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Consumption of Material and Experiential Goods, Social Comparison and Subjective Well-being in Cosmopolitan Bangkok

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Abstract

Empirical evidence of the consumption of material and experiential goods is limited to a few countries, most of which are developed countries. It has been shown that the consumption of life experiences makes people happier than that of material goods. However, these studies typically conduct dichotomous comparisons and do not consider social comparison as a purchase motive. The objective of this paper, thus, is to examine the relationship between consumption of material and experiential goods and subjective well-being, by taking into account if the purchase was made based on social comparison or not. Cross-sectional data were collected in 2015 using probability sampling. The regression results show that the consumption of material goods over a range of prices is negatively related with subjective well-being, while the coefficients on material goods, if purchased not because others bought it, however, are mostly positive. In case of experiential goods, the coefficient is positive at a price range of THB 1,000 to THB 5,000 only, but turns negative at higher prices, irrespective of the purchase motive. In line with the existing literature, experiential goods are less prone to social comparison than material goods. Sub-sample analyses by age groups and gender confirm these results.

Keywords: Consumption, Material Goods, Experiential Goods, Social Comparison, Subjective Well-being

1. Introduction

In recent years, a large literature on the economics of happiness has emerged. Standard measures of happiness aim at capturing people's self-reported thoughts, using single-item and multi-item happiness questions. The terms "happiness" and "subjective well-being" (SWB) are often used interchangeably (Deleire and Kalil 2010; Diener and Seligman 2002). In addition, self-reported mental health is used as a proxy for SWB in some studies (Yiengprugsawan, Somboonsook, Seubsman, and Sleigh 2012) as mental health and SWB are closely related in terms of their hedonic and eudaimonic well-being (Keyes 2006). SWB is defined as the ability to solve problems in life and the capability to improve oneself to have a good quality of life (Kahneman and Deaton 2010). This includes having a good mind set, given today's social and environmental changes (Kahneman and Deaton 2010; Mongkol et al., 2009; Sachayansrisakul 2009). In the field of happiness economics, one strand of the literature explores the relationship between SWB and its determinants from all aspects of life such as income, financial matters and employment. One of the key findings in the literature on income and happiness is the Easterlin Paradox (Easterlin 1974) of real income growth in Western countries over fifty years. Easterlin argued that individuals with higher income tend to be happier, but that this does not hold at the aggregate level because of social comparison. Closely related to income is consumption, which is often considered to be more closely related to an individual's well-being and SWB (Deleire and Kalil 2010; Meyer and Sullivan 2003), since income is one of the factors that enables consumption. Secondly, the consumption of goods and services is a vital component of economic well-being and a primary indicator of living standards. Diener and Seligman (2002) suggested that not only do total consumption expenditures matter, but also how individuals spend their income. Since consumption can be divided into meaningful consumption categories, the relationship between types of consumption and happiness can be examined. Meyer and Sullivan (2003) stated that the well-being of an individual can be measured directly, by expenditures on essential consumption categories such as food and housing to see if basic needs are met and how individuals allocate their income across consumption categories. Deleire and Kalil (2010) related consumption expenditures on various forms of consumption

to individual SWB. According to Aldridge (2003), consumption of goods and services led to greater SWB only when consumers were satisfied with those goods and services. Other studies have shown that the consumption of experiential goods makes people happier than the consumption of material goods (Carter and Gilovich 2014; Dunn, Gilbert, and Wilson 2011; Howell and Hill 2009; Van Boven and Gilovich 2003). However, these studies do not consider social comparison as a purchase motive. The objective of this paper, thus, is to examine the relationship between consumption of material and experiential goods and SWB, by taking into account if the purchase was made for social comparison or not.

This paper is structured as follows. First, the literature on the relationship between material goods, experiential goods and social comparison and SWB is reviewed, followed by the methodology, regression results, conclusion and limitations of the study.

1.1 Subjective Well-Being and Material goods

"Material goods" are objects that are tangible and physically retained in the possession of the owner (Van Boven 2005). They might be carried from one location to another, 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 (Hudders and Pandelaere 2012; Aldridge 2003). The consumption of material goods may function as a consumption of sign to add value to oneself (Perez-Truglia 2013; Baudrillard 1993). Consumption of sign is a term to express an investment in material objects to satisfy the need for difference. Fashionable clothing, jewelry, stereos, and fancy cars are examples of material goods (Nicolao, Irwin and Goodman 2009). Increases in material consumption might not increase the SWB of those who consume though (Linssen, van Kempen, and Kraaykamp 2011). Kasser (2002) emphasized that consumption does not seem to bring an individual more happiness or bring more fulfilment once individuals have reached a sufficient level of consumption of essentials, including food, clothing, housing and transportation. Scitovsky (1992) called some material goods comfort goods such as newer and fancier-looking sofas, nicer cars, and bigger houses to increase comfort. The gain from comfort,

however, was found to be temporary and fade away with time. As individuals adapt through time they continuously need new comforts. Hudders and Pandelaere (2012) used a structural model to investigate the relationship between luxury consumption, materialism and cognitive and affective subjective well-being. They found that luxury consumption affects materialistic consumers more than less materialistic consumers. The effect of luxury consumption, however, did not last long. Once individuals possessed the luxury goods, they had to persistently manage, maintain, upgrade, replace, and insure them. In addition, desire and aspiration of having and consuming more material goods drives individuals to work harder and harder. As a result, materialism may generate stress (Kasser 2002).

