

Financial Awareness and Retirement Preparedness of Self-Employed Youth in Malaysia

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Received: 09.11.2020, Revised: 01.04.2021 Accepted: 15.05.2021

Abstract

The increasing popularity of self-employment, especially among youths, presents a socioeconomic risk to the country as self-employed workers are not covered by any retirement saving schemes. Moreover, Malaysian youths lack financial awareness, making them unprepared for retirement. As such, this paper aimed to study the relationship of financial awareness level with retirement preparedness of self-employed youths in Malaysia and further relate the influence of demographic factors to retirement preparedness of self-employed youths to understand their level of preparedness for retirement. Surveys using the convenience sampling method were distributed. The responses were analysed using ANOVA and multiple linear regression. This study employed simple statistical tools as this study revolved around the behaviour of self-employed youths, which did not call for sophisticated statistical tools. The analysis showed that financial awareness does influence retirement preparedness and that both were found to be at healthy levels although some improvements such as in knowledge of the purpose of financial products and proper level of savings for retirement were needed for youths to be fully prepared for retirement. This finding will aid government agencies and NGOs to craft outreach programmes for youths to prepare them for retirement. Notwithstanding that, this finding will support ongoing research on the level of financial literacy among youths.

Keywords: financial attitude, financial awareness, retirement, self-employed, youth

JEL Classification: D01, J26

Introduction

Malaysia is seeing the rise of the gig economy where more people are choosing self-employment as their source of income, especially in urban areas due to strong penetration of the internet and adoption of technology. From 2010 to 2016, there was an 81% growth of number of self-employed workers. In 2016, the percentage of

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Journal of Wealth Management & Financial Planning

self-employed workers accounted for 16% of the total workforce (Idris, 2017). There have already been a few economic implications that can arise from this trend, such as the risk of bankruptcy among youths. As many as 1 in every 4 bankruptcy cases recorded in 2018 were by those aged below 34 years (Credit Counselling and Debt Management Agency (AKPK), 2018). Such a trend presents a socioeconomic risk to the country in the future as this mode of work is becoming popular among millennials. Many of this type of workers are not covered under any mandatory retirement saving scheme. In this case, they would need to prepare themselves financially for retirement on their own. If they are not fully prepared for their grey years, the government would have to bear the cost of caring for them.

In preparing the youths for their retirement, an overview of the level of financial literacy among them is imperative. The issues stated above reflect that financial awareness is rather low among self-employed youths in Malaysia. Financial literacy is an accurate measurement for this as a person becomes more prepared for financial shocks or uncertainties if they are financially literate. In a study by Lusardi and Mitchell (2011), financial literacy is positively linked to retirement preparedness. While financial education is a concern for all segments of society, self-employed youths should be given focus as selfemployed workers are not protected under any mandatory retirement saving



schemes and youths in general lack financial literacy.

The growth of self-employment heralds a new chapter for Malaysia as it brings a new set of challenges for the people and the government alike. The biggest growth in self-employment has been experienced in urban areas, largely contributed by the youth segment. One major challenge of this development is their low financial literacy (Malaysian Financial Planning Council [MFPC], 2018). This poses a socio-economic risk to this labour segment as this segment will not be prepared for their retirement. This trend of low financial literacy is seen despite many initiatives by government agencies to raise the level of financial awareness. In essence, youths in general lack financial literacy and this will render them ill-prepared for retirement. This is more pronounced for self-employed youths given that this mode of work requires them to save for retirement on their own.

Against this backdrop, the general objective of this research paper is to investigate the relationship between the level of retirement preparedness and the level of financial awareness as this will present the pressure points of financial literacy among youths. In relation to this, it will enhance the contents of financial literacy or outreach programmes for self-employed youths. To complement this, this study intends to understand the demographic factors that influence the level of retirement preparedness among self-employed Malaysians, such as gender, race, marital status, income level, education level and number of dependents.



