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HAPPINESS AND ECONOMIC CHOICE

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ABSTRAK

Penelitian ini mencoba menjawab pertanyaan ini secara empiris: Apakah kebahagiaan memengaruhi pilihan ekonomi? Penelitian ini menggunakan pengukuran kebahagiaan yang terbarukan dan mengujinya kepada 416 responden. Ukuran kebahagiaan dipenelitian ini menggunakan Oxford Happiness Scale dan diestimasi terhadap pilihan ekonomi. Pengukuran kebahagian ini berkorelasi dengan keyakinan positif tentang kondisi ekonomi masa depan dan dengan uji psikometrik kebahagiaan. Dengan menggunakan orang dewasa Malaysia sebagai sampel, temuan kami menunjukkan bahwa jika seseorang bahagia, mereka akan cenderung membuat keputusan yang baik pada pilihan ekonomi mereka. Dalam hasil yang lebih detail, kami juga mengestimasi efek kebahagiaan pada keputusan investasi, keputusan keuangan, preferensi risiko, dan toleransi risiko. Sebagai uji keandalan, kami juga menggunakan regresi instrumental yang dimana variabel cuaca adalah variabel instrumentalnya. Kesimpulan tetap sama. Ini juga berarti bahwa memiliki pilihan ekonomi yang bijak tidak membuktikan bahwa keputusan bergantung pada pemikiran rasional. Hasil temuan ini sangat penting karena memberikan panduan bagi pembuat kebijakan ketika mereka mengembangkan analisis kebijakan antara lain mengenai kebijakan pajak dan kebijakan pensiun.

Kata kunci: kebahagiaan, perilaku ekonomi, psikologi keuangan

ABSTRACT

This paper attempts to answer an interesting but empirically challenging question: Does happiness affect economic choice? We use a novel measure of happiness of a psychometric test and test it to 416 respondents. The happiness is measured using Oxford Happiness Scale, and it is estimated to the economic choices. This measure of happiness correlates with positive beliefs about future economic conditions and with psychometric tests of happiness. Using Malaysian adults as the sample, our findings indicate that if one is happy, they will tend to make good decision making on their economic choice. In a more detail result, we estimate the happiness effect on investment decision, financial decision, risk preference, and risk tolerance. We also did instrumental regression using weather as the instrument variable for the robustness test. The conclusion remains the same. This means that having a wise economic choice does not prove that he/she is depending on rational thinking. The result of this finding is essential because it provides an important guide for policy makers when they are developing policy analysis, for instant, tax and retirement policy.

Key words: happiness, economic behaviour, psychological finance

INTRODUCTION

Happiness has been recognized as one of the main factors to explain numerous economic phenomena: happiness is important in enabling the willingness to pay (Silva et al., 2019); it can affect investment behavior (Ke and Lu, 2021; Brahmana et al., 2012); it can affect financial decisions (Delis and Mylonidis,

2015; Shefrin, 2008); it can be a crucial component of utility (Blanchflower, 2021). Happiness is also found to be a fundamental driving factor in consumption. For example, Garg (2019) showed that sad people tend to over-consume. Stillman et al. (2012) found that higher levels of happiness correspond with a decreased desire to consume material goods. A link between happiness and savings decisions has also been established in behavioral economics.

To date, there is relatively little direct evidence concerning the role of happiness plays in individual economic choices. Prior studies have mainly focused on the impact of happiness on the national well-being (i.e. Spruk and Kešeljević, 2016), or personal well-being (i.e. Ponchio et al., 2019), or how happiness affects psychological health (i.e. Winkelman, 2012). It was only Guven (2012) who recently explored the role of happiness on savings behavior, though not so far to concern its impact on economic decisions. Puri and Robinson (2007) also investigated the role of hedonic utility, such as optimism, on economic decisions.

There is extensive evidence in psychology that illustrates the power of happiness. For a start, Blanchflower (2021) found a relationship between age and happiness in the U-shape association. There is Guven (2012) stated the crucial role of happiness in decision making. Guven's paper concluded that happier people tend to save more, spend less, or rather analyze carefully for everything they spent. Therefore, happier people normally require a longer period to make decisions and hence have more control over expenditures within the allocated budget. These people also presume they will lead a longer life and they started to plan about their future income and expenses with consideration of uncertainties.

Theoretically, the role of happiness in behavior can be explained by using the Emotion Contagion Theory. This theory states that when people in conversation or any physical contact, these people harmonized themselves with the content where they are dialoguing at. For example, when the individual is in happy mode, he or she will tend to spread happiness to other people wherein a conversation.

There is also Forgas's Affection Infusion Model. This model explains that affection from happiness may change the mood, and it affects the decision model. Forgas (1995) states the negative mood can affect the decision time, decision efficiency, information preference, and information processing. In our case, happiness may affect decision efficiency influencing individuals to consider more irrelevant dimensions of risk.

In economics, this irrational decision making is explained under hedonic utility theory (see Kahneman et al., 1999). This theory explains that the individual tends to follow their intuition rather than rational thinking in decision making. The psychological factors have push individuals to choose an option under emotional-feelings. The hedonic feeling is attained via some accomplishment by calculating utilities, increase chances of reward, and maximize the pleasure over dissepiments. Hedonism is a manner of individual pursuing enjoyment and happiness.

