual not close friends		√	Prob > chi2 = 0.1217
Model 5	+male,-hi blood pressure,+education,-bkkinner,-bkkmid	-having virtual as close friend, -osnpurchased	+extraversion, -virtual not close friends		√	Prob > chi2 = 0.1496
Model 6	-age,+male,+education,+fulltimeemployment,-bkkinner,-exp4purchased,	-osnpurchased,	+extraversion, +married -exp3purchased		√	Prob > chi2 = 0.3040
Model 7	+male,-hi blood pressure,-bkkinner	- having virtual as close friend,-osn3purchased,	+education, +extraversion,-virtual not close friend,-osnpurchased		√	Prob > chi2 = 0.2029
Model 8	+male,-hi blood pressure,-bkkinner	-having virtual as close friend,-exp4purchased,-exp5purchased,-osnpurchased,	+education, +extraversion,-virtual not close friends,-osn2purchased,-osn3purchased,-osn4purchased		√	Prob > chi2 = 0.3672
Model 9	-age,+male,-hi blood pressure,+education,-bkkinner,-matpurchased	-having virtual as close friend,-expurchased	+extraversion,-virtual not close friend,-osnpurchased		√	Prob > chi2 = 0.0871
Model 10	-age,+male,+education,+fulltimeemployment,-bkkinner,-mat2purchased,-mat3purchased,-mat4purchased,-mat5purchased,-exp4purchased,-osn2purchased,-osn3purchased,-osn4purchased,	x	+extraversion, +married,-virtual not close friend,-mat6purchased		√	Prob > chi2 = 0.1219
Model 11	+male,-hi blood pressure,+education,-bkkinner,-mat2socialcomparison,	-age,+mat5socialcomparison,-mat6socialcomparison,+matpurchased,-exp1socialcomparison,	+extraversion,-virtual not close friend,-bkkmid,+mat3socialcomparison,+mat4socialcomparison,-osnpurchased		√	Prob > chi2 = 0.3050

	Compare Significance variables and Coefficient sign with the OLS full model		Proportional Odds Assumption Test		
	Ordered Probit (OP)		Violated	Not Violated	Details
	Same	Differences from the OLS			
		<i>Significant variables</i>	<i>Not Significant variables</i>		
Model 12	-age,+male, +education, +fulltimeemployment, -bkkinner, -mat2purchased, - exp4purchased, - osn2purchased, - osn3purchased, -osn4purchased,	-mat5socialcomparison, - exp1socialcomparison, - exp2socialcomparison	-hi blood pressure, +extraversion, +married, -virtual not close friends, -mat2socialcomparison	√	Prob > chi2 = 0.367 2
Model 13	-age,+male,-hi blood pressure, +education, +fulltimeemployment, +married, -bkkinner, -matpurchased, -osnpurchased	+mat5socialcomparison, +exppurchased,	+extraversion, -virtual not close friends, +exp3socialcomparison, +exp4socialcomparison	√	Prob > chi2 = 0.121 8
Model 14	-age,+male, +education, +fulltimeemployment, +income rich, -bkkinner, -mat2purchased, - mat3purchased, - mat4purchased, - mat5purchased, - exp1purchased, - exp2purchased, - osn3purchased, - osn4purchased, - osn5purchased	-exp4purchased, -mat2socialcomparison, -mat3socialcomparison -mat5socialcomparison,	+extraversion, +married, -virtual not close friends, -mat6purchased, -exp3purchased, -exp1socialcomparison, - exp2socialcomparison, - exp3socialcomparison	√	Prob > chi2 = 0.589 6
Model 15	-age,+male,-hi blood pressure, -bkkinner, -matpurchased, -osnpurchased	+exp1socialcomparison, +exp2socialcomparison	+education, +extraversion, -virtual not close friends, +osn2socialcomparison, +osn3socialcomparison, +osn4socialcomparison	√	Prob > chi2 = 0.304 3
Model 16	-age, +male, +education, +fulltimeemployment, -bkkinner, -mat2purchased, - mat3purchased, - mat4purchased, - mat5purchased, - exp4purchased, - osn2purchased, - osn3purchased, - osn4purchase	-exp1socialcomparison, - exp2socialcomparison, - exp3socialcomparison	+extraversion, +income rich, +married, -virtual not close friends, -mat6purchased,- osn2socialcomparison,- osn3socialcomparison, - osn4socialcomparison		Order ed logit estima tes conve rgence not achiev ed (estim ated coeffi cients questi onable)

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		Significant variables	Not Significant variables			
Model 17	+male,-hi blood pressure, +education, -bkkinner,	-age, -o.mat6adaptation3, +o.mat5purchased, +o.mat6purchased, +exp1purchased,	+extraversion, -virtual not close friends, -bkkmid, -osnpurchased, +mat2adaptation_s, +mat3adaptation_s, +mat4adaptation_s		√	Prob > chi2 = 0.3672
Model 18	-age, +education, +fulltimeemployment, -bkkinner,	-exppurchased, -mat2adaptation1, -mat3adaptation1, -mat4adaptation1, -mat4adaptation2, -o.mat6purchased,	+male, +extraversion, +married,-virtual_not_close_friends, -exp4purchased, -osn2purchased, -osn3purchased, -osn4purchased, +mat5adaptation_s, +mat6adaptation_s		√	Prob > chi2 = 0.2885
Model 19	-age, +male, +education, -bkkinner,	-o.mat5adaptation2, -mat5adaptation4, +o.mat6adaptation2, -mat2purchased, -mat3purchased, -osn5purchased, -mat2adaptation_s, -mat3adaptation_s	+extraversion, -virtual not close friends, -bkkmid, -osnpurchased, -mat3adaptation1, -mat3adaptation3, -mat4adaptation1, -mat4adaptation2		√	Prob > chi2 = 0.1219
Model 20	-age, +male, +education, +fulltimeemployment, -bkkinner,	-matpurchased, -mat3adaptation2, -mat3adaptation4, -mat4adaptation1, -mat4adaptation2, -o.mat5adaptation2,	+extraversion, +married, -virtual not close friends, +mat6adaptation1, -exp4purchased, -osn2purchased, -osn3purchased, -osn4purchased			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 21	-age, +male, -high blood pressure, +education, +fulltime employment, -bkkinner,	-osn3purchased, +osn4purchased, -osn5purchased, +exp1adaptation_s,	+extraversion, +married, -virtual not close friends, -matpurchased, -osnpurchased, +exp3adaptation_s, +exp4adaptation_s		√	Prob > chi2 = 0.3043

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		Significant variables	Not Significant variables			
Model 22	-age,+male, +education, +full time employment, -bkkinner, - exp1adaptation_s,	-matpurchased,- exppurchased,- osnpurchased, mat2adaptation1, - mat2adaptation3, - mat2adaptation4, -mat3adaptation1, -mat3adaptation2, -mat3adaptation4, -mat4adaptation1, -mat4adaptation2, -mat6adaptation_s, -mat2adaptation_s, -mat4adaptation_s	+extraversion,+income rich, +married, -virtual not close friends, -mat2purchased, -mat3purchased, -mat4purchased, -exp1purchased, -exp2purchased, -exp3purchased, -osn2purchased, -osn3purchased, -osn4purchased, -exp2adaptation_s, -exp3adaptation_s, -mat5purchased, -mat6purchased			Order ed logit estima tes conve rgence not achiev ed (estim ated coeffi cients questi onable)
Model 23	-age, +male, +education,+ full time employment, +married, -bkkinner, -matpurchased, -osnpurchased,	-high blood pressure, +exppurchased, +osn3adaptation2, +osn4adaptation3,	+extraversion, -exp1adaptation3, -exp2adaptation1, -exp2adaptation4, +exp4adaptation1, -exp4adaptation2		√	Prob > chi2 = 0.367 3
Model 24	Error results	Error results	Error results			Order ed logit estima tes conve rgence not achiev ed (estim ated coeffi cients questi onable)
Model 25	-age,+male,-high bloodpressure,- bkkinner,	+exp1adaptation1, +exp1adaptation2, -exp2adaptation1, -exp2adaptation3, -osn2adaptation2, -osn2adaptation3	+education, +extraversion, -virtual not close friends, -matpurchased, -osnpurchased, +osn2adaptation_s, +osn3adaptation_s, +osn4adaptation_s		√	Prob > chi2 = 0.202 9
Model 26	-age,+male, +education, +full time employment, -bkkinner, -mat2purchased, -at3purchased, -at4purchased, -mat5purchased, - osn3purchased	-o.exp4purchased, -exp1adaptation2,	-mat6purchased, -osn2purchased, -osn2adaptation_s, -osn3adaptation_s, -exp4purchased,		√	Prob > chi2 = 0.553 6

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		<i>Significant variables</i>	<i>Not Significant variables</i>			
Model 27	+male, -high blood pressure, -bkkinner,	-age, -exp2adaptation1, -exp2adaptation3, -exp3adaptation, +exp3adaptation4, +exp5adaptation1, -o.exp5adaptation2, -exp5adaptation4,	+education, +extraversion, -virtual not close friends, -matpurchased, -osn2adaptation2, +osn2adaptation4, +osn4adaptation1, -osn4adaptation4			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 28	-age, +male, +education, +full time employment, -bkkinner, -mat2purchased, -mat3purchased, -mat4purchased, -mat5purchased, -osn3purchased,	-o.exp4purchased, -osn4purchased, +exp3adaptation4, -exp4adaptation2, -exp4adaptation3, -exp4adaptation4, -o.exp5adaptation2, -o.exp5adaptation3, -exp5adaptation4	+extraversion, +married, virtual not close friends, -mat6purchased, -exp4purchased, -osn2adaptation4, -osn3adaptation2, -osn3adaptation3, -osn3adaptation4, +osn4adaptation1, -osn4adaptation2, -osn4adaptation3, -osn4adaptation4			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 29	+male, -high blood pressure, +education, -bkkinner,	-age, -mat6aspiration2, +mat5aspiration, +mat6aspiration, +o.mat4purchased	+extraversion, -virtual not close friend, -osnpurchased, +mat2aspiration, +mat3aspiration, +mat4aspiration	√		Prob > chi2 = 0.0007
Model 30	-age, +male, +education, +full time employment, -bkkinner,	-mat3aspiration2, -mat3aspiration4, -mat4aspiration1, -mat4aspiration2	+extraversion, +married, -virtual not close friends, -exp4purchased, -osn2purchased, -osn3purchased, -osn4purchased, +mat6aspiration			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 31	-age, +male, -high blood pressure, +education,	-mat5aspiration2, +exp1purchased, -osn5purchased, -mat2aspiration	+extraversion, +married, -virtual not close friends, -osnpurchased, -mat3aspiration3,			Ordered logit estima