The next section will be the literature review as a discussion of previous research covering factors that influence financial awareness and retirement preparedness, including a discussion on the role of demographic factors. This study then presents the framework and methodology of choice, followed by an analysis of the results and discussion. The final section presents the conclusion and implications of the study.

Literature Review

The literature review chapter in this study first discusses the level of financial literacy level and retirement preparedness among Malaysian youths in general. This is as financial awareness forms a main pillar of financial literacy and financial literacy is related to retirement preparedness. This is then followed by a discussion on the rise of self-employment among Malaysian youths and the impact of technology on the financial literacy and awareness of youths. Finally, the literature review ends with a discussion on the adopted methodology for this study and the gap.

Given the increased interest in the topic of financial literacy and retirement preparedness in general and the rise of the gig economy in tandem with increasing technology usage, this study will refer to publications and reports by government and private agencies. This implies the growing national interest among policy makers and private firms in understanding the level of financial literacy among the general population. Many academic sources are also referred to, given the rising interest in this field of knowledge. However, it must be noted that academic studies conducted on this target group of Malaysian self-employed youths remain limited.

Understanding Financial Literacy and its Relation to Retirement Preparedness among Malaysian Youths

"Financial literacy" is defined as the summation of financial awareness. capability, and financial financial knowledge in that a person who is financially literate is a person who is able to read, analyse, manage about financial communicate and conditions that affect material wellbeing (Jevaram & Mustapha, 2015). Financial awareness is a measure of the amount of information a person holds while financial knowledge is the ability to put that information into practice.

In Malaysia, the level of financial literacy among youths is markedly low as evidenced by a finding of the Asian Institute of Finance in 2015. This low level of financial literacy is reflected in most Malaysians feeling that they face challenges related to high-cost borrowings, personal loans, and credit card borrowings. This also points to the relatively low financial awareness of Malaysians in general as evidenced by the report of the Malaysian Financial Planning Council which found that only 16.3% of respondents understood that expenses must always be lower than income (MFPC, 2018). Additionally, the report stated that more than half of the respondents (57%) were illiterate in risk management as they did not understand

the purpose of obtaining an insurance policy.

Where income is concerned, lack of financial literacy also leads to lack of savings. In Malaysia, the current level of household savings is relatively (Khazanah Research low Institute. 2013). Understandably, lack of savings will render a person not financially equipped to meet their future financial obligations such as car loans and house mortgages. While car loans and house mortgages are a financial obligation mostly dealt with during early working years, a young adult also needs to be aware of the financial obligations during their retirement years. While Malaysians in general agree that having their own financial retirement plan is important, many are illiterate as to how to adopt proper strategies to prepare themselves financially for their retirement years (MFPC, 2018). In this case, awareness needs to be supported with knowledge and application as education is positively related to attitude and behaviour (Yong et al., 2018). This is also supported by the finding that the level of financial literacy is inextricably correlated with retirement preparedness (Lusardi & Mitchell, 2011).

The Rise of Self-Employment Among Malaysian Youths

The rise of the gig economy paints another spectrum to the effort towards a higher level of financial literacy and retirement preparedness in Malaysia. The gig economy typically refers to self-employed workers performing tasks for firms on a project basis (Bajwa



et al., 2018). The increasing adoption of technology fuelled the growth of the gig economy which is now dominated by millennials as they are known to be more IT savvy than the previous generations of workers (Subramaniam, 2018). Self-employment is seen to be appealing due to its benefits such as schedule flexibility, diverse work experience and freedom to choose assignments (Subramaniam, 2018). The disbenefits of self-employment for this type of workers is that they are not covered under any mandatory pension saving schemes and would have to save up their own resources to cover for their medical costs and retirement years.

Due to a higher internet penetration rate in urban areas, it is intuitively understood that most self-employed youths are based in urban areas such as the Klang Valley, Penang, Ipoh and Johor Bharu. This is further supported by a finding of a survey by The Edge in 2018 on the gig economy which found that 66% of their urban respondents were self-employed youths aged 21 to 25 years.