On the other side, it is noteworthy that economic choices can hold several significant implications. Making a wrong or imprudent economic choice may lead to a discounted well-being with even longer-term financial consequences (i.e. Van Rooij et al., 2012; Davidson et al., 2013). This economic choice, wrong or right, might be influenced by the individual's mood during the decision-making process. For instance, emotions can control the cognitive and decision-making parts of the brain, radically changing the preferences, taste of risk, and empathy of an individual. It is easy to identify that if one is feeling happy, they will better focus on daily tasks, their social lifestyle and so forth. Hence, economists are interested to further explore this topic to better predict one's performance that will eventually affect decision-making. In turn, we can better understand and predict the overall individual,

the company performance and the economic choices they make.

Malaysia is a good example of how happiness and wealth may fall into two different categories. Recent Gallup survey about happiness and wealth. According to the table 1, Malaysia is the least happy country compared to countries like Madagascar and Nepal. The table above shows that Malaysia reportedly face few mood changes in their daily life. Less than 40% of the Malaysian population experience happiness daily and this figure is the lowest among those survey countries. Although some Malaysians have accumulated wealth in an impressive manner, this does not necessarily mean they are happy. The result shows that they are not happy at all. Typical Malaysians are stressed about their work, insufficiently rested and easily frustrated. This is mainly owing to their worries about high living expenses such as housing loan and car loan. Many have worries that if they stopped work, they would have inadequate money for their retirement. This example shows an inverse conclusion regarding happiness and economic choice.

Table 1
GDP and Emotionless Survey

Most Emotionless Societies	Average GDP	Emotion
Malaysia	USD 246 Billion	Bad
Lithuania	USD 39 Billion	Bad
Madagascar	USD 9 Billion	Okay
Nepal	USD 15 Billion	Okay

Source: Modification of Gallup Survey

There is other supporting literature showing the reverse effect of happiness (i.e. Kahneman and Krueger, 2006). This means that reverse causality on well-being and economic choices is possible. Kenny (1999) was one of the first scholars to deal with this reverse causation. Using time-series evidence from happiness polls in several countries, his research found that there is no significant relationship between economic growth and happiness. What's more, the findings showed that there was weak support for reverse causation and further weak support for the association between Gini rate and happiness. Huang (2019) suggest that happiness is related to better health and social outcome. Ifcher et al. (2021) investigated whether positivity impacts time preference in an experimental mode. Their findings suggest that compared to neutral affect, mild positive affects significantly reduce time preference over money. This has implications for the effect of happiness on time preference and the role of emotions in economic decision-making in general. Guven (2011) and Carter (2011) also explored the causal effects and human behavior using an experimental approach. Their studies suggest that happier people tend to have different behavior from that of less happy people, but the direction of causality remains unclear. For instance, are people with higher levels of consumption happier, or does happiness lead to greater consumption?

Our research paper aims to explore how happiness empirically relates to important individual economic decision-making. We start by showing the novel measure of happiness, dissimilar from prior studies such Guven (2012). We then show evidence that happiness is related to a wide range of economic decisions. We examine the factors of portfolio choice, savings decisions, risk taking behavior, and conclude with the whole economic choice. In short, this study examines the role of happiness on people's economic choice.In our approach, we replicate the method developed by Puri and Robinson (2007), in which we replace optimism with happiness as the main independent variable. Having said this, we extend the measure-ment of happiness to better empirical context by modifying psychometric inventory of The Oxford Happiness Questionnaire (Hills and Argyle, 2002). This method is a considerable improvement compared to self-developed items or binary items such in Guven (2012).

Psychometric inventory is the most reliable tools to measure human psychology (Hills and Argyle, 2002). This is also the reason why we prefer to conduct a new survey rather than using national survey that have one item question about happiness.

We believe that asking whether a person is happy or not contain a response bias. Psychometric inventory such as Oxford Happiness Questionnaire captures the psychological hedonic of a person (Hills and Argyle, 2002). The items used is reliable as Table 2 shows the Cronbach alpha value is 0.882. The items are also valid as the the loading factor averagely higher than 0.7. However, we do follow Guven's (2012) instrumental approach in happiness by modifying the measurement of happiness using cloud cover for robustness reason. The estimation of cloud cover is called as predicted happiness. We introduce demographic profiles to further demonstrate that socio-demographics may have some effects on economic choices.

This study's contribution is fourfold. First, we add to the literature by extending the understanding of this research area of behavioral economics. We propose that happiness on an individual level may contribute economic choices. Second, we document the effects on an individual basis not the national aggregate. This means that this study confirms prior conclusions on National wealth and happiness; that happy people tend to make better economic choices. Third, this survey employs several methods and approaches that may be useful for further research in other national contexts. Fourth, we introduce the instrumental approach of happiness that may be replicated by other academics interested in similar topics.

LITERATURE REVIEW

Theoretical Argument

This research conceptualizes the happiness-economic choice relationship on two theoretical frameworks, namely, emotion contagion theory and hedonic utility theory. Hatfield et al. (1992, 1994) are the scholars who propose happiness as emotionnal contagion on human behaviour. They affirm that when individual is in happy mode, he or she will tend to spread the happiness to other people where in a conversation. This postulation is become one of research framework in the latter research about how happiness affect the consumer behavior (e.g., Isen, 2001; Mogilner et al., 2012; Haugtvedt et al., 2018).

Meanwhile, Hedonic utility theory argues the mainstream rational utility as proposed by Becker and Murphy (1988). In traditional economics, the decision made by and individual is assumed to be rational, consistence, persistence and stable preference. Individual will not always make a rational decision due to their affection and moods. Therefore, the decision made by an individual is not only about maximizing their utility, but also their hedonism.