	Compare Significance variables and Coefficient sign with the OLS full model		Proportional Odds Assumption Test		
	Ordered Probit (OP)		Violated	Not Violated	Details
	Same	Differences from the OLS			
		Significant variables	Not Significant variables		
	-bkkinner, -mat5aspiration4		+mat5aspiration2, +mat5aspiration3, -mat6aspiration1		tes convergence not achieved (estimated coefficients questionable)
Model 32	-age,+male, +education, -bkkinner	-mat3aspiration2, -mat3aspiration4, -mat4aspiration1, -mat4aspiration2	+extraversion, +married,-virtual not close friends, -mat6aspiration1, -exp4purchased, -osn2purchased, -osn3purchased, -osn4purchased		Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 33	-age,+male,-high blood pressure, +education, +full time employment,+married,-bkkinner	-osn3purchased, -osn4purchased, -osn5purchased, +mat6aspiration	+extraversion, -virtual not close friends, -matpurchased, -osnpurchased, +exp3aspiration, +exp4aspiration	√	Prob > chi2 = 0.0267
Model 34	-age,+male, +education,+full time employment, -bkkinner	-matpurchased, -exppurchased, -osnpurchased, -mat2aspiration1, -mat2aspiration3, -mat2aspiration4, -mat3aspiration2, -mat3aspiration4, -mat4aspiration1, -mat4aspiration2, -mat3aspiration, -mat4aspiration, -mat6aspiration	+extraversion, +income rich, +married, -virtual not close friends, -mat2purchased, -mat3purchased, -mat4purchased, -mat5purchased, -exp1purchased, -exp2purchased, -exp3purchased, -exp5purchased, -osn2purchased, -osn3purchased, -osn4purchased, -exp1aspiration, -exp2aspiration, -exp3aspiration, -exp4aspiration, -mat6purchased		Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 35	-age, +male, -high blood pressure, +education, +full time employment, +married,-bkkinner,	+exppurchased	+extraversion, -virtual not close friends, -exp1aspiration4, -exp2aspiration1, -exp2aspiration2,		Ordered logit estimates

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		<i>Significant variables</i>	<i>Not Significant variables</i>			
	-matpurchased,- osnpurchased		-exp2aspiration3, +exp4aspiration3			convergence not achieved (estimated coefficients questionable)
Model 36	Error in appendix 9	Error in appendix 9	Error in appendix 9			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 37	-age,+male,-high blood pressure,- bkkinner,	+exp1aspiration1, +exp1aspiration2, -exp2aspiration1, -exp2aspiration3, -o.osn5purchased, -osn2aspiration1	+extraversion, -virtual not close friends, - matpurchased, -osnpurchased, +osn2aspiration, +osn3aspiration, +osn4aspiration	√		Prob > chi2 = 0.0034
Model 38	-age,+male, +education,+full time employment, - bkkinner, -mat2purchased, - mat3purchased, -mat4purchased, -mat5purchased, -osn2purchased, -osn3purchased, -osn4purchased	-exp1aspiration1, -exp1aspiration2, -exp1aspiration3, -o.osn5purchased, -osn2aspiration	+extraversion, +married, - virtual not close friends, -osn2aspiration, -osn3aspiration, -osn4aspiration, -exp4purchased			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 39	-age,+male,-high blood pressure, - bkkinner,	-exp2aspiration1, -exp2aspiration2, -exp4aspiration1, +exp4aspiration2 -exp4aspiration3, -o.osn5purchased, -osn2aspiration1	+education, +extraversion, -virtual not close friends, -matpurchased, -osnpurchased, -osn4aspiration4			Ordered logit estimates convergence not

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		Significant variables	Not Significant variables			
						achieved (estimated coefficients questionable)
Model 40	-age,+male,+education,+full time employment, -bkkinner, -mat2purchased, -mat3purchased, -mat4purchased, -mat5purchased, +osn2purchased, +osn4purchased, +osn2aspiration 1	-o.exp4purchased, +osn3purchased, +exp3aspiration1, +exp3aspiration3, +exp3aspiration4, +exp4aspiration2, +exp4aspiration3, +o.exp4aspiration4, +exp5aspiration1, +exp5aspiration2, +o.exp5aspiration3	+extraversion,+married, -virtual not close friends, +having virtual as close friend, -mat6purchased, -exp4purchased, +osn2aspiration3, +osn2aspiration4, -osn3aspiration1, +osn3aspiration2, +osn3aspiration3, +osn4aspiration1, +osn4aspiration2, +osn4aspiration3			Ordered logit estimates convergence not achieved (estimated coefficients questionable)
Model 41	-age,+male,-high blood pressure, +education,-bkkinner	-having virtual as close friend	+extraversion,-virtual not close friends,-matpurchased, -osn_fdb_total	√		Prob > chi2 = 0.0032
Model 42	+male,-high blood pressure, -bkkinner	-age	+education,+extraversion,-virtual not close friends, -matpurchased, -osn2_fdb_total, -osn3_fdb_total, -osn4_fdb_total	√		Prob > chi2 = 0.0072
Model 43	+male,-high blood pressure, +education, -bkkinner	-having virtual as close friend,-matpurchased, -osn2_fdb_total, -osn3_fdb_total, -mat5purchased	+extraversion,-virtual not close friends,-bkkmid, -osn_fdb_total, -mat2purchased, -mat3purchased, -mat4purchased	√		Prob > chi2 = 0.0014
Model 44	+male,-high blood pressure, -bkkinner, -osn2_fdb_total, -osn3_fdb_total, -mat2purchased, -mat3purchased	-matpurchased, -osn_fdb_total	+education,+extraversion,-virtual not close friends, -bkkmid, -osn4_fdb_total, -mat4purchased, -mat6purchased	√		Prob > chi2 = 0.0017
Model 45	+male, -high blood pressure, -bkkinner	-having virtual as close friend,-mat5purchased	+education, +extraversion,-virtual not close friends,-osn_fdb_total	√		Prob > chi2 = 0.0007
Model 46	+male,-high blood pressure,-bkkinner	-osn_fdb_total, -mat2purchased, -mat3purchased	+education, +extraversion, -virtual not close friends, -osn2 fdb total, -osn3 fdb total, -osn4 fdb total	√		Prob > chi2 = 0.0014

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		Significant variables	Not Significant variables			
Model 47	-age,+male, +education, +full time employment, -bkkinner	-osn2_fdb_total, -osn3_fdb_total, -osn4_fdb_total, -osn4purchased	-high blood pressure, +extraversion,+married,- virtual not close friends, -exp3purchased, -exp4purchased, -osn_fdb_total,	√		Prob > chi2 = 0.000 3
Model 48	-age,+male, +education,+full time employment, - bkkinner, -osn2_fdb_total, -osn3_fdb_total, -osn4_fdb_total	-osn4purchased	+extraversion, +married,+virtual not close friends, -exp4purchased,	√		Prob > chi2 = 0.000 7
Model 49	+male,-high blood pressure, -bkkinner,	-having virtual as close friend,-explpurchased,- osn3purchased,	+education,+extraversion,- virtual not close friends,- osnpurchased	√		Prob > chi2 = 0.002 5
Model 50	+male,-high blood pressure, -bkkinner,	-exp2purchased, -exp3purchased, -exp4purchased, -osn3purchased,	+education,+extraversion,- virtual not close friends, -osn2_fdb_total, -osn3_fdb_total, -osn4_fdb_total	√		Prob > chi2 = 0.005 8
Model 51	+male,-high blood pressure, -bkkinner, -osn3purchased,	-having virtual as close friend, -osn3_fdb total, -osn4_fdb total, -osnpurchased,	+education, +extraversion, -virtual not close friends, -osn_fdb total, -osn2purchased, -osn4purchased	√		Prob > chi2 = 0.008 4
Model 52	+male,-high blood pressure,-bkkinner,	-exp2purchased, -exp4purchased, -osn3purchased,	+education,+extraversion,- virtual not close friends, -osn2_fdb_total, -osn3_fdb_total, -osn4_fdb_total	√		Prob > chi2 = 0.026 4
Model 53	-age,+male,-high blood pressure, +education,bkkinner,	-having virtual as close friend, -mat2purchased, -osn3purchased, -osn5purchased, -osn_fdb_total,	+extraversion,-virtual not close friends, -matpurchased, -osnpurchased	√		Prob > chi2 = 0.000 8
Model 54	+male,-high blood pressure, -bkkinner,	-age, -mat3purchased, -mat4purchased, -mat5purchased, -osn3purchased, -osn4purchased, -osn5purchased	+education,+extraversion, -virtual not close friends, -matpurchased, -osn2_fdb_total, -osn3_fdb_total, -osn4_fdb_total	√		Prob > chi2 = 0.002 5
Model 55	-age,+male, +education, +full time employment,- bkkinner, -mat2purchased, -mat3purchased, -mat4purchased, -mat5purchased, -mat6purchased, -exp4purchased, -osn2purchased, -osn3purchased, -osn4purchased,	-osn3_fdb_total, -osn4_fdb_total,	+extraversion,+married,- virtual not close friends	√		Prob > chi2 = 0.000 1

	Compare Significance variables and Coefficient sign with the OLS full model			Proportional Odds Assumption Test		
	Ordered Probit (OP)			Violated	Not Violated	Details
	Same	Differences from the OLS				
		Significant variables	Not Significant variables			
Model 56	-age,+male, +education, +full time employment, - bkkinner, -mat2purchased, -mat3purchased, -mat4purchased, -mat5purchased, -exp4purchased, -osn3_fdb_total, -osn4_fdb_total,	+osn4purchased, -osn_fdb_total, -matpurchased, -exppurchased,	+extraversion,+income_ric h,+married,-virtual not close friends, -mat6purchased, -osn2_fdb_total	√		Prob > chi2 = 0.000 5

Source: Author

A9.2 Age sub-groups analysis (by 3 sub-groups)