1.2 Subjective Well-Being and Experiential goods

The term "experiential goods" refers to objects that are not tangible (Van Boven 2005). Examples are an individual's purchases to acquire a life experience, defined as an event or series of events with a finite time span that the individual encounters, for example, movies, amusement parks, and restaurant dinners (Van Boven 2005; Nicolao, Irwin and Goodman 2009). In addition, Scitovsky (1992) considers the consumption of experiential goods creative consumption. He also refers to experiential goods as pleasure goods, and includes events such as seeing beautiful scenery, meeting good friends, listening to music, watching a movie. Scitovsky (1992) argues that a person should spend money on experiential goods rather than material goods because experiential goods are less prone to adaptation though time, and can continually fascinate and provide satisfaction (Scitovsky 1992). Zimmermann (2014), Deleire and Kalil (2010), and Van Boven (2005) found that the consumption of experiential goods was the only one component of consumption which had a positive relationship with happiness. Their studies also suggest that the relationship between happiness and the consumption of durables, 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 following three reasons. First, experiences are more open to positive reinterpretation. Second, experiences are less likely to be subject to disadvantageous comparisons. The final reason is that experiences are more

likely to help develop social relationships, which in turn are important for SWB (DeLeire and Kalil 2010). According to many studies, it can be concluded that purchases of experiential goods are associated with higher levels of SWB than material goods (Carter and Gilovich 2014; Dunn, Gilbert, and Wilson 2011; Howell and Hill 2009; Van Boven and Gilovich 2003).

1.3 Subjective Well-Being and Social Comparison

There is another main reason explaining why consumption may not increase happiness, namely social comparison. Individuals tend to be concerned with their position relative to others in the society and overlook the role that social comparisons play with respect to SWB. An individual usually compares himself/herself with others, a reference group, driving him/her to create desires or needs to have more and consume more. One of the obvious examples is that an individual purchases material goods as symbol of worth, in order to improve his/her status. Another good example here is the purchase of luxury brand name watches that others may admire, or contemporary clothes and bags that convey characteristics of attractiveness. Duesenberry (1949) called this phenomenon the "Keeping Up with the Joneses" (KUJ) effect. According to KUJ an individual consumes by considering inter-personal influences. Because an individual takes the consumption of others into account, he/she strives to match others in terms of spending and social standing (Oshio, Nozaki, and Kobayashi 2011; Ball and Chernova 2008; Luttmer 2005; Ferrer-i-Carbonell 2005; Frank 1985; Gali 1994; Duesenberry 1949). Relative consumption leads to negative consumption externalities (Scotchmer 2005; Frank, 1985; 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 externality imposed on others. Where relative consumption matters, an increase of an individual's consumption may not have a positive impact on SWB. In the presence of consumption externalities, aggregate consumption increases do not increase individual SWB. This is because an individual's consumption affects another individual's SWB. In addition, aspirations might be shaped by the spending patterns of those around them (Stutzer 2004).

2. Methodology

2.1 Data Collection

This study uses cross-sectional data from a survey in Bangkok. The survey was carried out during February and March 2015 and used a self-administered questionnaire. The questionnaire has four parts, which are (1) socio-demographic and socio-economic characteristics, (2) SWB for which two alternative proxies are used, (i) World Values Survey single-item question and (ii) a short format Thai Mental Health Indicators with 15 questions (TMHI-15), (3) consumption, and (4) use of internet and online social networking. The self-administered questionnaire was approved by the Ethics Review Committee for Research Involving Human Research Subjects from Health Science Group on December 22, 2014. This paper focuses only on the first three parts and uses the TMHI-15[1] as a proxy for SWB. To complete the questionnaire, respondents took approximately 20 to 30 minutes. Blood pressure measurements were taken as proxies for health status. Therefore, the questionnaire also contains questions about exercise and the use of nicotine, alcohol, or caffeine within 30 minutes prior to the test. The target population was defined as Thai individuals who are 20 to 59 years old and have physically resided in Bangkok for at least six consecutive months or who have a house paper registration in Bangkok. Using Yamane's simplified formula, the sample size was calculated as 400 individuals (Yamane 1967). To buffer for non-responses (Yamane 1967), 500 samples were collected because the pilot survey results revealed a low response rate. To deal with the problem of incomplete and inconsistent survey responses, questionnaires were added until a total of 500 questionnaires were completed. The actual number of questionnaires collected was 619, but 119 questionnaires were immediately discarded as they were incomplete. The sampling design was developed with the assistance of the National Statistical Office (NSO) of Thailand. The NSO divides Bangkok into district, sub-district, and enumeration areas (EAs). At

[1] The World Values Survey question uses an ordinal measurement scale, which can be analyzed using ordered logit or probit regressions, provided the assumption of proportional odds holds. Brant test results, however, showed that the assumption was violated. As a result, the World Values Survey question is not used as an alternative proxy of SWB in this study.

the first stage, 25 EAs were selected by systematic sampling with probability proportional to size. At the second stage, 20 households in each EA were selected systematically from a household listing which was conducted in February 2015. At the final stage, one household member was selected according to the inclusion criteria of the study.

2.2 Data Analysis

This study uses the Thai Mental Health Indicators (TMHI-15) as proxy for SWB. The TMHI-15 employs a summated rating scale, with raw scores ranging from 15 to 60. Positive items are scored from 1 (not at all) to 4 (the most) whereas negative items are scored reversely. 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). The reliability of the TMHI-15 scale was satisfactory (Prapaipanich (2015) reported a Cronbach's alpha of 0.83). In OLS regressions, the summated scores are used to create the dependent variable, while the TMHI-15 scores were recoded into a binary variable for the logistic regressions.