Hypothesis Development

This research argues that happiness has positive effect on economic choice. It is developped from the seminal work from Isen (2001) framework, which surmises positive and rational thinking would help in problem solving and decision making. People with positive attitude have tendency to be more controls and more considerate when dealing with problem solving, difficulties and disputes. These people will figure up with some better solutions in obtaining for win-win situation. In short, they have studied that with the positive attitude, optimist people would tend to think rationally and tried to solve their problem with an open-minded. Using Remote Associate Test (RAT), he finds the positive effect of happiness on consumer thinking, decision making and choices. From this study, the behavioral economics literature tends to support that conclusion.

For instance, Quoidbach et al. (2019) reveal that ones' happiness would likely to influence their life choices and decision making. Quoidbach et al. (2019) emphasize more on the happiness impact on social

activites. They find that a depressed individual tends to avoid social activities. There is also Ya'akov et al. (2019), who have proven that individual happiness tends to influence life choices and decision-making. The findings showed that happiness did determine one's life direction including their ultimate goal. Some unhappy or depressed people may find it difficult to integrate or engage in social activities or regular exercise, and some neurotic individuals may have to settle for neurotic partners. In short, individuals may deliberately make choices that give greater weight to desiderata rather than happiness.

Meanwhile, Guven (2012) strongly emphasized that happiness does influence individual consumption and savings habits. This can be detected by comparing the happiness of an individual when they consume and when they save. Essentially, the study looks at how happiness affects a person's spending habits and economic choices. Firstly, Guven (2012) tests levels of happiness by using the data from the DNB Household Survey and also the German Socio-Economic Panel. The findings of this research help explain how individuals allocate their income in consumption and savings, and whether they have an understandding of the relationship between happiness and economic choices. With this understandding of individual economic choice, economists can propose or re-shape policies such as those concerning tax and retirement.

Meanwhile, Hrazdil et al. (2022) exploit happiness-decision making relationship in firm level. They reveal that company executives who exhibit happiness play an important role in carefully examining and selecting strategic choices. By using IBM Watson Tone Analyze, Hrazdil et al. (2022) found that CEO happiness significantly impacts the forecast properties of both managers and analysts. The results proved thatmore likely to issue forecasts, less likely to miss their forecast targets, and exhibit lower optimistic bias in their forecasts.

Another paper examining psychological factors and economic choices was done by Puri and Robinson (2007), stating that optimists (happy people) tend to perform economic decision-making. The main objective of this research was to explore how optimists behave, and how such thoughts and actions affect their economic decisions. In this study, they used OLS regression to test levels of optimism and included a huge sample of individuals. They found that there is a significant difference between optimistic and pessimistic respondents, particularly having dissimilar short-term and long-term views. The results further demonstrated a clear relationship of how optimism affects deliberating on key economic choices. In summary, optimism (happiness) within a person is regarded as beneficial for making careful decisions and exhibiting self-control.

In more recent findings, Brahmana and Brahmana (2016) adopt Positive Moods Scale and test it Indonesia, Malaysia, Thailand, and Vietnam (ASEAN-4) by using a survey mode with 2,257 respondents. An individual with aggressive behaviour tends to have compulsive behaviour in consumption by making fewer savings. The mood of an individual also induces savings behaviour. There is also Welsch (2020) who surmises that a happy person tends to choice a green lifestyle. In sum, the literature theorizes how happiness affect human choice, especially in economic choice. Mogilner et al. (2012) and Shin et al. (2018) make a framework to explain how happiness prompt the human decision, especially in economic decision. Hence, we hypothesize:

H_1: Happiness has positive relationship on economic choice

RESEARCH METHOD

Research Design

This is a survey-based study used to challenge the primary questions about happiness and the effect it has on economic choices. The items listed in our questionnaire are crucial to help us achieve the research objectives. Such items are adopted and or adapted from previous research such as

Oxford Happiness Questionnaire by Hills and Argyle (2002) and Guven (2012).

There are three parts to the items set in the questionnaire. The questionnaire was started by asking respondents for personal details such as age, sex, personal income, labor force status, marital status, health status, and education level. This section also has stamped time to help make the temperature tracing easier. Following this, 29 sets of questions about happiness were asked in Part B. These 29 questions about happiness are adapted from The Oxford Happiness Questionnaire. These questions are mainly asked about how happy and satisfied respondents are with their lives and the people around them. In this part, some of the questions will be asked purposely in reverse form in order to test the reliability and validity of the data. A Six-Likert scale is used as the answering scale, ranging from "strongly disagree" to "strongly agree". This section includes happiness items for predicted happiness. This predicted happiness is a robustness check on this research, using the instrumental approach by Guven (2012). The items are "To what extent do you consider yourself a happy person overall?" The response is recorded as a categorical variable taking the values 1–5 which in order refers to "very unhappy", "unhappy", "neither happy nor unhappy", "happy", and "very happy". (The answer "don't know'" is recorded as missing.)

The questionnaire then ends with four sets of questions that concern internet banking usage, amount of money saved, marginal propensity to consume, as well as risk investment. For "amount of money saved", respondents are presented with seven categories to choose from in the form of a money scale ranging from "below RM500" to "RM1750 and above". For "marginal propensity to consume", respondents are asked to give an answer on a scale from 1 to 5, where 1 means "I like to spend all my money immediately" and 5 means "I want to save as much as possible". Under risk investment, three questions will be asked to answer in a 7-Likert scale, where 1 means "totally disagree" and 7 means "totally agree".