BabyBoomer

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
age	0.0142 (0.136)	0.0260 (0.144)	0.0566 (0.141)	-0.0500 (0.131)	0.0251 (0.144)	-0.0946 (0.119)
male	1.520* (0.808)	1.348 (0.847)	1.687** (0.842)	1.731** (0.773)	1.353 (0.850)	1.104 (0.704)
high_bloodpressure	-0.458 (0.863)	-0.551 (0.874)	-0.770 (0.861)	-0.363 (0.787)	-0.531 (0.877)	-0.139 (0.718)
education	0.119 (0.126)	0.158 (0.128)	0.179 (0.126)	0.199* (0.116)	0.157 (0.128)	0.288*** (0.108)
fulltimeemployment	0.283 (0.905)	0.446 (0.937)	0.518 (0.919)	0.715 (0.878)	0.399 (0.944)	1.477* (0.789)
extraversion	6.618*** (1.222)	6.206*** (1.247)	5.425*** (1.265)	4.975*** (1.147)	6.317*** (1.267)	4.388*** (1.062)
income_rich	0.541 (0.872)	0.406 (0.906)	0.630 (0.893)	0.487 (0.819)	0.435 (0.910)	0.276 (0.753)
married		0.0706 (0.825)	0.114 (0.809)	-0.325 (0.756)	0.0498 (0.829)	0.458 (0.697)
virtual_not_close_friends		-0.0332** (0.0164)	-0.0276* (0.0162)	-0.0273* (0.0152)	-0.0330** (0.0164)	-0.0177 (0.0138)
having_virtual_as_close_friend		0.00246 (0.0124)	0.00777 (0.0124)	0.00812 (0.0113)	0.00172 (0.0125)	0.00593 (0.0103)
bkkinner		-0.789 (1.243)	-0.847 (1.218)	-0.512 (1.132)	-0.840 (1.250)	-0.524 (1.043)
bkkmid		-0.550 (0.828)	-0.659 (0.812)	-0.503 (0.753)	-0.618 (0.839)	-0.112 (0.690)
mat2purchased				-1.016 (0.856)		
mat3purchased				-1.537* (0.823)		
mat4purchased				-3.164*** (0.692)		
mat5purchased				-1.364* (0.762)		
mat6purchased				-1.197 (1.246)		
matpurchased			-3.790** (1.595)			

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
exppurchased					1.684 (3.030)	
exp1purchased						-0.624 (1.126)
exp2purchased						0.445 (0.663)
exp3purchased						-2.086*** (0.651)
exp4purchased						-6.211*** (0.869)
exp5purchased						0.0555 (0.677)
Constant	44.71*** (7.666)	45.99*** (8.077)	46.97*** (7.925)	53.02*** (7.444)	44.46*** (8.556)	50.46*** (6.730)
Observations	125	125	125	125	125	125
R-squared	0.286	0.320	0.353	0.479	0.322	0.565

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
age	-0.00416 (0.141)	0.0261 (0.141)	0.0246 (0.138)	-0.148 (0.104)	-0.0745 (0.126)	-0.122 (0.113)
male	0.911 (0.845)	1.061 (0.838)	1.232 (0.832)	1.163* (0.618)	1.278* (0.756)	0.937 (0.666)
high_bloodpressure	-0.560 (0.853)	-0.474 (0.857)	-0.785 (0.837)	0.0675 (0.617)	-0.427 (0.757)	-0.0553 (0.633)
education	0.184 (0.125)	0.167 (0.143)	0.210* (0.123)	0.319*** (0.106)	0.243** (0.111)	0.327*** (0.109)
fulltimeemployment	0.337 (0.916)	0.189 (0.960)	0.353 (0.897)	0.953 (0.726)	0.603 (0.837)	0.844 (0.741)
extraversion	6.272*** (1.218)	5.959*** (1.217)	5.531*** (1.248)	3.417*** (0.925)	4.830*** (1.141)	3.521*** (0.947)
income_rich	0.352 (0.885)	0.640 (0.889)	0.625 (0.868)	0.767 (0.655)	0.507 (0.784)	0.554 (0.684)
married	0.0250 (0.806)	0.0726 (0.816)	0.0450 (0.787)	0.125 (0.617)	-0.338 (0.722)	0.0371 (0.637)
virtual_not_close_friends	-0.0379** (0.0161)	-0.0312* (0.0160)	-0.0322** (0.0158)	-0.0158 (0.0123)	-0.0327** (0.0146)	-0.0137 (0.0126)
having_virtual_as_close_friend	0.00540 (0.0122)	0.00754 (0.0122)	0.0109 (0.0122)	0.0162* (0.00894)	0.0136 (0.0110)	0.0175* (0.00921)
bkkinner	-1.137 (1.221)	-0.843 (1.232)	-1.302 (1.194)	-0.478 (0.922)	-0.947 (1.087)	-0.853 (0.954)
bkkmid	-0.590 (0.808)	-0.613 (0.809)	-0.787 (0.797)	-0.257 (0.600)	-0.604 (0.724)	-0.273 (0.612)
mat2purchased				-1.152* (0.677)		-646.4 (727.1)
mat3purchased				-1.378** (0.663)		627.6 (899.2)
mat4purchased				-2.063*** (0.575)		774.3 (1,057)
mat5purchased				-1.532** (0.613)		387.0 (1,330)
mat6purchased				-1.902* (1.015)		-2.270 (2,232)
exp1purchased				-0.392 (0.997)		-0.485 (1.030)
exp2purchased				0.0681 (0.597)		0.243 (0.616)
exp3purchased				-0.920 (0.594)		-0.990 (0.619)
exp4purchased				-5.761*** (0.795)		-5.794*** (0.864)
exp5purchased				-0.309		-0.221

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
osn2purchased		-0.957 (0.852)		(0.601) -0.470 (0.622)		(0.612) -0.434 (0.644)
osn3purchased		-2.035** (0.777)		-2.063*** (0.601)		-1.989*** (0.615)
osn4purchased		-0.948 (0.744)		-1.515*** (0.556)		-1.568*** (0.570)
osn5purchased		0.331 (2.145)		-0.446 (1.578)		-0.626 (1.627)
osnpurchased	-2.289** (0.900)		-2.607*** (0.886)		-2.966*** (0.800)	
matpurchased			-4.206*** (1.564)		-1.318 (1.557)	
exppurchased			1.754 (2.900)		0.538 (2.660)	
mat2socialcomparison					0.00103 (0.000857)	-0.647 (0.729)
mat3socialcomparison					0.00138* (0.000810)	0.631 (0.902)
mat4socialcomparison					0.00331*** (0.000682)	0.779 (1.060)
mat5socialcomparison					0.00126* (0.000732)	0.390 (1.333)
mat6socialcomparison					0.00139 (0.00122)	-2.274 (2.238)
Constant	49.55*** (8.010)	47.34*** (8.124)	49.54*** (8.227)	57.96*** (6.098)	48.85*** (7.523)	1.176 (2.955)
Observations	125	125	125	125	125	125
R-squared	0.358	0.382	0.401	0.714	0.541	0.724

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Generation X

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
age	0.115 (0.0784)	0.108 (0.0796)	0.101 (0.0787)	0.101 (0.0799)	0.116 (0.0800)	0.0855 (0.0634)
male	0.360 (0.583)	0.268 (0.592)	0.208 (0.586)	0.317 (0.596)	0.295 (0.593)	0.594 (0.474)
high_bloodpressure	-1.481 (0.992)	-1.394 (1.002)	-1.274 (0.991)	-1.261 (1.014)	-1.343 (1.004)	-0.912 (0.805)
education	0.187** (0.0845)	0.198** (0.0862)	0.212** (0.0854)	0.193** (0.0861)	0.192** (0.0865)	0.199*** (0.0689)
fulltimeemployment	0.694 (0.823)	0.566 (0.832)	0.517 (0.822)	0.394 (0.837)	0.719 (0.846)	0.978 (0.676)
extraversion	6.041*** (0.851)	6.045*** (0.904)	5.763*** (0.901)	5.559*** (0.933)	5.851*** (0.925)	4.430*** (0.744)
income_rich	-0.443 (0.664)	-0.419 (0.696)	-0.327 (0.689)	-0.122 (0.708)	-0.445 (0.697)	-0.343 (0.562)
married		0.550 (0.631)	0.611 (0.624)	0.606 (0.634)	0.515 (0.632)	0.739 (0.503)
virtual_not_close_friends		-0.0140 (0.0136)	-0.0145 (0.0134)	-0.0164 (0.0136)	-0.0141 (0.0136)	-0.0137 (0.0109)
having_virtual_as_close_friend		-0.00687 (0.00883)	-0.00659 (0.00872)	-0.00507 (0.00910)	-0.00648 (0.00884)	-0.000314 (0.00717)
bkkinner		0.201 (0.804)	0.154 (0.794)	-0.0100 (0.812)	0.107 (0.809)	-0.474 (0.645)
bkkmid		0.756 (0.818)	0.821 (0.808)	0.745 (0.816)	0.670 (0.823)	0.346 (0.653)
mat2purchased				-1.253 (0.813)		

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
mat3purchased				-0.933 (0.718)		
mat4purchased				-0.681 (0.633)		
mat5purchased				-0.0270 (0.621)		
mat6purchased				-0.776 (2.428)		
matpurchased			-3.460** (1.469)			
exppurchased					-1.022 (1.036)	
exp1purchased						-0.0894 (0.647)
exp2purchased						0.324 (0.503)
exp3purchased						-0.183 (0.517)
exp4purchased						-5.711*** (0.552)
exp5purchased						0.594 (0.607)
Constant	40.22*** (3.625)	41.08*** (3.829)	44.57*** (4.062)	43.91*** (4.068)	41.75*** (3.889)	43.13*** (3.070)
Observations	195	195	195	195	195	195
R-squared	0.267	0.281	0.303	0.307	0.285	0.561