Presently, the changing labour demographics would require the government to constantly update the existing regulations and laws pertaining to labour protection. This includes the protection of these workers once they reach their retirement years. While formally employed workers are mandated to save a portion of their monthly income into the Employees Provident Fund (EPF), the self-employed are not obligated to do the same. Instead,



self-employed workers are given the option to save in numerous savings vehicles including in EPF's i-Saraan scheme. Other saving vehicles include the Private Retirement Schemes and various capital market products offered to retail investors.

To incentivise savings for retirement, an income tax incentive amounting to a maximum of RM3,000 was introduced for self-employed Malaysians who declare their annual income tax. However, a more robust education drive could enhance the growth of retirement savings, especially among self-employed youths. This is as not only are the self-employed youths not mandated to save for their retirement, they are also lacking in terms of financial awareness.

Retirement Preparedness Among Self-Employed Youths

Studies have found that demographic factors such as gender, race, income, number of dependents and level of education do influence the level of financial literacy (Jeyaram & Mustapha, 2015). The conceptual framework relates these demographic factors to financial literacy. This study narrows the concept to financial awareness which is a subset of financial literacy and then extends it to retirement preparedness. This is echoed in a paper by Githui & Ngare in 2014 which found that retirement preparedness is also influenced by financial literacy among demographical factors. This complements an earlier finding by Lusardi & Mitchell in 2011

that financial literacy is related to retirement planning or preparedness.

Retirement preparedness is the level of readiness or preparation towards being ready for retirement. A study by the Malaysian Financial Planning Council in 2018 noted that Malaysians generally save for other future obligations first while saving later for retirement. In other words, Malaysians generally do not find saving for retirement to be a top financial planning priority. This could affect the amount they would have saved for retirement and subsequently the amount of money at their disposal at retirement.

While this is drawn from evidence of the studies mentioned, a finding by the Employees Provident Fund (EPF) that Malaysians will not have enough money to retire also supports this. While this rests on the awareness of Malaysians that saving early for retirement is important, it is also due to external circumstances such as a lower return on investment (Carvalho & Hamdan, 2015).

The Impact of Financial Technology on the Financial Literacy of Youths

The proliferation of Financial Technology otherwise known as "FinTech", (Securities Commission Malaysia, 2018), heralds the democratisation of access to financial services for consumers. The access to these services is inherently different in nature as compared with traditional methods. For instance, it is easier now to acquire credit cards as one can now apply for cards online with a few clicks as opposed to filling up a form and making an appointment with a bank staff at a selected bank branch. This process is devoid of any human interaction. While this proves the development of the financial sector with regard to adoption of technological solutions is at an increasing rate, it also poses a risk to Malaysians as it was found that 10% of Malaysians are not disciplined enough to manage their finances and that as many as 30% of Malaysian working adults need to borrow to buy essential goods (Financial Education Network, 2019).

The E-commerce industry is also growing at an exponential rate and this growth has spilled over into the financial sector, given the average projected annual growth of 10% coupled with a high internet penetration rate in Malaysia (Abdul Aziz, 2017). With this development, Malaysia has also seen the growth of e-commerce making its way into the financial sector. This is evidenced by the establishment of e-wallets such as GrabPay, Touch 'n' Go E-Wallet, Boost and a host of phone application-based transaction services provided by banks, such as CIMB Clicks and Maybank2U.

This development came about to tap into the millennial sector who are more IT savvy than their predecessors. However, it was found that this group of consumers are not financially literate (Asian Institute of Finance, 2015). In the realm of the capital market, investing is now made easy with the establishment



of micro-investing platforms such as StashAway and the digitalisation of stockbroking services such as Rakuten Trade. All these are designed to tap into millennial consumers in Malaysia (Subramaniam, 2018).