Respondents were asked to consider material goods and experiential goods they purchased over the past 12 months to avoid seasonal purchases such as for birthdays and New Year, and to reduce the recall bias problem. Purchases of material and experiential goods are separated into three sub-categories by their prices, which are THB 1,000 to 5,000, THB 5,001 to 10,000, and exceeding THB 10,000. In addition, respondents were asked if the purchase was made because others had made it or not. Social comparison, which was elicited for each type of consumption at each price level, might be associated differently with SWB. By comparing themselves with others, individuals may decrease their SWB (Oshio, Nozaki, and Kobayashi 2011; Ball and Chernova 2008; Luttmer 2005; Frank 1985; Gali 1994).

Control variables include age, gender, education, health, personality, income, and employment status. The relationship between age and SWB has been confirmed by many studies. Frey and Stutzer (2002) and Easterlin (2006), for example, find that age has a U-shaped relationship with SWB. 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 and Seligman 2002). However, the results from the literature are ambiguous. Some studies suggest that being male has a positive and significant relationship with SWB while others conclude that it has negative relationship. Many studies refer to education as one of the main determinants of SWB (Frey and Stutzer 2002; Blanchflower and Oswald 2004b; Clark 2003a; Stutzer 2004). Education is typically measured by number of years spent in formal education. Health is another important determinant of SWB, which is either elicited through self-reports (Di Tella, Haisken-De New, and MacCulloch 2010; Ferrer-i-Carbonell and Gowdy 2007) or like in this study blood pressure readings (Brook 2002; Grundy and Sloggett 2003). High blood pressure is used as a representative of poor health because it creates nervousness, difficulty to sleep and also may lead to serious diseases, including stroke, heart disease and kidney failure (Brook 2002; Grundy and Sloggett 2003). Duckworth, Weir, Tsukayama, and Kwok (2012) reveal that agreeableness and openness are negatively related with life satisfaction. Given the Asian preference for non-confrontation and conformity, agreeableness is included in this study as proxy for personality analogous Herberholz and Prapaipanich (2016). There is a strong and positive relationship between relative income and SWB because of the effects of social comparison, which is confirmed by many studies (Luttmer 2005; Ferrer-i-Carbonell 2005; Ball and Chernova 2008; Oshio, Nozaki, and Kobayashi 2011), and dummy variables are used if the individual is in the high income group or in the low income group. Research has consistently shown that unemployment has a strong negative effect on SWB (Di Tella, MacCulloch, and Oswald 2001; Frey and Stutzer 2002 2007; Stutzer 2004; Winkelmann 2012).

A summary of variables included in this study is presented in Table 1. Sample weights were constructed and used to account for unequal probabilities of selection.

Table 1. Variables included in the study

Dependent variables	Description
TMHI-15	Summated score, the higher the summated score the better mental health
TMHI-15 binary	1 = better than average mental health (TMHI 15 score > 50) and 0 = average and below average mental health
Independent variables	**Description**
Age	1 = aged 35 to 54 years, 0 =otherwise
Male	1 = male, 0 = female
Married	1 = married, 0 = otherwise
Education	Years of formal education the respondent received (standardized)
Health	1 = high blood pressure, 0 = low or normal blood pressure
Personality	1 = self-reported personality trait: agreeableness, 0 = other self-reported personality traits
LowIncome	1 = average monthly own income is less than THB 15,000, 0 = otherwise
HighIncome	1 = average monthly own income exceeds THB 60,000, 0 = otherwise
Fulltimeemployment	1 = full-time employment, 0 = otherwise
Material goods purchased	
with a price of THB 1,000 to 5,000	1 = respondent purchased material goods with a price of THB 1,000 to 5,000, 0 = otherwise
with a price of THB 5,001 to 10,000	1 = respondent purchased material goods with a price of THB 5,001 to 10,000, 0 = otherwise
with a price exceeding THB 10,000	1 = respondent purchased material goods with a price exceeding THB 10,000, 0 = otherwise
Experiential goods purchased	
with a price of THB 1,000 to 5,000	1 = respondent purchased experiential goods with a price of THB 1,000 to 5,000, 0 = otherwise
with a price of THB 5,001 to 10,000	1 = respondent purchased experiential goods with a price of THB 5,001 to 10,000, 0 = otherwise
with a price exceeding THB 10,000	1 = respondent purchased experiential goods with a price exceeding THB 10,000, 0 = otherwise
Material goods purchased (but not because others bought it)	
with a price of THB 1,000 to 5,000	1 = respondent purchased material goods with a price of THB 1,000 to 5,000 not because others have it, 0 = otherwise
with a price of THB 5,001 to 10,000	1 = respondent purchased material goods with a price of THB 5,001 to 10,000 not because others have it, 0 = otherwise
with a price exceeding THB 10,000	1 = respondent purchased material goods with a price exceeding THB 10,000 not because others have it, 0 = otherwise
Experiential goods purchased (but not because others bought it)	
with a price of THB 1,000 to 5,000	1 = respondent purchased experiential goods with a price of THB 1,000 to 5,000 not because others have it, 0 = otherwise
with a price of THB 5,001 to 10,000	1 = respondent purchased experiential goods with purchase a price of THB 5,001 to 10,000 not because others have it, 0 = otherwise
with a price exceeding THB 10,000	1 = respondent purchased experiential goods withpurchase a price exceeding THB 10,000 not because others have it, 0 = otherwise

3. Regression Analysis Results

Summary statistics for the sample respondents are shown in Table 2. A total of 500 questionnaires were collected in February and March 2015. All questionnaires could eventually be used for the analysis because the responses were complete and consistent. 43 percent of respondents had better than average mental health, 46 percent average mental health and 11 percent below average mental health, indicating that sample respondents had slightly better mental health compared with 2014 mental health data published by the National Statistical Office of Thailand (2015), according to which 11 percent of people in the Bangkok Metropolis had below average mental health, 53 percent average mental health and 36 percent above average mental health.