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
age	0.117 (0.0776)	0.120 (0.0753)	0.116 (0.0773)	0.0780 (0.0575)	0.117 (0.0780)	0.0624 (0.0594)
male	0.339 (0.578)	0.258 (0.561)	0.302 (0.573)	0.553 (0.430)	0.418 (0.581)	0.0157 (0.451)
high_bloodpressure	-1.463 (0.977)	-1.171 (0.951)	-1.309 (0.970)	-0.671 (0.739)	-1.163 (0.991)	-0.815 (0.724)
education	0.155* (0.0851)	0.138 (0.0844)	0.164* (0.0847)	0.147** (0.0645)	0.151* (0.0853)	0.165** (0.0637)
fulltimeemployment	1.066 (0.825)	1.269 (0.803)	1.115 (0.830)	1.513** (0.625)	1.043 (0.840)	1.658*** (0.613)
extraversion	5.783*** (0.885)	5.631*** (0.865)	5.384*** (0.903)	3.702*** (0.698)	5.060*** (0.929)	3.525*** (0.684)
income_rich	-0.360 (0.679)	-0.197 (0.666)	-0.300 (0.674)	0.0363 (0.520)	-0.0972 (0.688)	-0.220 (0.512)
married	0.567 (0.615)	0.450 (0.599)	0.593 (0.611)	0.677 (0.457)	0.652 (0.617)	0.656 (0.449)
virtual_not_close_friends	-0.0145 (0.0132)	-0.0196 (0.0129)	-0.0150 (0.0131)	-0.0209** (0.00990)	-0.0170 (0.0132)	-0.0191* (0.00972)
having_virtual_as_close_friend	-0.00921 (0.00863)	-0.00790 (0.00841)	-0.00851 (0.00856)	0.00106 (0.00671)	-0.00811 (0.00890)	0.00340 (0.00660)
bkkinner	-0.0639 (0.787)	-0.00331 (0.762)	-0.167 (0.785)	-0.901 (0.588)	-0.314 (0.797)	-0.878 (0.579)
bkkmid	0.390 (0.805)	0.462 (0.780)	0.403 (0.802)	-0.00934 (0.593)	0.343 (0.805)	-0.0830 (0.583)
mat2purchased				-1.101* (0.607)		-1.851*** (612.4)
mat3purchased				-0.939* (0.530)		-1.173* (660.3)
mat4purchased				-0.513 (0.459)		681.6 (1,300)
mat5purchased				-0.731 (0.464)		-953.1 (728.3)
mat6purchased				0.467		

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
exp1purchased				(1.765) -0.0321 (0.607)		-0.0250 (0.593)
exp2purchased				0.0885 (0.463)		0.0536 (0.460)
exp3purchased				0.0773 (0.537)		0.212 (0.529)
exp4purchased				-5.821*** (0.510)		-5.776*** (0.503)
exp5purchased				0.516 (0.565)		0.364 (0.556)
osn2purchased		-2.152*** (0.680)		-2.121*** (0.522)		-2.100*** (0.513)
osn3purchased		-1.505** (0.589)		-1.072** (0.519)		-1.067** (0.508)
osn4purchased		-2.091*** (0.596)		-1.915*** (0.456)		-1.859*** (0.449)
osn5purchased		3.977 (4.039)		0.989 (3.159)		0.951 (3.076)
osnpurchased	-2.658*** (0.816)		-2.502*** (0.811)		-2.536*** (0.821)	
matpurchased			-3.169** (1.438)		-1.985 (1.594)	
exppurchased			-0.819 (1.002)		-1.224 (1.044)	
mat2socialcomparison					0.00118 (0.000840)	-1.855*** (0.614)
mat3socialcomparison					0.000631 (0.000718)	-1.175* (0.662)
mat4socialcomparison					0.000380 (0.000642)	0.684 (1.303)
mat5socialcomparison					-0.000242 (0.000612)	-0.955 (0.730)
mat6socialcomparison					0.00134 (0.00238)	-0.000517 (0.00175)
o.mat6purchased						-
Constant	43.53*** (3.807)	43.97*** (3.681)	47.12*** (4.069)	48.93*** (2.995)	45.00*** (4.646)	3,344* (1,926)
Observations	195	195	195	195	195	195
R-squared	0.321	0.373	0.341	0.665	0.358	0.690

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Generation Y

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
age	0.0425 (0.0771)	0.0110 (0.0805)	0.00971 (0.0802)	0.0203 (0.0769)	0.0144 (0.0844)	0.00865 (0.0658)
male	1.260* (0.648)	1.100* (0.644)	1.082* (0.642)	0.873 (0.620)	1.107* (0.648)	0.119 (0.519)
high_bloodpressure	-1.579 (1.559)	-1.956 (1.553)	-2.407 (1.571)	-2.171 (1.487)	-1.957 (1.557)	-0.0657 (1.238)
education	0.0686 (0.121)	0.0982 (0.122)	0.0784 (0.122)	0.104 (0.117)	0.0953 (0.124)	0.134 (0.0966)
fulltimeemployment	0.120 (0.854)	0.190 (0.867)	0.193 (0.863)	0.320 (0.841)	0.169 (0.883)	0.787 (0.685)
extraversion	5.603*** (0.926)	5.667*** (0.919)	5.506*** (0.920)	5.413*** (0.887)	5.673*** (0.922)	3.813*** (0.747)
income_rich	0.293 (0.837)	-0.0270 (1.017)	-0.209 (1.019)	-0.306 (0.984)	-0.0132 (1.025)	0.0302 (0.804)
married		0.724 (0.894)	0.719 (0.890)	0.948 (0.863)	0.696 (0.919)	1.144 (0.706)
virtual_not_close_friends		0.00197 (0.0148)	0.000138 (0.0147)	-0.00798 (0.0143)	0.00195 (0.0148)	0.00697 (0.0119)
having_virtual_as_close_		-0.000122	0.00112	0.000888	0.000191	0.000564

VARIABLES	(1) model 1	(2) model 2	(3) model 3	(4) model 4	(5) model 5	(6) model 6
friend		(0.00954)	(0.00953)	(0.00926)	(0.00983)	(0.00764)
bkkinner		-2.194*** (0.778)	-2.230*** (0.775)	-2.159*** (0.744)	-2.192*** (0.780)	-1.509** (0.620)
bkkmid		-2.024** (0.822)	-2.115** (0.820)	-1.848** (0.789)	-2.021** (0.824)	-1.059 (0.654)
mat2purchased				-1.122 (0.952)		
mat3purchased				-1.777*** (0.658)		
mat4purchased				-1.814*** (0.618)		
mat5purchased				-0.199 (0.613)		
mat6purchased				-5.966 (4.121)		
matpurchased			-4.943 (3.103)			
exppurchased					0.312 (2.261)	
exp1purchased						0.632 (0.876)
exp2purchased						0.199 (0.506)
exp3purchased						0.0775 (0.530)
exp4purchased						-6.521*** (0.631)
exp5purchased						-0.927 (0.582)
Constant	45.90*** (2.117)	47.63*** (2.353)	53.09*** (4.150)	51.38*** (2.542)	47.27*** (3.499)	47.35*** (2.372)
Observations	180	180	180	180	180	180
R-squared	0.194	0.238	0.250	0.329	0.238	0.545

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
age	-0.0228 (0.0754)	-0.00452 (0.0773)	-0.00584 (0.0789)	-0.00160 (0.0588)	0.00730 (0.0745)	-0.0173 (0.0576)
male	1.387** (0.604)	1.442** (0.627)	1.419** (0.609)	0.235 (0.474)	1.204** (0.577)	0.655 (0.499)
high_bloodpressure	-2.468* (1.452)	-1.810 (1.487)	-2.574* (1.479)	-0.467 (1.105)	-2.502* (1.394)	-1.052 (1.099)
education	0.128 (0.114)	0.0762 (0.117)	0.109 (0.117)	0.125 (0.0866)	0.131 (0.111)	0.0941 (0.0843)
fulltimeemployment	0.253 (0.809)	-0.345 (0.840)	0.148 (0.824)	0.465 (0.628)	0.212 (0.788)	0.545 (0.610)
extraversion	5.296*** (0.860)	5.100*** (0.880)	5.290*** (0.868)	3.475*** (0.665)	5.182*** (0.825)	3.033*** (0.662)
income_rich	-0.0666 (0.949)	0.116 (0.973)	-0.0368 (0.964)	0.184 (0.724)	-0.157 (0.918)	0.265 (0.702)
married	1.041 (0.836)	0.522 (0.850)	0.898 (0.859)	0.983 (0.630)	1.110 (0.818)	1.037* (0.613)
virtual_not_close_friends	-0.00110 (0.0138)	0.000397 (0.0140)	-0.00156 (0.0139)	-0.00114 (0.0106)	-0.0111 (0.0132)	0.00221 (0.0103)
having_virtual_as_close_friend	-0.000843 (0.00890)	0.000975 (0.00911)	0.00103 (0.00921)	0.00529 (0.00688)	0.00194 (0.00877)	0.00382 (0.00669)
bkkinner	-1.934*** (0.727)	-1.766** (0.746)	-1.932*** (0.731)	-1.217** (0.551)	-1.843*** (0.690)	-1.156** (0.539)
bkkmid	-1.681** (0.770)	-1.701** (0.785)	-1.687** (0.777)	-0.735 (0.582)	-1.389* (0.736)	-0.370 (0.574)
mat2purchased				-2.268*** (0.714)		-2.449*** (829.5)
mat3purchased				-2.053***		306.8

VARIABLES	(1) model 7	(2) model 8	(3) model 9	(4) model 10	(5) model 11	(6) model 12
mat4purchased				(0.489) -0.300		(1.257) -1,124
mat5purchased				(0.471) -0.309		(697.0) -1,803**
mat6purchased				(0.449) -0.716		(854.7)
exp1purchased				(3.058) 0.949		0.759
exp2purchased				(0.783) -0.533		(0.764) -0.532
exp3purchased				(0.467) -0.00343		(0.456) -0.265
exp4purchased				(0.469) -6.288***		(0.460) -6.027***
exp5purchased				(0.594) -0.966*		(0.606) -1.197**
osn2purchased		-1.452* (0.740)		(0.542) -0.949*		(0.536) -0.948*
osn3purchased		-2.158*** (0.613)		(0.567) -1.755***		(0.550) -1.984***
osn4purchased		-1.606*** (0.611)		(0.465) -1.427***		(0.460) -1.595***
o.osn5purchased		-		(0.452) -		(0.441) -
osnpurchased	-4.105*** (0.807)		-4.098*** (0.845)		-4.456*** (0.803)	
matpurchased			-1.105 (3.024)		3.385 (3.081)	
exppurchased			1.590 (2.128)		2.090 (2.013)	
mat2socialcomparison					0.00169* (0.000935)	-2.455*** (0.832)
mat3socialcomparison					0.00195*** (0.000618)	0.310 (1.261)
mat4socialcomparison					0.00181*** (0.000577)	-1.127 (0.699)
mat5socialcomparison					0.000204 (0.000574)	-1.807** (0.857)
mat6socialcomparison					0.00567 (0.00381)	0.00137 (0.00298)
o.mat6purchased						-
Constant	51.43*** (2.319)	50.57*** (2.364)	50.82*** (4.613)	53.72*** (2.326)	38.78*** (6.060)	5,122** (2,071)
Observations	180	180	180	180	180	180
R-squared	0.341	0.328	0.344	0.666	0.439	0.695