Therefore, a different approach to increasing financial literacy rate is encouraged for this group as the development of FinTech has provided a new dimension to understanding the nature of financial services available in Malaysia together with the risks surrounding them.

Research Gaps and Way Forward

While multiples studies have established the importance and link between financial awareness and retirement preparedness for multiple segments of society including youths (Lusardi & Mitchell. 2011). studies with a special focus on self-employed youths in emerging economies like Malaysia remain limited. The key question that remains for emerging economies with limited fiscal capabilities is how to provide an adequate level of social protection policy that can cover as many individuals in need as possible with minimal cost.

An understanding of the expanding niche groups or segments of society like self-employed workers comprising youths remains pertinent as financial counselling and planning professionals, as well as policy makers, have a stake in better understanding the factors that influence a person's financial literacy and their retirement preparedness levels. As this study can be used to systematically



show and suggest factors that impact the retirement preparedness level of self-employed youths, it may be possible to design a social protection ecosystem that improves the level of retirement preparedness among Malaysians with this background. Therefore, this study is intended to fill that gap by establishing the relationship of financial awareness level with retirement preparedness of self-employed youths in Malaysia and the influence of demographic factors on the retirement preparedness of selfemployed youths.

Methodology

Introduction

Self-employed millennials in Malaysia work in various industries and as such, this study intends to reach out to a sample that can reflect the diversity of the millennial themselves. However, it is worth noting that most self-employed workers are relatively more reachable in urban areas across Malaysia, especially in the Klang Valley rather than in rural areas.

Considering this, surveys used for this study were made available both online and offline for a wider reach. The questions in the survey were all given to several faculty members as a pre-test for an assessment of readability and ease of comprehension. The tests involved were all based on those used and conducted in previous studies. Notwithstanding that, two pilot studies comprising sample sizes of 40 and 150 respectively were run with similar and comparable results, which indicated the reliability of the tests chosen for use for this study.

In this study, financial awareness is a measure of the amount of information a person holds. Retirement preparedness is the level of readiness or preparation towards being ready for retirement. Measures for this variable included whether respondents saved and if so, what proportion of the saving amount was for retirement purposes.

Conceptual Framework

displays the research Figure 1 framework for the present study. The research framework was derived from OECD's Measuring Financial Literacy: Questionnaire and Guidance Notes Internationally Conducting for an Comparable Survey of Financial Literacy in 2011. This study examined self-employed the reasons behind vouths' lack of retirement preparedness in relation to their financial awareness. In this regard, this was a derivation and extension of works of past researchers such as Lusardi & Mitchell (2011).

This was further coupled with demographic factors such as gender, race, income level, education level, number marital status and of dependents. This extended to works done by past researchers in linking demographic factors financial to literacy, such as Jeyaram & Mustapha (2015). The research framework for this study linked the reasons behind the retirement preparedness of selfemployed youths with their financial awareness levels and the demographical factors



Figure 1

Research framework for the study of self-employed youths' preparedness for retirement



As financial literacy is linked to retirement preparedness (Lusardi & Mitchell, 2011), this study adopted the testing of demographic factors similar to those studied in a separate paper by Jevaram & Mustapha (2015) that includes gender and race in relation to financial literacy. Notwithstanding that, Potrich et al., (2015), also tested all the demographic factors chosen for this study. This indicates that these demographic factors such as gender. race, marital status, education level, number of dependents and level of income does influence financial literacy. This study intended to extend this to their relationship with retirement preparedness.

Research Design

This section of the study presents the hypotheses, unit of analysis, population frame, sampling technique and validation of instrument for this study.

Type of Study

The study was undertaken using survey questionnaires that were given to a sample of self-employed youth by hand and via online forms.

Based on the synthesized information/identified knowledge gap, the following hypotheses were developed:

- H1A: Does financial awareness significantly influence retirement preparedness?
- H2A: Is gender positively associated with retirement preparedness?
- H3A: Is race positively associated with retirement preparedness?
- H4A: Is marital status positively associated with retirement preparedness?
- H5A: Is education level positively associated with retirement preparedness?
- H6A: Does the number of dependents significantly influence retirement preparedness?