All the questions set by using fixed-alternative questions require less time, and therefore are easier for respondents to answer. Under various types of fixed-alternative questions, frequency-determination questions were used in asked such as "Nowadays, a number of banks offer the possibility to arrange banking affairs through the Internet, without the mediation of a person. Do you use such a facility?" Attitude rating scales such as the 7-Likert scale will also be used in developing questions to allow respondents to rate how strongly they agree or disagree with a particular subject. Some other questions and items such as "How much money have you put aside in the past 12 months?" and "Please indicate what you do with money that is left over after having paid for food, rent, and other necessities." were developed with multiple-choice alternatives.

Data and Sampling

The sample frame is all Malaysian working force that especially in Johor Bahru, Kuala Lumpur, Penang, Kota Kinabalu and Kuching. A total amount of 416 sample sizes was used in studying this cross sectional research. This sample size is large enough to eliminate the random sampling error. Nonprobability sampling method was used given that each member of the sample was randomly chosen and unknown.

While Sekaran and Bougie (2016) establish the minimum sample as 335, we opted to broaden the sample threshold to 416. Of the 600 questionnaires that distributed, it is noteworthy to mention that 437 questionnaires were returned, and 416 were useful. The distribution was conducted in two waves, and our preliminary paired t-test indicates that a non-response bias did not occur owing to this two wave distribution. The survey was conducted by a field officer face-to-face with the respondent.

Data Representation

Unlike prior studies such as Puri and Robinson (2007), and Guven (2012) this research collected the data through the survey. It is noteworthy that Malaysia national survey and Rand's do not provide happiness and economic choice information. The data is also outdated which may result a bias estimation. Moreover, as stated by Guven (2012), national survey in certain country does not have happiness data. Conducting new survey is by far the best method for this research. For the generalization issue, Sekaran and Bougie (2016) mention that sample can represent population as long as it follows the normal distribution. Table 2 shows a good distribution of our data sample where the mean value and standard deviation are 3.5 and 0.409 respectively. The skewness closes to zero (0.21), and kurtosis is near to 3 (2.8). In fact, we follow Sekaran and Bougie (2016) minimum sample rule table as the benchmark for total number of respondents. Hence, the 416 respondents are robust enough to represent the population.

Table 2
Goodness of Measure for Happiness Items

Items	Loading	Items	Loading	Items	Loading	Reference
I don't feel particularly pleased with the way I am. (R)	0.855	I laugh a lot.	0.722	I feel fully mentally alert.	0.861	
I am intensely interested in other people	0.688	I am well satisfied about everything in my life.	0.738	I often experience joy and elation.	0.826	
I feel that life is very rewarding.	0.777	I don't think I look attractive.(R)	0.647	I don't find it easy to make decisions. (R)	0.673	Adopted from Hills and Argyle (2002)
I have very warm feelings towards almost everyone.	0.745	There is a gap between what I would like to do and what I have done. (R)	0.807	I don't have a particular sense of meaning and purpose in my life. (R)	0.701	
I rarely wake up feeling rested. (R)	0.809	I am very happy	0.872	I feel I have a great deal of energy.	0.769	
I am not particularly optimistic about the future. (R)	0.888	I find beauty in some things.	0.801	I usually have a good influence on events.	0.744	
I find most things amusing.	0.616	I always have a cheerful	0.683	I don't have fun with	0.835	

		effect on others.		other people. (R)	
I am always committed and involved.	0.701	I can fit in (find time for) everything I want to.	0.731	I don't feel particularly healthy. (R)	0.779
Life is good.	0.74	I feel that I am not especially in control of my life. (R)	0.775	I don't have particularly happy memories of the past. (R)	0.757
I do not think that the world is a good place. (R)	0.819	I feel able to take anything on.	0.815		
Cronbach Alpha	0.882	Skewness	0.21		
Mean	3.5	Kurtosis	2.822		

Source: Authors' Estimation

ANALYSIS AND DISCUSSION

Happiness and Investment Decision

Table 3 reports the Logistic regression of happiness with demographic factors including age, gender, income status, occupation, marital status, health status and education level towards investment decisions. The main variable in this model is happiness. From the table above, happiness shows a coefficient of 1.521 and significant at the 1% level. This proves that happier people are more likely to report that they will invest their income. When an individual is happy, they demonstrate rational thinking while making investment decisions. In contrast, when an individual is in a bad mood, they tend to invest unwisely, susceptible to a higher probability of losing money or feel reluctant for investing. This is in line with the research by Guven (2012).

In terms of the goodness of fit, the Cox & Snell R-square shows the value of 0.084 with Nagelkerke R-square (adjusted Cox & Snell R-square) of 0.159. As mentioned in IBM Knowledge Center (n.d.), Cox & Snell R-square is used to compare the log likelihood between the estimation model and the baseline model.

Table 3
Logistic Regression Estimation of Happiness on Demographic Factors towards Investment Decision

Variables	Results
HAPPY	1.521***
	(0.339)
GENDER	0.629*
	(0.360)
AGE	0.498
	(0.462)
INCOME	-0.192
	(0.262)
OCCUPATION	0.488
	(0.317)
MARITAL	0.433
	(0.373)
HEALTH	-0.099
	(0.083)
EDUCATION	-0.243
	(0.333)
Constant	3.937*
	(2.042)
Cox & Snell R Square	0.084
Nagelkerke R Square	0.159

Note: the number stated is beta coefficient except number inside parenthesis is standard error. *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. Source: Authors' estimation

However, it cannot reach a maximum of 1. Here, Nagelkerke R-square takes place where it adjusts the scale of the statistic to cover from a range 0 to 1. With the Nagelkerke R-square of 0.159, it shows that the fit of the model is strong, given that 0.159 is close to 1. This means that the estimation model best fits the population from which the data were sampled by using Logistic regression. This also indicates that the estimation model is robust enough and passes the goodness of fit test.