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A9.3 Interaction terms

Material and Experiential goods

```
. regress tmhi_15 age male chronicdisease educationattainment employment_ft personality_55_2 income_r:
> rried closefriend virtualfriend havingvirtualasclosefriend temple movietheater matgoodpurchase expg:
> rchase osngoodspurchase matgoodpurchase#expgoodspurchase
note: 1.matgoodpurchase omitted because of collinearity
note: 1.expgoodspurchase omitted because of collinearity
```

Source	SS	df	MS	Number of obs = 500			
Model	3307.35379	17	194.550223	F(17, 482) = 12.90			
Residual	7266.83821	482	15.0764278	Prob > F = 0.0000			
				R-squared = 0.3128			
				Adj R-squared = 0.2885			
				Root MSE = 3.8828			

tmhi_15	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
age	-.0130476	.0212491	-0.61	0.539	-.0547999	.0287047	
male	.9885348	.3712187	2.66	0.008	.259128	1.717942	
chronicdisease	-.1875683	.4109032	-0.46	0.648	-.9949512	.6198146	
educationattainment	.1517435	.0559907	2.71	0.007	.0417275	.2617595	
employment_ft	.161921	.4266309	0.38	0.704	-.6763652	1.000207	
personality_55_2	-.9150647	.3874243	-2.36	0.019	-1.676314	-.1538156	
income_rich	.3283345	.4520399	0.73	0.468	-.5598777	1.216547	
married	.1646717	.4007004	0.41	0.681	-.6226637	.9520071	
closefriend	-.0418178	.0597318	-0.70	0.484	-.1591846	.075549	
virtualfriend	-.0207881	.0079575	-2.61	0.009	-.0364239	-.0051523	
havingvirtualasclosefriend	.0285068	.0523797	0.54	0.587	-.074414	.1314276	
temple	.1687536	.0208506	8.09	0.000	.1277843	.209723	
movietheater	.0996679	.0265013	3.76	0.000	.0475956	.1517401	
matgoodpurchase	-.7553064	4.021772	-0.19	0.851	-8.657678	7.147065	
expgoodspurchase	1.868403	4.034819	0.46	0.644	-6.059604	9.79641	
osngoodspurchase	-2.856308	.4661362	-6.13	0.000	-3.772218	-1.940398	
1.matgoodpurchase	0	(omitted)					
1.expgoodspurchase	0	(omitted)					
matgoodpurchase#expgoodspurchase							
1 1	-3.537572	4.132085	-0.86	0.392	-11.6567	4.581553	

_cons	51.18391	4.117871	12.43	0.000	43.09271	59.27511	

```
. vif
```

Variable	VIF	1/VIF
age	1.80	0.555860
male	1.14	0.880881
chronicdis~e	1.32	0.758008
educationa~t	1.06	0.944695
employment~t	1.41	0.710692
personalit~2	1.04	0.964030
income_rich	1.22	0.818407
married	1.32	0.758776
closefriend	1.07	0.934961
virtualfri~d	1.03	0.968950
havingvirt~d	1.05	0.950010
temple	1.16	0.865646
movietheater	1.13	0.881112
matgoodpur~e	18.62	0.053717
expgoodspu~e	25.65	0.038993
osngoodspu~e	1.04	0.965547
matgoodpur~e#		
expgoodspu~e		
1 1	43.57	0.022952
Mean VIF	6.15	

Material and Online Social Network goods

```
. regress tmhi_15 age male chronicdisease educationattainment employment_ft personality_55_2 income_rich ma
> rried closefriend virtualfriend havingvirtualasclosefriend temple movietheater matgoodpurchase expgoodspu
> rchase osngoodspurchase matgoodpurchase#osngoodspurchase
note: 1.matgoodpurchase omitted because of collinearity
note: 1.osngoodspurchase omitted because of collinearity
```

Source	SS	df	MS	Number of obs = 500			
Model	3296.34354	17	193.902561	F(17, 482) = 12.84			
Residual	7277.84846	482	15.0992707	Prob > F = 0.0000			
Total	10574.192	499	21.1907655	R-squared = 0.3117			
				Adj R-squared = 0.2875			
				Root MSE = 3.8858			

	tmhi_15	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	age	-.0129568	.0215106	-0.60	0.547	-.055223	.0293094
	male	.974547	.3715214	2.62	0.009	.2445454	1.704549
	chronicdisease	-.1694671	.4106688	-0.41	0.680	-.9763893	.6374552
	educationattainment	.1547309	.0561835	2.75	0.006	.044336	.2651258
	employment_ft	.1520857	.4272898	0.36	0.722	-.687495	.9916665
	personality_55_2	-.9056364	.3875796	-2.34	0.020	-1.667191	-.1440821
	income_rich	.351074	.452286	0.78	0.438	-.5376218	1.23977
	married	.1414085	.4011343	0.35	0.725	-.6467794	.9295965
	closefriend	-.0383335	.0597225	-0.64	0.521	-.1556821	.0790151
	virtualfriend	-.0206948	.0079653	-2.60	0.010	-.0363457	-.0050439
	havingvirtualasclosefriend	.0295922	.0524043	0.56	0.573	-.0733769	.1325613
	temple	.1685306	.0210032	8.02	0.000	.1272614	.2097997
	movietheater	.0995556	.0265764	3.75	0.000	.0473356	.1517756
	matgoodpurchase	-4.008544	2.026717	-1.98	0.049	-7.990835	-.0262523
	expgoodspurchase	-1.514135	.8076884	-1.87	0.061	-3.10116	.0728901
	osngoodspurchase	-2.761424	2.259409	-1.22	0.222	-7.200931	1.678083
	1.matgoodpurchase	0	(omitted)				
	1.osngoodspurchase	0	(omitted)				
	matgoodpurchase#osngoodspurchase						
	1 1	-.1192515	2.31806	-0.05	0.959	-4.674003	4.4355
	_cons	54.23546	2.528024	21.45	0.000	49.26815	59.20277

```
. vif
```

Variable	VIF	1/VIF
age	1.84	0.543247
male	1.14	0.880779
chronicdis-e	1.32	0.760024
educationa-t	1.06	0.939643
employment~t	1.41	0.709576
personalit~2	1.04	0.964717
income_rich	1.22	0.818756
married	1.32	0.758283
closefriend	1.07	0.936668
virtualfri~d	1.03	0.968542
havingvirt~d	1.05	0.950557
temple	1.17	0.854410
movietheater	1.14	0.877463
matgoodpur~e	4.72	0.211846
expgoodspu~e	1.03	0.974551
osngoodspu~e	24.30	0.041159
matgoodpur~e#		
osngoodspu~e		
1 1	28.68	0.034864
Mean VIF	4.38	

A9.4 Number of temples and movie for neighborhood effects

Use number of temples and movie as proxies for neighborhood effects

Number of Temples and Movie Theater

Source	SS	df	MS	Number of obs = 500			
Model	2328.42253	13	179.109426	F(13, 486) = 10.56			
Residual	8245.76947	486	16.9666038	Prob > F = 0.0000			
				R-squared = 0.2202			
				Adj R-squared = 0.1993			
				Root MSE = 4.1191			

tmhi_15	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
age	.0105838	.0223182	0.47	0.636	-.0332683	.0544359	
male	.9472556	.3933459	2.41	0.016	.1743871	1.720124	
chronicdisease	-.2569723	.4346133	-0.59	0.555	-1.110925	.5969809	
educationattainment	.1708341	.0591835	2.89	0.004	.0545469	.2871212	
employment_ft	-.0907294	.4511074	-0.20	0.841	-.977091	.7956322	
personality_55_2	-.9178855	.4106274	-2.24	0.026	-1.72471	-.1110614	
income_rich	.281773	.4782424	0.59	0.556	-.6579051	1.221451	
married	.0422841	.4237126	0.10	0.921	-.7902506	.8748189	
closefriend	-.054952	.0628448	-0.87	0.382	-.178433	.068529	
virtualfriend	-.0188462	.0084232	-2.24	0.026	-.0353966	-.0022958	
havingvirtualasclosefriend	.0119163	.0552234	0.22	0.829	-.0965899	.1204224	
temple	.175936	.0220799	7.97	0.000	.1325521	.2193199	
movietheater	.108355	.0280822	3.86	0.000	.0531774	.1635325	
_cons	45.56171	1.4293	31.88	0.000	42.75334	48.37008	

A9.5 Friends squared

```
. regress tmhi_15 age male chronicdisease educationattainment employment_ft personality_55_2 income_rich ma
> rried closefriendsquare virtualfriendsquare havingvirtualasclosefriendsquare
```

Source	SS	df	MS	Number of obs = 500			
Model	496.699782	11	45.1545256	F(11, 488) = 2.19			
Residual	10077.4922	488	20.6505988	Prob > F = 0.0141			
				R-squared = 0.0470			
				Adj R-squared = 0.0255			
				Root MSE = 4.5443			

tmhi_15	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
age	-.012126	.0244768	-0.50	0.621	-.0602191	.035967	
male	.8641404	.4295601	2.01	0.045	.0201248	1.708156	
chronicdisease	-.4584403	.4775653	-0.96	0.338	-1.396778	.4798978	
educationattainment	.2023157	.0650721	3.11	0.002	.0744596	.3301718	
employment_ft	.2018274	.4959308	0.41	0.684	-.7725958	1.176251	
personality_55_2	-.5386929	.45084	-1.19	0.233	-1.42452	.3471342	
income_rich	.0002442	.524807	0.00	1.000	-1.030916	1.031404	
married	.3472648	.4654924	0.75	0.456	-.5673518	1.261881	
closefriendsquare	-.0035758	.0046549	-0.77	0.443	-.012722	.0055703	
virtualfriendsquare	-.000134	.0000649	-2.07	0.039	-.0002615	-6.55e-06	
havingvirtualasclosefriendsquare	-.0323862	.0608253	-0.53	0.595	-.151898	.0871256	
_cons	47.33634	1.398486	33.85	0.000	44.58854	50.08413	