H7A: Does income level significantly influence retirement preparedness?

Unit of Analysis

The source of data for this study was information gathered from survey questions given to Malaysian selfemployed youths. These consisted of those born between 1980 and 2000 (aged 18 to 38 as at 2018). Those who turned 39 as at 2019 were also considered in this study while those who turned 18 in 2019 were not considered. The term "youth" and "millennials" are used interchangeably for this study.

This study was conducted using the convenience sampling technique and focusing on individual millennials working independently. The respondents had to be born between 1980 and 2000 and worked as self-employeds for 3 months or more consecutively.

Population Frame

The respondents were individuals who fit the categories of being selfemployed and born within 1980 to 2000. This was as 25.7% of the workforce was in the self-employed sector (Khazanah Research Institute, 2017). The population of millennials in Malaysia was estimated to be 11,659,600. By estimation, the population of selfemployed millennials in Malaysia was at around 2,996,517 (25.7% * 11,659,600) (Department of Statistics Malaysia, IDOSM] 2017).

Sampling Technique

The convenience sampling technique was chosen as it is the optimum

method to study the self-employed labour segment of Malaysia with a focus on the segment's millennials. This technique was chosen in the interest of time constraints and the then unknown number of self-employed youths in Malaysia.

Using the convenience sampling method, the respondents for this study came from the social circles of the researchers. This was to enhance quick accessibility to the respondents and shorten the time to get responses to the survey questions. Sulaiman et al., in 2007 adopted this technique to study urban mobile banking usage among urbanites. The limitation of this technique is its inability to ensure that the sample is representative of the whole population of self-employed youths.

In this study, the trait common to all respondents was that they were selfemployed millennials. Other factors such as gender, age (limited to those born between 1980 and 2000), race, marital status, education level, income level and number of respondents were however not kept constant.

Sample Size of Study

According to the sampling size calculation table by Krejcie & Morgan (1970), for a population which is equal to or greater than 1,000,000, the required sample size is about 384 with confidence interval of 95% and margin of error of 5%. As the number of self-employed youths in the Klang Valley was only an estimation, it was advantageous to obtain a relatively substantial sample size to minimise

error. This was to ensure that the sample data could be a representative of the target population given that potential problems like measurement errors, issues relating to coverage and non-response were minimised. This study aimed to collect information from a total of 400 respondents who were born between 1980 and 2000 and were self-employed as their estimated number was 2,996,517 persons.

G*Power software is a relatively recent method for researchers to estimate the sample size that would give them a reading with 95% confidence interval given the number of variables planned to be tested as well as the statistical toolkit aimed to be used. The software offers the ability to estimate the sample size for research and adopts a wide variety of statistical tests including t-tests, F-tests, and chi-squaretests, among others1. While the Krejcie & Morgan estimation was considered, the estimation by G*Power software was be the main reference for sample size estimation.

As the study planned to adopt linear multiple regression method, it gave an estimation of 77 respondents which could give a 95% confidence level in the results in G*Power.

Validation of Instrument

All 45 questions were multiple choice-based questions. This method could prevent bias and allow the data to be analysed in the most appropriate way. Data was collected from October 2018 to February 2019.



A pilot study was conducted among 40 and later 150 respondents to check the suitability of research instruments in a preliminary small-scale study. This assisted in deciding the most appropriate method to conduct the research project and to ensure that the proposed methods or instruments were suitable. Some instruments were revised regarding the terms used and the instructions given after the pilot study due to respondents' problems in understanding them. This enhanced the reliability and accuracy of the survey questions. The questionnaire was developed in both Malay and English to ensure understanding by respondents.

Assistance in the form of explanation was given when it was requested. In addition, the Statistical Package for Social Science (SPSS) was utilised in this research to analyse the information gathered.