Table 2. Summary statistics

	Observations	Mean / Proportion	Min	Max
TMHI_15	500	49.30	38	60
TMHI_15 binary	500	0.43	0	1
Age	500	0.55	0	1
Male	500	0.46	0	1
Education (unstandardized, years)	500	15.78	4	27
Health	500	0.14	0	1
Personality	500	0.49	0	1
LowIncome	500	0.18	0	1
HighIncome	500	0.12	0	1
Fulltimeemployment	500	0.63	0	1
Material goods purchased				
with a price of THB 1,000 to 5,000	500	0.85	0	1
with a price of THB 5,001 to 10,000	500	0.73	0	1
with a price exceeding THB 10,000	500	0.77	0	1
Experiential goods purchased				
with a price of THB 1,000 to 5,000	500	0.39	0	1
with a price of THB 5,001 to 10,000	500	0.35	0	1
with a price exceeding THB 10,000	500	0.42	0	1
Material goods purchased (but not because others bought it)				
with a price of THB 1,000 to 5,000	500	0.15	0	1
with a price of THB 5,001 to 10,000	500	0.10	0	1
with a price exceeding THB 10,000	500	0.19	0	1
Experiential goods purchased (but not because others bought it)				
with a price of THB 1,000 to 5,000	500	0.30	0	1
with a price of THB 5,001 to 10,000	500	0.26	0	1
with a price exceeding THB 10,000	500	0.39	0	1

85 percent of respondents purchased material goods with a price of THB 1,000 to 5,000 in the 12 months before the survey, 73 percent material goods with a price of THB 5,001 to THB 10,000 and 77 percent with a price exceeding THB 10,000. While most respondents reported having purchased material goods at prices in the three price ranges, this does not hold for experiential goods. Only, 39 percent, 35 percent and 42 percent of respondents, respectively, bought experiential goods at prices in the three given price ranges. Less than 20 percent of respondents stated that they purchased material goods not because others bought these. However, 30 percent (price of THB 1,000 to 5,000), 26 percent (price of THB 5,001 to THB 10,000) and 39 percent (price exceeding THB 10,000) of respondents reported that they purchased

experiential goods, but not because others have it. Comparing between material and experiential goods, it can be noticed that others influence respondents to purchase material goods more than experiential goods. As presented in Table 3, 92.34 percent of those who bought experiential goods with a price exceeding THB 10,000 did not purchase it because others have it. On the other hand, only 24.80 percent of respondents who bought material goods with the same price stated that they did not purchase it because others have it. According to Table 3, it can be concluded that most respondents purchased material goods because others have it, while respondents who bought experiential goods were likely to have made the purchase because of their self-determined reasons. The study of Zhang, Howell, and Caprariello (2013) confirms this observation. The consumption of life experiences should be driven by self-determined reasons not controlled reasons, such as "*to impress others*".

The summary of regression results from estimating three ordinary least squares (OLS) regressions (models 1 to 3) and three logistic regressions (models 4 to 6; results are reported in terms of odds ratios) are shown in Table 4. First, a standard model is estimated, in which mental health is regressed on standard controls only (models 1 and 4). Second, material and experiential goods purchased are included as additional independent variables (models 2 and 5). Third, material and experiential goods purchased but not because others bought it are considered (models 3 and 6).

Table 3. Purchasing motive percentage

	Not because others have it (% of those who bought goods at the stated prices)
Material goods purchased (but not because others bought it)	
with a price of THB 1,000 to 5,000	17.97
with a price of THB 5,001 to 10,000	14.05
with a price exceeding THB 10,000	24.80
Experiential goods purchased (but not because others bought it)	
with a price of THB 1,000 to 5,000	75.63
with a price of THB 5,001 to 10,000	75.29
with a price exceeding THB 10,000	92.34

Standard model

The regression results (Models 1 and 4) show that age has a negative relationship with mental health, but is statistically insignificant. Many literatures found that the relationship between age and SWB is ambiguous, although elderly tend to be happier than young people, which is supported in several studies that found a U-shaped relationship between age and SWB (Blanchflower and Oswald 2000; Frey and Stutzer 2002; and Easterlin 2006). Although a few studies found that females have higher SWB than males (Alesina, Di Tella, and MacCulloch, 2004; Blanchflower and Oswald, 2004), the relationship is still not clear (Diener and Seligman 2002; Frey and Stutzer 2002). In line with Yiengprugsawan, Somboonsook, Seubsman, and Sleigh (2012), whose results showed a lower average TMHI-15 score for females, and the NSO (2015) 2014 data, the results in Table 4 suggest that being male is associated with better mental health although the coefficient is only significant (at the 10 percent level) in the OLS regression. In accordance with the findings in Ferrer-i-Carbonell (2005) and Blanchflower and Oswald (2000), education is positively related with SWB because educated individuals might be superior in handling life's difficulties. The results in Table 4 show that the coefficient is positive, but only statistically significant in the case of the OLS regressions. The OLS and logistic regression results in Table 4 show a negative and statistically significant relationship between high blood pressure and mental health, which is in line with the studies of Ferrer-i-Carbonell and Gowdy (2007), Peiro (2006), and Diener, Emmons, Larsen, and Griffin (1985). Along with the study of Duckworth, Weir, Tsukayama, and Kwok (2012), the regression results further show that the agreeableness personality trait has a strong and negative effect on mental health. Agreeableness reflects how much individuals adjust their behavior to suit others and it therefore has a negative effect on SWB. There is consistent evidence of a strong relationship between relative income and SWB (Luttmer 2005; Ferrer-i-Carbonell 2005; Ball and Chernova 2008; Oshio, Nozaki, and Kobayashi 2011), which is confirmed by the OLS and logistic regression results. Individuals who belong to the highest income group have better mental health. The coefficient of the dummy variable for the lowest income group on the other hand is negative as to be expected, but insignificant. Studies consistently reveal that unemployment has a strong and

negative effect on SWB (Di Tella, MacCulloch, and Oswald 2001; Frey and Stutzer 2002 2007; Stutzer 2004; Winkelmann 2012). While the regression results show that full-time employment has a positive relationship with SWB, the results are not statistically significant.