Appendix 10

A10.1 Income Sub-group 1

Regression results: Personal, Social factors and SWB

VARIABLES	(1) model 1	(2) model 2
age	-0.119 (0.171)	-0.0681 (0.186)
male	0.425 (1.199)	0.650 (1.229)
high_bloodpressure	-0.249 (1.529)	-1.362 (1.623)
education	0.161 (0.172)	0.154 (0.182)
fulltimeemployment	1.816 (1.676)	2.009 (1.753)
extraversion	6.324*** (1.453)	6.758*** (1.584)
married		-0.0287 (1.232)
virtual_not_close_friends		-0.0298 (0.0227)
having_virtual_as_close_friend		-0.00661 (0.0215)
bkkinner		-0.404 (1.736)
bkkmid		-2.407* (1.403)
Constant	51.02*** (9.068)	51.81*** (9.873)
Observations	60	60
R-squared	0.319	0.392

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: Each Consumption Types and SWB

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
age	-0.0478 (0.186)	-0.126 (0.177)	-0.0598 (0.193)	0.0612 (0.151)	-0.134 (0.189)	-0.102 (0.196)
male	0.815 (1.232)	0.474 (1.159)	0.674 (1.249)	0.496 (1.074)	0.243 (1.246)	0.374 (1.278)
high_bloodpressure	-1.548 (1.624)	-0.402 (1.559)	-1.408 (1.659)	-2.802** (1.316)	-1.037 (1.619)	-0.906 (1.708)
education	0.135 (0.182)	0.0602 (0.177)	0.159 (0.186)	0.328** (0.154)	0.206 (0.183)	0.266 (0.225)
fulltimeemplo	1.632	1.480	2.021	2.256	2.164	1.335

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
yment	(1.774)	(1.720)	(1.772)	(1.387)	(1.735)	(2.229)
extraversion	6.264*** (1.632)	6.610*** (1.654)	6.707*** (1.625)	4.793*** (1.336)	6.725*** (1.566)	6.907*** (1.658)
married	0.266 (1.252)	1.289 (1.327)	-0.0617 (1.258)	-0.0799 (0.996)	-0.0663 (1.217)	-0.0353 (1.281)
virtual_not_close_friends	-0.0300 (0.0226)	-0.0196 (0.0226)	-0.0300 (0.0229)	-0.0137 (0.0182)	-0.0352 (0.0227)	-0.0346 (0.0242)
having_virtual_as_close_friend	-0.00620 (0.0214)	-0.000359 (0.0215)	-0.00593 (0.0220)	0.0176 (0.0173)	-0.00685 (0.0212)	-0.00907 (0.0232)
bkkinner	-0.626 (1.739)	-0.343 (1.728)	-0.460 (1.782)	-2.048 (1.413)	-0.888 (1.747)	-1.002 (1.859)
bkkmid	-2.260 (1.403)	-2.497* (1.346)	-2.410* (1.418)	-1.716 (1.112)	-2.204 (1.393)	-2.417 (1.510)
mat2purchased		-2.755* (1.572)				
mat3purchased		-1.705 (1.444)				
mat4purchased		-2.934** (1.188)				
mat5purchased		0.586 (1.366)				
mat6purchased		-0.372 (2.499)				
matpurchased	-2.569 (2.168)					
expurchased			-0.466 (2.568)			
exp1purchased				-0.663 (1.423)		
exp2purchased				1.971* (1.111)		
exp3purchased				-3.302*** (1.123)		
exp4purchased				-6.832*** (1.247)		
exp5purchased				0.00508 (1.038)		
osnpurchased					-1.897 (1.291)	
osn2purchased						-0.288 (1.489)
osn3purchased						-0.819 (1.450)
osn4purchased						-0.746 (1.314)
osn5purchased						-3.663

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
Constant	53.70*** (9.959)	60.32*** (10.05)	51.76*** (9.979)	43.91*** (8.142)	56.03*** (10.17)	53.41*** (4.919) (10.64)
Observations	60	60	60	60	60	60
R-squared	0.410	0.525	0.393	0.670	0.419	0.418

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: All Types of Consumption Simultaneous and SWB

VARIABLES	(1) model 9	(2) model 10
age	-0.112 (0.196)	-0.116 (0.182)
male	0.405 (1.259)	0.578 (1.093)
high_bloodpressure	-1.262 (1.646)	-1.587 (1.477)
education	0.195 (0.184)	0.181 (0.191)
fulltimeemployment	1.713 (1.756)	2.326 (1.779)
extraversion	6.031*** (1.651)	3.531** (1.619)
married	0.278 (1.247)	0.242 (1.184)
virtual_not_close_friends	-0.0367 (0.0227)	-0.00933 (0.0211)
having_virtual_as_close_friend	-0.00572 (0.0215)	0.0116 (0.0197)
bkkinner	-1.318 (1.785)	-1.673 (1.544)
bkkmid	-1.981 (1.397)	-1.602 (1.217)
mat2purchased		-1.258 (1.534)
mat3purchased		-1.920 (1.230)
mat4purchased		-1.347 (1.119)
mat5purchased		-1.382 (1.402)
mat6purchased		-0.108 (2.241)
exp1purchased		-0.00878 (1.739)
exp2purchased		1.510 (1.279)
exp3purchased		-1.968 (1.411)
exp4purchased		-6.660*** (1.389)
exp5purchased		-0.217

VARIABLES	(1) model 9	(2) model 10
osn2purchased		(1.065) -0.796
osn3purchased		(1.295) -1.530
osn4purchased		(1.326) -0.568
osn5purchased		(1.286) 1.845
matpurchased	-3.333 (2.204)	(4.163)
exppurchased	-0.434 (2.554)	
osnpurchased	-2.242* (1.321)	
Constant	59.19*** (10.38)	58.60*** (10.48)
Observations	60	60
R-squared	0.447	0.740

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

A10.2 Income Sub-group 2

Regression results: Personal, Social factors and SWB

VARIABLES	(1) model 1	(2) model 2
age	0.0857 (0.0799)	0.0551 (0.0858)
male	0.159 (0.951)	0.0312 (0.967)
high_bloodpressure	-1.381 (1.568)	-1.039 (1.645)
education	0.162 (0.200)	0.154 (0.203)
fulltimeemployment	-0.765 (1.279)	0.239 (1.366)
extraversion	6.484*** (1.457)	6.839*** (1.505)
married		0.401 (1.020)
virtual_not_close_friends		-0.0396* (0.0206)
having_virtual_as_close_friend		0.0176 (0.0154)
bkkinner		0.862 (1.427)
bkkmid		0.660 (1.326)
Constant	42.46***	44.72***

VARIABLES	(1) model 1 (5.080)	(2) model 2 (5.786)
Observations	73	73
R-squared	0.259	0.321

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: Each Consumption Types and SWB

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
age	0.0451 (0.0858)	0.0943 (0.0856)	0.0579 (0.0865)	0.0265 (0.0727)	0.0529 (0.0837)	0.0857 (0.0824)
male	0.0525 (0.963)	0.348 (0.991)	-0.0180 (0.977)	0.262 (0.763)	-0.322 (0.959)	-0.160 (0.928)
high_bloodpres sure	-0.681 (1.662)	-1.334 (1.610)	-1.031 (1.654)	-0.564 (1.304)	-1.757 (1.642)	-1.400 (1.613)
education	0.120 (0.204)	0.133 (0.201)	0.170 (0.206)	0.346** (0.162)	0.165 (0.198)	0.0951 (0.195)
fulltimeemploy ment	0.619 (1.393)	-0.0401 (1.438)	0.336 (1.385)	0.152 (1.079)	0.128 (1.333)	0.210 (1.294)
extraversion	6.609*** (1.509)	6.234*** (1.563)	6.705*** (1.532)	4.872*** (1.212)	6.809*** (1.468)	6.491*** (1.431)
married	0.448 (1.016)	0.584 (1.038)	0.452 (1.030)	1.002 (0.871)	0.766 (1.011)	1.130 (0.998)
virtual_not_clo se_friends	-0.0373* (0.0206)	-0.0280 (0.0216)	-0.0395* (0.0207)	-0.0207 (0.0179)	-0.0369* (0.0201)	-0.0281 (0.0204)
having_virtual_ as_close_friend	0.0218 (0.0156)	0.0240 (0.0156)	0.0183 (0.0155)	0.00918 (0.0122)	0.00641 (0.0160)	0.0114 (0.0155)
bkinner	1.314 (1.465)	0.541 (1.520)	0.794 (1.440)	1.309 (1.133)	0.828 (1.391)	1.301 (1.370)
bkkmid	1.115 (1.369)	0.789 (1.366)	0.558 (1.346)	0.235 (1.034)	0.759 (1.294)	1.022 (1.263)
mat2purchased		0.487 (1.427)				
mat3purchased		-2.249* (1.152)				
mat4purchased		-1.241 (1.132)				
mat5purchased		-1.285 (1.140)				
mat6purchased		-4.556 (3.034)				
matpurchased	-4.045 (3.225)					
exppurchased			-1.395 (2.489)			
exp1purchased				-0.534 (1.206)		
exp2purchased				-0.415		

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
exp3purchased				(0.880) -1.697*		
exp4purchased				(0.958) -5.247***		
exp5purchased				(1.002) 0.564		
osnpurchased				(1.173)	-2.976** (1.459)	
osn2purchased						-1.693 (1.095)
osn3purchased						-2.467** (1.015)
osn4purchased						-0.00250 (1.032)
o.osn5purchase d						-
Constant	48.65*** (6.553)	44.82*** (5.712)	45.64*** (6.046)	44.12*** (4.824)	47.51*** (5.805)	44.44*** (5.515)
Observations	73	73	73	73	73	73
R-squared	0.339	0.408	0.325	0.626	0.365	0.422

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: All Types of Consumption Simultaneous and SWB