For the first aspect in personal characteristics which is gender, the regression shows a coefficient of 0.629, significant at the 10% level. This indicates that gender has a positive relationship of 0.629 towards investment decisions. This result is tallied with the research in the Gallup Poll. It states that men will be more antagonistic if their investment choices promise a good return and they will continue to be a high risk taker. In addition, Wang (1994) reports evidence that investment brokers offer women lower risk investment than those offered to men. This is because women are more risk averse in investment decision-making.

For the second personal characteristic of age, the regression gives a coefficient of 0.498 with no level of significance. This implies that age has no relationship in making investment decision although it gives a positive coefficient of 0.498. This is consistent with Eberhardt et al. (2019).

For the other personal characteristics of income status, occupation, marital status, health status and education level, the findings show that the results are not significant at 1%, 5% or 10% levels. The income status, occupation, marital status, health status and education level are not significant at a coefficient of -0.192, 0.498, 0.433, -0.099 and -0.243 respectively. This proves that there is insufficient evidence to support the relationship between personal characteristic and economic choices (investment decision).

Happiness and Financial Decision

Table 4 reports the Logistic regression of happiness with demographic factors including age, gender, income status, occupation, marital status, health status and education level towards financial decisions. From the table below, happiness shows a coefficient of 0.960, significant at the 1% level. This proves that happier people are more likely to report that they will take action in financing such as loan or leasing. As stated in hedonic utility theory, when an individual is happy, they follow their feeling or gut or intuition in making financial decisions. On the other hand, when an individual is not a happy person, she or he tends to avoid or doubtful in financing. This result is in line with Mogilner et al. (2012) and Berezan et al. (2018).

In terms of the goodness of fit, the Cox & Snell R-square shows the value of 0.162 with Nagelkerke R-square (adjusted Cox & Snell R-square) of 0.192. With the Nagelkerke R-square of 0.192, it shows that the fit of the model is strong since 0.192 is close to 1. This means that the estimation model best fits the population from which the data were sampled by using Logistic regression. This also indicates that the estimation model is robust enough and has goodness of fit.

For the first aspect in personal characteristics which is gender, the regression shows a coefficient of 0.482, significant at the 10% level. This indicates that gender has a positive relationship of 0.482 towards financial decisions. The coefficient of 0.482 proves that male respondents are more likely daring in making financial decisions such as taking loan from ban. This is in line with the research by Meziani and Noma (2018).

For the second personal characteristic which is age, the regression gives a negative coefficient of 0.487 with significance at the 10% level. This suggests that age has a negative relationship of 0.487 towards financial decisions. In other words, golden age people (18-35) tend to take financing decision compared to other age groups. What's more, this particular age group tend

to be more expert in saving money rather than spend money even as they grow older. This is because when people become older, they are afraid of taking risks. This is tallied with the previous research by Eberhardt et al. (2019), who used simple heuristics to research age differences and correlations with financial decisions. They found that older adults were more likely to use a single-deal strategy than young adults, as they wanted to reduce their working memory capacities.

Table 4
Logistic Regression Estimation of Happiness on Demographic Factors towards Financial Decision

Variables	Results
HAPPY	0.960***
	(0.259)
GENDER	0.482*
	(0.251)
AGE	-0.487*
	(0.293)
INCOME	0.149
	(0.174)
OCCUPATION	-0.196
	(0.173)
MARITAL	0.427
	(0.189)
HEALTH	0.119
	(0.176)
EDUCATION	-0.304
	(0.237)
Constant	0.928*
	(0.552)
Cox & Snell R Square	0.162
Nagelkerke R Square	0.192

Note: the number stated is beta coefficient except number inside parenthesis is standard error. *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. Source: Authors' estimation

For the other personal characteristics such as income status, occupation, marital status, health status and education level, the findings show that the results do not have significant sign. The income status, occupation, marital status, health status and education level are not significant at a coefficient of 0.149, -0.196, 0.427, 0.119 and -0.304, respecttively. This suggests that there is insufficient evidence to support the relationship between personal characteristic and economic choices (financial decisions).

Happiness and Risk Preferences

Table 5 reports the Logistic regression of happiness with demographic factors including age, gender, income status, occupation, marital status, health status and education level towards risk preference. Risk preference measures how much risk an individual is willing to take. From the table above, happiness shows a coefficient of 0.867 and significant at 1% level. This proves that when a single unit of happiness increases, an increment of around 0.867% of risk preference increases as well. In other words, the higher the happiness level, the higher the level in risk preference. When an individual is happy, they will seek for higher risk. When an individual is in unhappy mood, they tend to protect themselves from taking risks. This finding is in line with Guven (2012) and Asebedo et al. (2019).

In terms of the goodness of fit, the Cox & Snell R-square shows the value of 0.053 with Nagelkerke R-square (adjusted Cox & Snell R-square) of 0.078. With the Nagelkerke R-square of 0.078, it shows that the fit of the model is strong, as 0.078 is close to 1. This means that the estimation model best fits the population from which the data were sampled by using Logistic regression. This also indicates that the estimation model is robust enough and has goodness of fit.