Table 4. Regression results

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OLS regressions (with robust standard errors)						logistic regressions					
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
Age	-0.44	0.41	-0.40	0.36	-0.50	0.40	0.85	0.18	0.86	0.20	0.83	0.19
Male	0.74 *	0.40	0.73 **	0.35	0.73 *	0.37	1.21	0.24	1.23	0.26	1.22	0.26
Education	0.48 **	0.20	0.44 **	0.18	0.48 ***	0.19	1.15	0.12	1.15	0.13	1.15	0.12
Health	-1.63 ***	0.61	-1.35 **	0.54	-1.65 ***	0.57	0.44 **	0.15	0.43 **	0.16	0.42 **	0.16
Personality	-2.65 ***	0.38	-1.77 ***	0.35	-2.14 ***	0.38	0.26 ***	0.05	0.31 ***	0.07	0.29 ***	0.06
LowIncome	-0.43	0.56	-0.07	0.47	-0.41	0.53	0.80	0.24	0.90	0.29	0.80	0.25
HighIncome	1.87 ***	0.67	1.87 ***	0.58	1.79 ***	0.62	3.23 ***	1.12	3.82 ***	1.31	3.35 ***	1.19
Fulltimeemployment	0.22	0.47	0.46	0.39	0.42	0.44	1.12	0.28	1.20	0.31	1.21	0.31
Material goods purchased												
with a price of THB 1,000 to 5,000			-1.17 ***	0.40					0.72	0.20		
with a price of THB 5,001 to 10,000			-1.89 ***	0.39					0.42 ***	0.10		
with a price exceeding THB 10,000			-1.64 ***	0.38					0.54 **	0.13		
Experiential goods purchased												
with a price of THB 1,000 to 5,000			0.03	0.36					1.17	0.26		
with a price of THB 5,001 to 10,000			-0.94 ***	0.35					0.69 *	0.15		
with a price exceeding THB 10,000			-3.55 ***	0.37					0.27 ***	0.06		
Material goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					1.24 **	0.54					1.59	0.48
with a price of THB 5,001 to 10,000					0.11	0.63					0.88	0.29
with a price exceeding THB 10,000					0.80 *	0.47					1.50	0.38
Experiential goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					1.04 ***	0.39					1.57 **	0.34
with a price of THB 5,001 to 10,000					-0.43	0.40					0.83	0.19
with a price exceeding THB 10,000					-2.59 ***	0.40					0.38 ***	0.08
R2 / Pseudo R2	0.13		0.36		0.24		0.10		0.19		0.15	
Obs.	500		500		500		500		500		500	

Constant term not reported.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Material and experiential goods consumption

The results from estimating models 2 and 5, in which dummy variables are added to capture if respondents purchased material and experiential goods at the stated prices, are also shown in Table 4. Purchasing material and experiential goods at every price level (except in the case of experiential goods purchased with a price of THB 1,000 to 5,000) is negatively correlated with SWB, which is contrary to the literature (Guevarra and Howell 2015; Carter and Gilovich 2014; Dunn, Gilbert, and Wilson 2011; Howell and Hill 2009; Van Boven and Gilovich 2003). Interestingly, the coefficient on the dummy variable for experiential goods purchased at a price of THB 1,000 to THB 5,000 is positive, but statistically insignificant. Purchases of experiential

goods at higher prices, on the other hand, are negatively associated with mental health in a statistically significant way. In addition, this negative effect is stronger the higher the price range, which might suggest that people have to forego consumption of some necessities to be able to purchase expensive experiential goods as discussed in Linssen, van Kempen, and Kraaykamp (2011). Another possible reason for these negative results is that respondents might have had a bad experience or a negative purchases outcome from expensive experiential goods purchased and that would last long (Nicolao, Irwin and Goodman 2009). In an experimental study, Nicolao, Irwin, and Goodman (2009) suggest that the superiority of life experiences only holds for positive purchases as adaptation to life experiences tends to be slower. Besides, the negative correlation between purchases of material and experiential goods and mental health might be due to social comparison (Luttmer 2005; Ferrer-i-Carbonell 2005; Ball and Chernova 2008; Oshio, Nozaki, and Kobayashi 2011), especially given the importance of social comparison in Asian societies (Oshio, Nozaki, and Kobayashi 2011). In models 3 and 6, the dummy variables for material and experiential goods purchased are replaced by dummy variables for material and experiential goods purchased at the stated prices, but not because others bought these, to extract if the purchases were made for self-determined reasons rather than social comparison. With the purchase motive accounted for, the coefficients of material goods purchased (but not because others bought it) are mostly positive and in the OLS regressions statistically significant for the price ranges THB 1,000 to THB 5,000 and exceeding THB 10,000. The coefficient of experiential purchases made at a price between THB 1,000 to THB 5,000, but not because others bought it, is statistically significant and positive. However, the regression results consistently indicate a strong and negative relationship between experiential goods purchased (but not because others bought it) with a price exceeding THB 10,000 and SWB.