VARIABLES	(1) model 9	(2) model 10
age	0.0461 (0.0839)	0.0898 (0.0660)
male	-0.380 (0.961)	0.238 (0.717)
high_bloodpressure	-1.394 (1.660)	-2.161* (1.223)
education	0.151 (0.201)	0.346** (0.149)
fulltimeemployment	0.660 (1.374)	0.378 (1.033)
extraversion	6.380*** (1.494)	4.257*** (1.142)
married	0.898 (1.014)	1.684** (0.808)
virtual_not_close_friends	-0.0341* (0.0202)	-0.0130 (0.0169)
having_virtual_as_close_friend	0.0113 (0.0162)	0.00415 (0.0118)
bkkinner	1.213 (1.435)	1.284 (1.125)
bkkmid	1.102 (1.347)	0.633 (0.973)

VARIABLES	(1) model 9	(2) model 10
mat2purchased		-0.833 (1.058)
mat3purchased		-2.214** (0.830)
mat4purchased		-0.856 (0.832)
mat5purchased		-1.545* (0.841)
mat6purchased		-2.738 (2.264)
exp1purchased		-1.110 (1.167)
exp2purchased		0.477 (0.886)
exp3purchased		-1.037 (0.958)
exp4purchased		-5.110*** (0.951)
exp5purchased		0.404 (1.046)
osn2purchased		-2.406*** (0.864)
osn3purchased		-1.592* (0.921)
osn4purchased		-2.196** (0.864)
o.osn5purchased		-
matpurchased	-4.276 (3.155)	
exppurchased	-1.919 (2.416)	
osnpurchased	-3.083** (1.459)	
Constant	53.02*** (6.811)	46.22*** (4.319)
Observations	73	73
R-squared	0.390	0.753

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A10.3 Income Sub-group 3

Regression results: Personal, Social factors and SWB

VARIABLES	(1) model 1	(2) model 2
age	-0.0261 (0.0523)	-0.0274 (0.0519)
male	1.222 (0.772)	1.201 (0.781)
high_bloodpressure	-1.984*	-1.836*

VARIABLES	(1) model 1	(2) model 2
	(1.006)	(1.011)
education	0.0398 (0.146)	0.0291 (0.145)
fulltimeemployment	1.022 (0.944)	1.562 (0.959)
extraversion	6.439*** (1.165)	6.659*** (1.185)
married		0.662 (0.754)
virtual_not_close_friends		0.0254 (0.0201)
having_virtual_as_close_friend		-0.0139 (0.0118)
bkkinner		0.678 (0.978)
bkkmid		1.762* (1.013)
Constant	47.66*** (3.139)	44.76*** (3.452)
Observations	142	142
R-squared	0.235	0.278

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: Each Consumption Types and SWB

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
age	-0.0304 (0.0513)	-0.0350 (0.0528)	-0.0263 (0.0520)	-0.0989** (0.0399)	-0.0449 (0.0504)	-0.0408 (0.0521)
male	1.185 (0.771)	0.945 (0.791)	1.149 (0.785)	0.561 (0.601)	1.665** (0.767)	1.647** (0.769)
high_bloodpressure	-1.825* (0.998)	-1.802* (0.999)	-1.777* (1.015)	-1.442* (0.770)	-1.833* (0.975)	-1.355 (0.976)
education	0.0281 (0.144)	0.0175 (0.144)	0.0282 (0.146)	0.101 (0.111)	-0.0427 (0.142)	-0.0777 (0.142)
fulltimeemployment	1.433 (0.949)	1.447 (0.940)	1.682* (0.971)	1.830** (0.744)	1.462 (0.926)	0.918 (0.957)
extraversion	6.159*** (1.194)	6.167*** (1.230)	6.504*** (1.202)	4.266*** (0.943)	6.300*** (1.149)	6.443*** (1.190)
married	0.536 (0.746)	0.490 (0.743)	0.730 (0.759)	0.665 (0.576)	0.529 (0.728)	0.635 (0.740)
virtual_not_close_friends	0.0227 (0.0198)	0.0127 (0.0202)	0.0246 (0.0201)	0.00835 (0.0152)	0.0222 (0.0194)	0.0146 (0.0196)
having_virtual_as_close_friend	-0.0109 (0.0117)	-0.00680 (0.0121)	-0.0146 (0.0118)	-0.00768 (0.00891)	-0.0133 (0.0114)	-0.00461 (0.0117)
bkkinner	0.564 (0.968)	0.342 (0.978)	0.706 (0.980)	0.205 (0.739)	0.0997 (0.960)	0.294 (0.942)

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
bkkmid	1.562 (1.004)	1.535 (1.010)	1.797* (1.015)	0.874 (0.765)	1.146 (0.995)	1.197 (0.982)
mat2purchased		-2.175** (1.038)				
mat3purchased		-1.215 (0.804)				
mat4purchased		-0.922 (0.770)				
mat5purchased		-0.230 (0.764)				
mat6purchased		-2.184 (1.843)				
matpurchased	-3.319** (1.584)					
exppurchased			-1.106 (1.348)			
exp1purchased				0.304 (0.707)		
exp2purchased				0.498 (0.591)		
exp3purchased				-0.128 (0.591)		
exp4purchased				-6.424*** (0.638)		
exp5purchased				0.389 (0.682)		
osnpurchased					-2.925*** (0.895)	
osn2purchased						-2.281** (0.897)
osn3purchased						-1.094 (0.767)
osn4purchased						-2.039*** (0.730)
osn5purchased						-1.340 (4.462)
Constant	48.48*** (3.843)	49.93*** (3.930)	45.71*** (3.644)	49.73*** (2.660)	49.52*** (3.636)	50.11*** (3.678)
Observations	142	142	142	142	142	142
R-squared	0.302	0.337	0.282	0.610	0.334	0.362

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: All Types of Consumption Simultaneous and SWB

VARIABLES	(1) model 9	(2) model 10
age	-0.0454 (0.0502)	-0.106*** (0.0401)
male	1.592** (0.769)	0.969 (0.590)
high_bloodpressure	-1.801* (0.974)	-1.009 (0.725)

VARIABLES	(1) model 9	(2) model 10
education	-0.0378 (0.141)	0.00151 (0.106)
fulltimeemployment	1.413 (0.935)	1.246* (0.726)
extraversion	5.861*** (1.176)	4.126*** (0.933)
married	0.464 (0.732)	0.594 (0.548)
virtual_not_close_friends	0.0200 (0.0193)	-0.00640 (0.0146)
having_virtual_as_close_friend	-0.0112 (0.0114)	0.00343 (0.00883)
bkkinner	0.0671 (0.959)	-0.403 (0.699)
bkkmid	1.049 (0.996)	0.250 (0.727)
mat2purchased		-1.524* (0.774)
mat3purchased		-0.944 (0.607)
mat4purchased		-0.323 (0.563)
mat5purchased		-0.322 (0.559)
mat6purchased		-1.176 (1.363)
exp1purchased		0.476 (0.687)
exp2purchased		-0.340 (0.580)
exp3purchased		0.351 (0.594)
exp4purchased		-6.032*** (0.613)
exp5purchased		0.467 (0.648)
osn2purchased		-1.296* (0.662)
osn3purchased		-1.289** (0.622)
osn4purchased		-2.024*** (0.563)
osn5purchased		-3.627 (3.386)
matpurchased	-2.707* (1.554)	
exppurchased	-0.437 (1.309)	
osnpurchased	-2.674*** (0.910)	
Constant	52.53*** (4.036)	57.17*** (3.047)
Observations	142	142
R-squared	0.350	0.694

A10.4 Income Sub-group 4

Regression results: Personal, Social factors and SWB

VARIABLES	(1)	(2)
	model 1	model 2
age	-0.0685* (0.0398)	-0.101** (0.0415)
male	0.654 (0.715)	0.122 (0.732)
high_bloodpressure	-0.686 (1.550)	-0.788 (1.531)
education	0.138 (0.0961)	0.140 (0.0952)
fulltimeemployment	-0.127 (0.762)	0.316 (0.767)
extraversion	5.446*** (1.050)	5.268*** (1.034)
married		1.097 (0.707)
virtual_not_close_friends		-0.0128 (0.0162)
having_virtual_as_close_friend		0.00149 (0.0101)
bkkinner		-2.145** (0.885)
bkkmid		-1.264 (0.895)
Constant	48.94*** (2.450)	51.92*** (2.782)
Observations	137	137
R-squared	0.238	0.295

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Regression results: Each Consumption Types and SWB

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	model 3	model 4	model 5	model 6	model 7	model 8
age	-0.109** (0.0418)	-0.102** (0.0402)	-0.101** (0.0418)	-0.138*** (0.0352)	-0.0527 (0.0403)	-0.0727* (0.0409)
male	0.0916 (0.730)	0.250 (0.693)	0.129 (0.736)	0.00789 (0.616)	0.382 (0.687)	0.277 (0.700)
high_bloodpressure	-0.734 (1.527)	-0.435 (1.471)	-0.772 (1.539)	0.642 (1.308)	-1.804 (1.449)	-1.470 (1.446)
education	0.165* (0.0968)	0.132 (0.0900)	0.140 (0.0956)	0.116 (0.0805)	0.149* (0.0890)	0.0964 (0.0977)
fulltimeemployment	0.500 (0.776)	-0.0640 (0.747)	0.308 (0.771)	1.188* (0.653)	0.239 (0.716)	0.0338 (0.740)
extraversion	4.960*** (1.055)	4.108*** (1.021)	5.256*** (1.039)	4.234*** (0.887)	5.353*** (0.966)	4.974*** (0.970)
married	1.179* (0.707)	0.742 (0.684)	1.097 (0.710)	1.259** (0.595)	1.416** (0.665)	0.891 (0.684)
virtual_not_close_friends	-0.0103 (0.0162)	-0.0206 (0.0155)	-0.0129 (0.0163)	-0.00499 (0.0139)	-0.0167 (0.0151)	-0.0166 (0.0155)
having_virtual_as_close_friend	0.00104 (0.0100)	0.00188 (0.00958)	0.00131 (0.0101)	0.00537 (0.00875)	-0.00295 (0.00945)	-0.000913 (0.00947)