For the first aspect in personal characteristics which is gender, it shows a coefficient of 0.457, significant at 10% level. This determines that gender has a positive relationship of 0.457 towards risk preference. The coefficient of 0.457 indicates that women showed higher levels in taking risks. However, this result does not align with the research by Eckel and Grossman (2008), who find no evidence support of gender

difference in risk preferences in the absence of controls for competence, knowledge and overconfidence.

Table 5
Logistic Regression Estimation of Happiness on Demographic Factors towards Risk Preference

Variables	Results
HAPPY	0.867***
	(0.257)
GENDER	0.457**
	(0.221)
AGE	-0.357
	(0.283)
INCOME	0.273
	(0.202)
OCCUPATION	-0.194
	(0.168)
MARITAL	-0.527
	(0.561)
HEALTH	0.022
	(0.177)
EDUCATION	-0.202
	(0.230)
Constant	0.483**
	(0.231)
Cox & Snell R Square	0.053
Nagelkerke R Square	0.078

Note: the number stated is beta coefficient except number inside parenthesis is standard error. *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. Source: Authors' estimation

For the second personal characteristic which is age, the regression gives a negative coefficient of 0.357 with no significant level. This implies that age has no relationship in risk preference.

Meanwhile, income status, occupation, marital status, health status and education level still show insignificant role on economic choice. The income status, occupation, marital status, health status and education level are not significant at a coefficient of 0.273, -0.194, -0.527, 0.022 and -0.202, respectively. Hence, there is insufficient evidence to support the relationship between personal characteristic and economic choices (risk preference).

Happiness and Economic Choice

Table 6 documents the OLS regression of happiness with demographic factors including age, gender, income status, occupation, marital status, health status and education level towards risk tolerance. From the table above, happiness shows a coefficient of 0.654 significant at the 1% level. This proves that there is 0.654 of happiness explaining how much people can take risk tolerance. In other words, the higher the happiness level, the higher the risk tolerance. When an individual is happy, they are more daring to take on risks. Once again, this corresponds with the research by Guven (2012).

The estimation model has the R-Squared of 17.4% with adjusted R-Squared of 15.7%. This shows that the independent variables explain the dependent variable at 17.4%. As mentioned before by Gujarati and Porter (2009), if the R-Squared falls in between 10% to 90%, it is claimed to be a good R-Squared value in the cross-sectional study. Therefore, the R-Squared in this study is considered as a good R-Squared value.

In goodness of fit terms, the F-Value shows the value of 10.260 and significant at 1% level. This means that the estimation model best fits the population from which the data were sampled by using OLS regression. This also indicates that the estimation model is robust enough and has goodness of fit.

For the first aspect in personal characteristics which is age, the regression gives a coefficient of -0.175 at the significant level of 10%. This implies that age has a negative relationship of 0.175 towards risk tolerance. In other words, when people become older, they tend to develop better financial planning skills and are far less daring of risks. That is, individuals are more risk adverse as they grow older because they are afraid of the negative repercussions prone with risk-taking. They do not dare to use their savings in risky investments.

Table 6
OLS Regression estimation of Happiness on Demographic Factors towards Risk Tolerance

Variables	Results
(constant)	1.103**
	(0.459)
AGE	-0.175*
	(0.101)
GENDER	0.235***
	(0.084)
INCOME	0.036
	(0.056)
OCCUPATION	-0.048
	(0.058)
MARITAL	0.176
	(0.193)
HEALTH	0.017
	(0.059)
EDUCATION	-0.046
	(0.071)
HAPPY	0.654***
	(0.083)
R-square	0.174
Adj. R-square	0.157
F-Value	10.260***

Note: the number stated is beta coefficient except number inside parenthesis is standard error. *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. Source: Authors' estimation

For the second personal characteristic which is gender, the regression shows a coefficient of 0.235, significant at the 1% level. This indicates that gender has a positive relationship of 0.235 towards risk tolerance. This result contrasts with the research in the Gallup Poll. In Gallup Poll findings, it shows that both men and women expect their own portfolios to outperform the market, and men anticipate a greater out performance. However, the coefficient of 0.235, which is below 0.5, shows that women has more risk tolerant than compared to men. This is in line with Fisher and Yao (2017).

Additionally, the other personal characteristics such as income status, occupation, marital status, health status and education level do not have any significant effect on risk tolerance. The income status, occupation, marital status, health status and education level are not significant at a coefficient of 0.036, -0.048, 0.176, 0.017 and -0.046, respectively. Hence, there is insufficient evidence to support the relationship between personal characteristic and economic choices (risk tolerance). This is consistent with the research of Manser and Brown (1980), and Xiao and Porto (2019).

Robustness Test: Another Measure of Happiness

Some researchers may be skeptical of the use psychometric-based survey because the data may not reveal the true happiness of respondents. Therefore, we estimate another measure of happiness by following Guven (2012) approach. Note that our questionnaire stamped the time in which the questionnaire was completed. This timestamping leads to the cloud cover given to each respondent according to Malaysian Meteorology Office data. The latter, the happiness will be measured using that clouds cover data.

This research treats the weather as an exogenous shifter of happiness, using happiness data at the individual level and estimating the cloud cover as a predictor of happiness controlling other related demographic variables. The model is as follows:

$$HAPPINESS_i = \beta_0 + \beta_1 UNEXPECTED\ SUNSHINE_i + \beta_2 DEMOGRAPHY\ VARIABLES_i + \varepsilon_i$$

The estimation of the above model is treated as an instrument of predicted happiness of each respondent. It means that personal economic behavior is estimated to be a function of the predicted happiness, which is estimated in above model. Once more, we run our main model by using this predicted happiness. The model of regression is as follows.