4. Sub-sample analyses by age groups and gender

Sub-sample analyses were subsequently conducted as robustness check to see if differences within age and gender sub-groups exist. The results for the five sub-groups, namely age groups 20-34 years (i.e. 166 observations),

35-54 years (i.e. 276 observations), and 55-59 years (i.e. 58 observations) and gender groups female (i.e. 270 observations) and male (i.e. 230 observations), are shown in Tables 5 to 9.

Table 5. Regression results of sub-sample by age group: 20-34 years

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OLS regressions (with robust standard errors)								Logistic regressions			
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.
Age	0.184	0.112	0.109	0.0817	0.167	0.104	1.079	0.0673	1.084	0.0769	1.098	0.0758
Male	0.63	0.71	0.543	0.554	0.322	0.744	1.061	0.376	0.753	0.328	1.03	0.456
Education	0.234	0.365	0.166	0.263	0.0409	0.349	1.046	0.214	1.055	0.213	0.986	0.223
Health	-0.593	1.631	0.85	1.075	-0.927	1.651	0.635	0.637	2.505	3.558	0.453	0.449
Personality	-2.548***	0.686	-1.574***	0.577	-2.176***	0.701	0.225***	0.0833	0.178***	0.0882	0.187***	0.0818
Low Income	-0.124	1.071	-0.71	0.843	-0.758	1.071	1.162	0.672	1.198	0.724	1.004	0.662
High Income	-	-	-	-	-	-	-	-	-	-	-	-
Full-time Employment	-0.39	0.904	0.179	0.68	-0.317	0.821	0.962	0.441	1.327	0.736	1.149	0.603
Material goods purchased												
with a price of THB 1,000 to 5,000			-2.141***	0.729					0.863	0.574		
with a price of THB 5,001 to 10,000			-1.752***	0.519					0.61	0.28		
with a price exceeding THB 10,000			-0.536	0.552					0.94	0.376		
Experiential goods purchased												
with a price of THB 1,000 to 5,000			-0.415	0.515					1.448	0.605		
with a price of THB 5,001 to 10,000			-0.325	0.549					0.519	0.235		
with a price exceeding THB 10,000			-0.961	0.597					0.822	0.39		
Material goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					0.987	1.151					2.264	1.4
with a price of THB 5,001 to 10,000					-0.199	1.67					1.657	1.621
with a price exceeding THB 10,000					2.184***	0.735					8.332**	8.226
Experiential goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					0.592	0.748					1.841	0.858
with a price of THB 5,001 to 10,000					0.382	0.79					0.901	0.427
with a price exceeding THB 10,000					-0.474	0.785					0.949	0.462
R2/Pseudo R2	0.103		0.533		0.263		0.087		0.13		0.145	
Obs.	166		166		166		166		132		145	

Constant term not reported.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The coefficients of the variables that capture material purchases made in various price ranges are negatively associated with SWB in a statistically significant way in all age sub-group regressions (except in the case of 20-34 year olds for material goods purchased with a price exceeding THB 10,000 in the OLS regression and all logistic regressions, as well as in the case of 55-59 year olds for material goods purchased with a price of THB 1,000 to 5,000 in the OLS and logistic regressions), which is broadly in line with the full sample results and might be due to social comparison as discussed in section 3 (Luttmer 2005; Ferrer-i-Carbonell 2005; Ball and Chernova 2008; Oshio, Nozaki, and Kobayashi 2011). Comparing how well off one is relative to others can lead people to obtain more material possessions

as material goods increasingly become outdated very quickly, which might entice people to upgrade and purchase more and more material goods with negative implications for SWB.

Table 6. Regression results of sub-sample by age group: 35-54 years

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OLS regressions (with robust standard errors)						Logistic regressions					
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.
Age	-0.0197	0.0556	-0.0401	0.0418	-0.0212	0.0439	0.986	0.0259	0.975	0.0303	0.98	0.0289
Male	0.356	0.547	0.867**	0.403	0.456	0.431	1.312	0.364	2.227**	0.789	1.61	0.531
Education	0.477*	0.273	0.468**	0.199	0.600***	0.203	1.15	0.167	1.206	0.19	1.26	0.194
Health	-0.939	0.849	-0.426	0.584	-0.862	0.67	0.843	0.367	0.973	0.572	0.847	0.445
Personality	-2.819***	0.528	-1.706***	0.408	-1.876***	0.441	0.265***	0.0732	0.271***	0.0898	0.270***	0.0838
Low Income	0.928	0.915	-0.237	0.777	-0.134	0.929	0.408	0.294	0.286*	0.216	0.273*	0.204
High Income	2.551***	0.908	2.475***	0.622	2.097***	0.671	4.453***	2.129	9.436***	5.214	6.772***	3.846
Full-time Employment	0.947	0.678	1.215**	0.483	1.342**	0.542	1.496	0.543	1.535	0.631	1.632	0.629
Material goods purchased												
with a price of THB 1,000 to 5,000			-1.446***	0.517					0.443*	0.186		
with a price of THB 5,001 to 10,000			-1.546***	0.528					0.339***	0.134		
with a price exceeding THB 10,000			-1.765***	0.428					0.355***	0.134		
Experiential goods purchased												
with a price of THB 1,000 to 5,000			0.177	0.429					1.37	0.491		
with a price of THB 5,001 to 10,000			-0.855**	0.408					0.855	0.302		
with a price exceeding THB 10,000			-5.995***	0.492					0.0268***	0.0153		
Material goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					1.076*	0.62					1.601	0.713
with a price of THB 5,001 to 10,000					0.145	0.607					0.805	0.351
with a price exceeding THB 10,000					-0.496	0.72					0.925	0.372
Experiential goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					0.867*	0.469					1.727*	0.544
with a price of THB 5,001 to 10,000					-0.977**	0.469					0.703	0.251
with a price exceeding THB 10,000					-5.938***	0.547					0.0361***	0.0222
R2/ Pseudo R2	0.156		0.537		0.463		0.135		0.357		0.306	
Obs.	276		276		276		276		276		276	

Constant term not reported.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The sub-sample analyses reveal that the coefficients of the experiential goods purchased dummies mostly have the expected signs and, in addition, are statistically significant in the case of age group 35-54 years for purchases with a price of THB 5,001 to THB 10,000 and above THB 10,000, but are largely insignificant in the case of other age groups. This might be due to the responsibilities middle-aged people have to deal with, such as looking after children and parents, and the financial resources these require (Almeida and Horn 2014).