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
bkkinner	-2.325** (0.892)	-2.385*** (0.847)	-2.149** (0.889)	-2.182*** (0.745)	-1.495* (0.840)	-1.445* (0.846)
bkkmid	-1.244 (0.892)	-1.300 (0.870)	-1.258 (0.899)	-0.352 (0.771)	-1.013 (0.838)	-0.880 (0.850)
mat2purchased		0.118 (0.884)				
mat3purchased		-0.619 (0.746)				
mat4purchased		-2.916*** (0.686)				
mat5purchased		-0.731 (0.677)				
mat6purchased		-4.964* (2.873)				
matpurchased	-5.658 (4.177)					
exppurchased			-0.340 (1.805)			
exp1purchased				-0.146 (0.948)		
exp2purchased				0.119 (0.577)		
exp3purchased				0.160 (0.636)		
exp4purchased				-5.752*** (0.763)		
exp5purchased				-0.340 (0.721)		
osnpurchased					-4.657*** (1.062)	
osn2purchased						-1.506** (0.728)
osn3purchased						-1.885*** (0.685)
osn4purchased						-2.163*** (0.688)
osn5purchased						3.588 (2.407)
Constant	57.25*** (4.813)	55.64*** (2.954)	52.30*** (3.432)	53.45*** (2.592)	54.02*** (2.643)	54.21*** (2.801)
Observations	137	137	137	137	137	137
R-squared	0.305	0.402	0.295	0.524	0.390	0.403

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Regression results: All Types of Consumption Simultaneous and SWB

VARIABLES	(1) model 9	(2) model 10
age	-0.0603 (0.0409)	-0.115*** (0.0336)
male	0.348 (0.688)	0.311 (0.556)
high_bloodpressure	-1.760 (1.453)	-0.150 (1.184)
education	0.175* (0.0907)	0.0835 (0.0778)
fulltimeemployment	0.425 (0.728)	0.412 (0.620)
extraversion	5.056*** (0.991)	3.028*** (0.822)
married	1.497** (0.667)	0.928 (0.562)

VARIABLES	(1) model 9	(2) model 10
virtual_not_close_friends	-0.0141 (0.0153)	-0.0146 (0.0129)
having_virtual_as_close_friend	-0.00329 (0.00949)	0.00441 (0.00786)
bkkinner	-1.670* (0.850)	-1.772** (0.688)
bkkmid	-0.997 (0.839)	-0.0213 (0.706)
mat2purchased		-0.624 (0.763)
mat3purchased		-1.072* (0.630)
mat4purchased		-2.264*** (0.575)
mat5purchased		-0.978* (0.555)
mat6purchased		-4.250* (2.353)
exp1purchased		0.0491 (0.893)
exp2purchased		-0.167 (0.535)
exp3purchased		0.143 (0.586)
exp4purchased		-5.161*** (0.714)
exp5purchased		0.166 (0.669)
osn2purchased		-1.850*** (0.595)
osn3purchased		-1.499** (0.584)
osn4purchased		-0.895 (0.577)
osn5purchased		1.768 (2.029)
matpurchased	-5.567 (3.917)	
exppurchased	0.192 (1.687)	
osnpurchased	-4.661*** (1.066)	
Constant	59.05*** (4.939)	58.63*** (2.641)
Observations	137	137
R-squared	0.400	0.661

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

A10.5 Income Sub-group 5

Regression results: Personal, Social factors and SWB

VARIABLES	(1) model 1	(2) model 2
age	0.0181 (0.0412)	0.00253 (0.0423)
male	1.930** (0.942)	1.929** (0.942)
high_bloodpressure	0.145 (2.593)	1.510 (2.622)
education	0.180 (0.182)	0.147 (0.187)
fulltimeemployment	-0.309 (1.328)	-0.507 (1.385)
extraversion	6.322*** (1.429)	6.184*** (1.462)
married		0.155 (1.174)
virtual_not_close_friends		-0.0131 (0.0188)
having_virtual_as_close_friend		-0.00359 (0.0125)
bkkinner		-2.312** (1.044)
bkkmid		-2.398** (1.062)
Constant	44.54*** (3.003)	48.10*** (3.361)
Observations	88	88
R-squared	0.228	0.297

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Regression results: Each Consumption Types and SWB

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
age	-0.00901 (0.0450)	-0.00924 (0.0396)	0.00138 (0.0441)	-0.0486 (0.0371)	-0.0110 (0.0421)	-0.0348 (0.0431)
male	1.991** (0.948)	1.416 (0.919)	1.927** (0.949)	1.757** (0.798)	1.970** (0.926)	1.644* (0.908)
high_bloodpres sure	1.527 (2.629)	1.290 (2.500)	1.518 (2.640)	2.030 (2.197)	2.017 (2.588)	2.355 (2.519)
education	0.201 (0.200)	0.187 (0.180)	0.145 (0.189)	0.0762 (0.155)	0.159 (0.184)	0.247 (0.182)
fulltimeemploy ment	-0.270	0.353	-0.491	-1.233	-0.516	-0.136

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
extraversion	6.208*** (1.424)	7.106*** (1.356)	6.131** (1.404) *	5.140*** (1.174)	5.690*** (1.360)	5.372*** (1.345)
married	0.228 (1.181)	-0.000431 (1.184)	0.157 (1.182)	1.436 (1.003)	0.252 (1.154)	-0.216 (1.130)
virtual_not_close_friends	-0.0122 (0.0188)	-0.0105 (0.0178)	-0.0129 (0.0190)	0.000780 (0.0158)	-0.0174 (0.0186)	-0.0159 (0.0180)
having_virtual_as_close_friend	-0.00263 (0.0126)	-0.00101 (0.0116)	-0.00372 (0.0126)	0.00886 (0.0106)	-0.00139 (0.0123)	-0.00453 (0.0121)
bkkinner	-2.370** (1.050)	-2.603*** (0.970)	-2.316** (1.052)	-1.732* (0.886)	-2.393** (1.027)	-2.556** (1.013)
bkkmid	-2.525** (1.078)	-2.599** (0.991)	-2.418** (1.087)	-1.600* (0.935)	-2.386** (1.043)	-2.347** (1.034)
mat2purchased		-2.544* (1.517)				
mat3purchased		-2.780*** (0.909)				
mat4purchased		-1.570* (0.804)				
mat5purchased		-0.00716 (0.847)				
mat6purchased		-0.185 (4.118)				
matpurchased	-2.545 (3.358)					
exppurchased			-0.440 (4.458)			
exp1purchased				-0.873 (3.653)		
exp2purchased				0.517 (0.789)		
exp3purchased				-0.792 (0.749)		
exp4purchased				-6.420*** (1.151)		
exp5purchased				-1.645** (0.807)		
osnpurchased					-2.330* (1.199)	
osn2purchased						-0.0796 (1.049)
osn3purchased						-2.155** (0.880)
osn4purchased						-1.903** (0.886)
osn5purchased						-
Constant	50.06*** (4.243)	52.90*** (3.410)	48.60** (6.069) *	51.11*** (4.955)	50.56*** (3.535)	50.53*** (3.326)

VARIABLES	(1) model 3	(2) model 4	(3) model 5	(4) model 6	(5) model 7	(6) model 8
Observations	88	88	88	88	88	88
R-squared	0.303	0.451	0.298	0.560	0.331	0.385

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

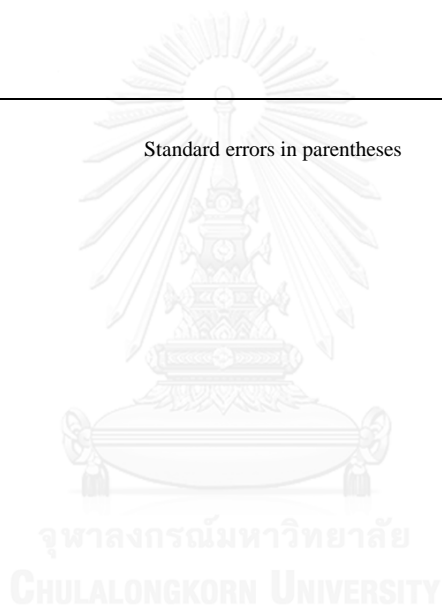
Regression results: All Types of Consumption Simultaneous and SWB

VARIABLES	(1) model 9	(2) model 10
age	-0.0260 (0.0468)	-0.0765** (0.0317)
male	2.069** (0.934)	1.041 (0.685)
high_bloodpressure	2.082 (2.602)	3.374* (1.861)
education	0.242 (0.199)	0.251* (0.134)
fulltimeemployment	-0.222 (1.416)	0.367 (1.030)
extraversion	5.797*** (1.541)	4.960*** (1.095)
married	0.362 (1.165)	0.492 (0.888)
virtual_not_close_friends	-0.0173 (0.0189)	-0.00600 (0.0132)
having_virtual_as_close_friend	0.000562 (0.0125)	0.00763 (0.00857)
bkkinner	-2.476** (1.036)	-2.026*** (0.718)
bkkmid	-2.514** (1.083)	-1.366* (0.768)
mat2purchased		-3.889*** (1.136)
mat3purchased		-2.786*** (0.673)
mat4purchased		-0.257 (0.615)
mat5purchased		-0.588 (0.659)
mat6purchased		-1.715 (2.982)
exp1purchased		1.104 (2.959)
exp2purchased		-0.509 (0.664)
exp3purchased		-0.763 (0.603)
exp4purchased		-6.279*** (0.993)
exp5purchased		-2.126*** (0.697)
osn2purchased		-0.781

VARIABLES	(1) model 9	(2) model 10
osn3purchased		(0.794) -1.859***
osn4purchased		(0.676) -1.487**
o.osn5purchased		(0.641) -
matpurchased	-3.607 (3.362)	
exppurchased	1.114 (4.502)	
osnpurchased	-2.612** (1.248)	
Constant	52.37*** (6.760)	56.61*** (4.044)
Observations	88	88
R-squared	0.343	0.755

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1



VITA

Miss Nattaya Prapaipanich was born in September 5, 1983 in Thailand. She graduated from Triam Udom Suksa Pattanakarn school. She received her Bachelor's Degree in Business and Commerce from Monash University, Melbourne, Australia in 2005 and Master's Degree in Commerce and Economics from University of New South Wales, Sydney, Australia in 2007. She joined the Doctor of Philosophy Program in Economics, Chulalongkorn University in 2009. Her Ph.D. dissertation was present at "19th International Business Research Conference" at Melbourne in November 2012, and "13th Eurasia Business and Economics Society Conference" at Istanbul in June 2014.