Table 7 provides the results of the predicted happiness model across different economic choices. However, the conclusion remains the same where happiness is the significant predictor for each economic

choice. The happiness about an investment decision shows a coefficient of 2.387 and significant at 1% level, which is in line with the results in Table 2. It proves that happiness leads greater rational thinking when making investment decisions. In terms of happiness and financial decisions, Table 6 reports that happiness significantly contributes to financial decision at a 1% level, where the value of coefficient is 1.874. This aligns with the results in Table 3 and consistent with the findings of Mogilner et al. (2012).

Table 7 also reports the significant role of happiness on risk preference. The coefficient value is 1.911 and it is significant at the 1% level. This result is consistent with Table 4 results. It concludes that happier people tend to take a higher level of risk. The happy mood may be the source of this euphoria and make people become game to take risks. Lastly, the predicted happiness model also documented that happiness significantly influences the risk tolerance of an individual, where the coefficient value is 2.009 and it is significant at the 1% level. Again, this result is also corresponding with the findings of Table 6.

In terms of demographic profile variables, Table 7 has the same conclusion with the previous table. It finds that income, occupation, marital, health, and education have no significant effects on economic choices. Meanwhile, gender still plays an important role on economic choices. It is significant at a 5% level for the financial decisions model, and at a 10% level for investment decisions, risk preference, and risk tolerance models. Age is also another important demographic in economic choices. The findings show that age has significant effects on investment decisions, financial decisions, and risk preference at the 10% level. However, age significantly contributes to risk tolerance at a 5% level with the coefficient value of 0.155.

Table 7
Predicted Happiness Model towards Economic Choice

Variables	Investment Decision	Financial Decision	Risk Preference	Risk Tolerance
HAPPY	2.387***	1.874***	1.911***	2.009***
	(0.587)	(0.509)	(0.577)	(0.525)
GENDER	0.19*	0.274**	0.14*	-0.203*
	(0.108)	(0.112)	(0.079)	(0.104)
AGE	0.114*	-0.112*	-0.109*	0.155**
	(0.068)	(0.059)	(0.063)	(0.069)
INCOME	-0.231	0.241	0.210	0.106
	(0.344)	(0.214)	(0.147)	(0.073)
OCCUPATION	0.334	-0.460	-0.094	-0.079
	(0.241)	(0.318)	(0.103)	(0.071)
MARITAL	0.155	0.422	-0.307	0.101
	(0.108)	(0.274)	(0.381)	(0.131)
HEALTH	-0.402	0.488	0.447	0.233
	(0.267)	(0.316)	(0.277)	(0.160)
EDUCATION	-0.161	-0.224	-0.311	-0.083
	(0.119)	(0.146)	(0.289)	(0.087)
Constant	-2.771***	-0.865*	-0.919*	0.455**
	(1.042)	(0.505)	(0.521)	(0.208)
Cox & Snell R Square	0.117	0.204	0.104	0.144

Note: the number stated is beta coefficient except number inside parenthesis is standard error. *, **, *** denote statistical significance at 10%, 5% and 1% levels, respectively. Source: Authors' estimation

Discussion

From the data collected in this study, it is clear that individual happiness has a significant effect on the economic choices they make throughout life. In essence, happiness is a personal driving force in pursuing career goals and maintaining economic stability. When a person is driven as such, psychologically speaking, they may surround themselves with positive stimulus and hence make a better, well-considered decision regarding not only their finances but other important life choices. Mogilner et al. (2012) and Brahmana and Brahmana (2016) state that happiness has a strong influence on a person's mood and positivity, which in turn can affect their cognitive processing in rational, open-minded decision-making. Hence, it is clear that happiness plays an undeniable role in a person's in the economic decision-making process.

On the other hand, the data collected for age as a factor in personal economic choices carries a high negative coefficient of 10%. It seems that age is a defying factor in deliberating economic matters since the needs and goals of different ages in life changes. With different needs, individuals will make different decisions regarding personal economic situations to realistically achieve their goals. Moreover, in the study conduct by Eberhardt et al. (2019), it is found out that people in older age brackets are less willing to take financial risks than people younger in age. Hence, it is clear that age is indeed a significant variable affecting one's economic choice.

With the support of collected data in this study, gender possesses a significant effect on the economical behavior. Similar to age, different genders have different needs and goals. However, different gender also creates a bias in some parts of the world, particularly in career choices and business opportunities. Also, previous studies suggest that this field of concern differs across the genders. Females are more concerned with uncertainty, doubts and the dynamism during decision-making; while the male will focus on the analysis of information and the definition of purpose and goals while making choices (Fisher and Yao, 2017). Hence, it is indisputable that different genders having a significant effect on the economic choices of people.

Income was found to have no significant effect on the economic choices of people according to the data collected. This is mostly because the basic human needs are similar regardless of different income levels. There may be a slight effect on higher incomes. That is, the more disposable income a person has, however in ratio, the magnitude of spending and saving (or in other words, the economic choices) remain alike. This conclusion is supported by Xiao and Porto (2019), who proved that personal income has trivial effect on economic choic due to the present bias.

Similar to the case of income, occupation also fails to act as a significant factor in people's economic choices. From speculation derived from the data collected, the effect of occupation on economic choices is similar to the effect of the income, with the one distinction being the social status of the person. Higher work positions typically receive higher levels of income, therefore, the effect of income is a subset of the effect of occupation in economic choices. As for social status, the only effect on economic decision-making will only be the spending on social activities, which is insignificant to the result.