Table 7. Regression results of sub-sample by age group: 55-59 years

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OLS regressions (with robust standard errors)								Logistic regressions			
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.
Age	0.0103	0.379	-0.419	0.268	-0.168	0.309	1.164	0.282	0.875	0.203	1.138	0.345
Male	2.305**	0.953	1.466	0.923	0.97	1.116	0.622	0.437	0.283	0.3	0.2	0.211
Education	0.757	0.669	1.184**	0.506	0.964	0.813	0.917	0.335	1.061	0.595	0.994	0.572
Health	-3.006**	1.294	-2.491***	0.881	-1.499	1.125	0.314	0.321	0.186*	0.183	0.64	0.88
Personality	-2.689**	1.059	-1.794*	0.89	-2.477**	0.971	0.291*	0.208	0.204	0.334	0.182*	0.166
Low Income	-0.165	1.228	-3.222*	1.601	-2.751	1.714	-	-	-	-	-	-
High Income	1.635	1.353	1.539	0.993	0.734	1.213	5.782*	6.159	13.31**	13.38	4.461	5.57
Full-time Employment	-0.678	1.353	0.818	0.882	0.18	1.399	0.754	0.686	1.353	1.271	1.306	1.376
Material goods purchased												
with a price of THB 1,000 to 5,000			0.395	1.092					1.565	2.975		
with a price of THB 5,001 to 10,000			-3.236***	0.991					0.0384***	0.0428		
with a price exceeding THB 10,000			-1.850**	0.83					0.123***	0.0909		
Experiential goods purchased												
with a price of THB 1,000 to 5,000			0.261	0.888					0.161	0.229		
with a price of THB 5,001 to 10,000			-1.647**	0.772					0.319	0.426		
with a price exceeding THB 10,000			-0.213	0.808					0.698	0.824		
Material goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					-0.861	1.403					0.82	1.01
with a price of THB 5,001 to 10,000					-1.188	1.431					0.217	0.263
with a price exceeding THB 10,000					3.154**	1.41					5.723*	5.724
Experiential goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					-0.0566	0.996					0.328	0.315
with a price of THB 5,001 to 10,000					-0.945	0.985					0.231	0.22
with a price exceeding THB 10,000					-0.818	1.008					0.817	0.796
R2/ Pseudo R2	0.304		0.719		0.621		0.138		0.473		0.267	
Obs.	58		58		58		57		49		49	

Constant term not reported.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Material goods purchased with a price exceeding THB 10,000 but not because of others is positively related with SWB in the 20-34 year old and 55-59 year old sub-sample regressions as expected, but insignificant in most other regressions, as well as in case of material goods purchased in other price ranges. These results thus confirm that social comparison matters for all age groups.

The effects of the control variables are found to vary across the age sub-groups, especially with respect to health, which is found more important for those aged 55 to 59 years, and high income, which matters most for those aged 35 to 54 years.

Table 8. Regression results of sub-sample by gender: Male

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OLS regressions (with robust standard errors)								Logistic regressions			
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.
Age	0.0154	0.0392	-0.00392	0.0261	0.0063	0.0301	0.979	0.0186	0.965	0.0234	0.969	0.0212
Education	0.612**	0.271	0.626***	0.18	0.702***	0.179	1.165	0.162	1.157	0.169	1.240*	0.161
Health	-1.218	0.875	-1.195*	0.676	-1.402**	0.702	0.475*	0.21	0.251**	0.148	0.336**	0.169
Personality	-2.035***	0.577	-1.307***	0.446	-1.941***	0.507	0.442***	0.125	0.462**	0.157	0.362***	0.115
Low Income	0.693	0.992	0.146	0.767	0.188	0.913	0.854	0.409	0.62	0.368	0.601	0.317
High Income	1.957**	0.947	2.119***	0.728	1.999**	0.77	3.693***	1.849	9.294***	5.691	5.339***	3.024
Full-time Employment	-0.0743	0.737	0.737	0.516	0.422	0.575	1.43	0.522	2.399*	1.143	1.939*	0.774
Material goods purchased												
with a price of THB 1,000 to 5,000			-0.957*	0.561					0.404**	0.186		
with a price of THB 5,001 to 10,000			-1.541***	0.466					0.308***	0.125		
with a price exceeding THB 10,000			-0.910*	0.471					0.502*	0.187		
Experiential goods purchased												
with a price of THB 1,000 to 5,000			0.0515	0.45					1.409	0.507		
with a price of THB 5,001 to 10,000			-1.033**	0.463					0.59	0.209		
with a price exceeding THB 10,000			-6.410***	0.543					0.0282***	0.0167		
Material goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					1.695**	0.777					2.581*	1.44
with a price of THB 5,001 to 10,000					0.64	0.814					0.644	0.364
with a price exceeding THB 10,000					0.266	0.922					1.223	0.59
Experiential goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					0.416	0.556					1.47	0.482
with a price of THB 5,001 to 10,000					-0.387	0.565					0.765	0.282
with a price exceeding THB 10,000					-5.767***	0.592					0.0457***	0.0311
R2/ Pseudo R2	0.105		0.503		0.378		0.067		0.298		0.214	
Obs.	230		230		230		230		230		230	

Constant term not reported.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The results of experiential goods purchased (but not because others bought it) from the sub-sample analyses of those aged 35-54 are in accordance with the full sample results. Additionally, in the case of age group 35-54 years, the coefficients of the price range THB 5,001 to THB 10,000 are not only negative but also statistically significant in the OLS regression.

Table 9. Regression results of sub-sample by gender: Female

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	OLS regressions (with robust standard errors)						Logistic regressions					
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.	Odds ratio	Std. Err.
Age	-0.0447	0.0294	-0.106***	0.0223	-0.0724***	0.0259	0.951***	0.0176	0.927***	0.0183	0.937***	0.0185
Education	0.224	0.304	0.313	0.235	0.344	0.296	1.054	0.173	1.064	0.184	1.117	0.208
Health	-1.700*	0.874	-0.431	0.572	-1.317*	0.71	0.679	0.372	1.136	0.659	0.768	0.494
Personality	-3.167***	0.525	-1.824***	0.437	-2.149***	0.492	0.142***	0.0455	0.154***	0.058	0.161***	0.0584
Low Income	-1.479*	0.782	-1.931***	0.6	-2.001***	0.724	0.326**	0.168	0.256**	0.137	0.248***	0.133
High Income	2.130**	0.99	1.839***	0.672	1.808**	0.828	6.268***	3.6	7.985***	5.124	6.968***	4.799
Full-time Employment	0.306	0.612	0.839*	0.447	0.865	0.538	1.179	0.408	1.311	0.484	1.441	0.519
Material goods purchased												
with a price of THB 1,000 to 5,000			-1.664***	0.542					0.746	0.378		
with a price of THB 5,001 to 10,000			-1.632***	0.5					0.523	0.237		
with a price exceeding THB 10,000			-1.377***	0.494					0.611	0.21		
Experiential goods purchased												
with a price of THB 1,000 to 5,000			0.0395	0.421					0.931	0.337		
with a price of THB 5,001 to 10,000			-0.49	0.43					0.663	0.243		
with a price exceeding THB 10,000			-6.026***	0.539					0.0149***	0.0129		
Material goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					0.14	0.685					1.126	0.48
with a price of THB 5,001 to 10,000					-0.386	0.694					1.237	0.583
with a price exceeding THB 10,000					0.585	0.743					1.622	0.791
Experiential goods purchased (but not because others bought it)												
with a price of THB 1,000 to 5,000					1.043**	0.478					1.476	0.522
with a price of THB 5,001 to 10,000					-0.63	0.506					0.741	0.263
with a price exceeding THB 10,000					-5.621***	0.616					0.0212***	0.0197
R2/Pseudo R2	0.158		0.547		0.388		0.174		0.356		0.295	
Obs.	270		270		270		270		270		270	

Constant term not reported.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The sub-sample analyses by gender confirm the main results of the full-sample analyses with respect to material and experiential purchases, but show some interesting differences in terms of the control variables. The results reveal negative and statistically significant coefficients of the age and low income variables in the female sub-group. However, there is some instability across the sub-sample regressions, which is most likely due to the small size of the sub-groups and high income was dropped in the case of 20-34 year olds might be because of insufficient observations.

5. Conclusion

Empirical evidence of the consumption of material and experiential goods is limited to only some countries. It has been shown that the consumption of life experiences makes people have higher SWB than that of material goods. However, these studies typically do not look at social comparison motives related with these goods. The objective of this paper, thus, is to examine

the relationship between consumption of material and experiential goods by taking into account the important role social comparison plays for SWB. The study uses cross-sectional data from 500 questionnaires, which were collected in February and March 2015 by using a multistage cluster sampling design. The NSO identified 25 enumeration areas (EAs), employing probability proportional to size and systematic sampling. Households were then sampled systematically within each EA. The data analysis was done based on descriptive statistics, estimations of OLS, and logistic regressions. The regression results show that the consumption of material goods over the range of prices is negatively related with subjective well-being, while the coefficients on material goods, if purchased not because others bought these, however, are mostly positive. In case of experiential goods, the coefficient is positive at a price range of THB 1,000 to THB 5,000 only, but turns negative at higher prices, irrespective of the purchase motive. In line with the existing literature (Carter and Gilovich 2014; Dunn, Gilbert, and Wilson 2011; Howell and Hill 2009; Van Boven and Gilovich 2003), experiential goods are less prone to social comparison than material goods. Among the control variables, the OLS and the logistic regression results consistently show that high blood pressure and self-reported agreeableness personality trait are negatively associated with mental health, while the relationship between belonging to the highest income group and mental health is positive. The sub-sample analyses by age and gender broadly confirm these findings, but reveal some interesting differences in terms of the control variables. The coefficients of the age and low income variables in the female sub-sample analyses are negative and statistically significant.

The findings in this study support the results in Zhang, Howell, & Caprariello (2013) that consumption should be driven by self-determined reasons. In addition, the consumption of experiential goods at lower prices seems to be preferable to the consumption of experiential goods at higher prices.

Limitations

This study has several limitations. First, as cross-sectional data are used, causal relations cannot be established. Second, a single-item question is

used to capture social comparison instead of a social comparison motive scale. Also, neither were respondents asked to provide information about the number and type of material and experiential good purchased, nor were questions asked about purchase motives other than social comparison. These issues are left for future research.

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