There has been an argument surrounding the impact that marital status has on personal economic choices, purporting that the two variables are indeed significantly related. However, from the data collected, the statement above can be rendered as inaccurate. Specifically, while married and single workers have different lifestyles, their basic economic needs are very similar. The only deciding factor between married and single people that weighs on economic choices is the existence of children. However, nowadays, adoption has become increasingly normal in many societies, hence the effect is lessened. This is in line with the research by Manser and Brown (1980), who

argued that whether single or married, a person's economic decision-making remains the same. This commonality may be attributed to the shared desire to put money in the bank as opposed to purposefully investing it, for instance, on housing. Therefore, there is an insignificant relationship between marital status and economic choices.

The health status of a person also proves to have a little effect on economic choices, as substantiated by data collected in this study. Even with different health statuses, individuals' basic economic needs are relatively similar. Those suffering ill health may spend additional money on medical attention as required. However, the prevalence of health insurance today lessens the effect. With good financial and insurance planning, an individual's economic pattern may not differ as much before and after ill health. Therefore, health status does not impose a significant effect. Einav and Finkelstein (2018) and Ellis et al. (2018) made argument about personal health status, health care and health insurance concerning the economic decision. They argue that an individual's health status had a minor impact on the way they make a decision. Thus, health status insignificantly affects one's decision-making.

On the other hand, educational level, which heavily determines the income and occupational status of a person, has proven to affect economic choices along with both of the aforementioned characteristics. Differences in educational levels can certainly shape different economic patterns in individuals. However, by looking in the big picture, education level only plays a minor role. While a person's success may be attributed to their economic and life achievements, it also significantly depends on overlooked personal skills such as leadership, analytical, coordination, and problem-solving skills. Since educational level does not even play a significant role in a person's economic patterns, it would be tenuously linked to a person's economic choices. This is in line with Huffman (1974), who suggests that education level does not contribute all that much to one's economic decision-making. For example, nowadays, investment decisions can be made by farmers, not just people with high education levels. Hence, there is an insignificant relationship between education level and economic choice.

CONCLUSION AND RECOMMENDATION

Conclusion

This study aims to examine the relationship between happiness and economic choices. In this research, the citizens and working force of Malaysia, from across different age groups, serve as the sample population. The time period for this cross-sectional research is from 20th November 2019 to 15th December 2019. Several other independent variables, such as personal characteristics, maybe better for the estimation model. Therefore, our main research question is: Is happiness significantly associated with economic choices?

The research finds that happiness has significant effect on economic choice at the 1% significance level. The result suggests that happier people think that saving makes sense, with consideration to the general economic situation. This parallels previous research findings by Guven (2012). This answers our first research question in the affirmative, that there is a significant relationship between happiness and economic choices.

For the second research question: Do personal characteristics affect economic choices? We find that personal characteristics such as gender and age do indeed have significant relationships towards economic choices. However, personal characteristics such as income status, occupation, marital status, health status, and education level do not significantly influence economic decision-making.

In a nutshell, this study shows that happiness contributes significantly to economic choices. This means that when people are happy, they tend to save more money, spend less and make more informed invest-

ment decisions. The findings suggest that the happier the people, the better the decision-making around their economic situations. This does not tally with the evidence from rational choice theory. As discussed by Levin and Milgrom (2004), rational choice is defined as careful selection after thorough consideration, and logical and persistence thinking before any decision is made. Normally people tend to make selections according to the promise of potential maximum return. For example, when an individual buys a laptop after looking at the functions that will help meet their needs or wants, they are also calculating the price with rational thinking. However, happiness is a very subjective item. It can come and go unexpectedly and cannot be measured by rationality. Yet, we know it when we feel it. As explained by Psychology researcher Sonja Lyubomirsky et al. (2015), happiness is the experience of joy, contentment or positive well-being in a sense that one's life is good, meaningful and worthwhile. Our findings indicate that if one is happy, they will tend to make good economic decisions. This also means that making wise economic choices does not prove that an individual is depending on rational thinking.

Recommendation

In a sum, this study reveals that happiness positively affects economic choice supporting emotional contagion and hedonic utility theory. It surmises that when people are happy, they tend to save more money, less spending and do more on investment decision. Our findings recommend that policymakers should treat the outcome for the question seriously in their policymaking process. Often, happiness has some relationship with one's productivity, by increasing people's happiness the likelihood of their productivity also raises overall GDP. Governments should focus more on people's happiness to increase country GDP as a whole reviewing process and fully-funded effort (Ruggeri et al., 2020).

The main focus of this research is to establish a connection between one's happiness and economic choices. These findings are crucial in advising government authorities as they develop policies relating to tax and retirement among other issues. On top of that, these findings also help determine optimal timing for macroeconomic announcements such as unemployment rates, inflation and tax levels. The outcome of this research furthermore helps explain the low correlation between income and happiness in many other happiness studies. This paper advocates that by facilitating an increase in the income coefficient, national governments may just raise their population's level of happiness, as well.

However, all our findings need to be verified by further research on other research contexts and research frameworks. The focus of this study has been to examine the direct effect of happiness on economics choice. Adopting other theoretical frameworks, a few extensions can be built upon this analysis. Firstly, more in-depth analysis can be gained through the examination of financial literacy effect or temporal effect. Second, future research can engage the psychology trait effect on that relationship as been partially discussed by Brahmana and Brahmana (2016) and Bucciol and Zarri (2017). Additionally, future research may test the same topic with different happiness measure to explore the best measurement scale for behavioral economics literature.

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