Data Collection and Administration

The respondents were reached in person or by social media or survey sites such as Google Forms. To make answering the surveys easier, the questionnaires included the study objectives, the expected outcome of the study and the target group for the study. A few persons were asked to despatch and also collect the digital forms and hard copy forms of the survey after they had been answered. The persons in charge were given a few weeks to collect the questionnaires from the respondents and return them to the researcher. The information from the

1https://en.wikipedia.org/wiki/G*Power



survey was coded and analysed using SPSS.

As the sampling size calculation table by Krejcie & Morgan (1970) indicates that a suitable sample size is 348 individuals, this study therefore despatched 400 survey forms to selfemployed youth via the internet and by hand despite G*Power's estimation of 77 respondents. Data was collected in a period of 4 months, from October 2018 to February 2019.

Instrumentation

This section of the study summarises the methodology of instrumentation of choice and the analysis of data for this study.

Introduction to Instrumentation

In designing the questionnaire, the study adopted survey questions from Measuring Financial 2011 OECD's Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy. In adopting several questions pertaining to financial literacy, only questions requiring "yes" or "no" answers and those related to gauging a person's financial awareness such as "Credit cardholders can spend without limit" were asked. So that respondents better understood the questions, they were developed to reflect the Malaysian situation. For instance, instead of using US Dollars, the questions were asked in terms of the Malaysian currency, i.e., Ringgit.

Readability was of prime importance in designing the questions

as this survey aimed to be given to selfemployed millennials with all levels of education. The language and terms used were designed to be accurate, concise and simple. There were 45 questions altogether, consisting of either "yes" or "no" questions, Likert-scale questions, and multiple-choice questions. However, for better accuracy in the results, not all questions included in OECD's 2011 survey were chosen for this study.

The questions were made in the English language; however, a Bahasa Melayu version was also crafted for respondents who preferred to answer in Bahasa Melayu. The results were then translated to English for further analysis. Both versions of the survey were uploaded on Google Forms and distributed via e-mail and Facebook. In addition to that, marks were allotted for questions on financial awareness where each correct answer got one mark. Respondents who completed the survey online could also access the marks they got for several questions related to financial awareness.

400 hard copies of the survey questions were also printed out and distributed to colleagues to be given to those in their network of self-employed youth. Prior to distribution, colleagues were given an explanation of how to explain the study objectives and answer any questions that could arise from the respondents. In the event of confusion, a mobile phone number and an e-mail address were also stated on both the online and the hard copies of the survey for further queries. However, respondents who responded via hard



Table 1

Demograp	hic	Factors
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Variable	Question	Code	
QD1	What is your gender?	Female = 0 Male = 1	
QD2	Which ethnic category do you fall into?	Malay = 1 Chinese = 2 Indian = 3	
QD3	What is your marital	Married = 1 Single = 2	
	status?	Divorce/Separated = 3	
QD4	What is your highest education level?	No formal education= 1 Completed primary school= 2 Completed secondary school= 3	
		Diploma = 4 Degree = 5 Postgraduate = 6	
QD5	How many dependents do you have?	None = 11 to 5 = 2 6 to 10 = 3 11 and above = 4	
QD6	How much is your gross monthly income (RM)?	Less than 950 = 1 951 to 3860 = 2 3861 to 8319 = 3 8319 and above = 4	

copies were not given marks in the interest of time.

Out of 400 responses distributed, 100 hard copies were completed and returned while 200 online versions were completed. This meant that as many as 300 responses were recorded, and 75% of the target was achieved. This fulfilled the G*Power requirements of 77 respondents. The survey was divided into four sections. The first section sought demographic information from the respondents. This section comprised a total of 17 questions in multiple-choice format which, among others, comprised those concerning gender, race, income level, education level, marital status and number of dependents.

The final section concerned retirement preparedness. 13 questions were asked in various formats ranging from multiple-choice questions to shortanswer essay questions. The overarching theme for this section was saving for retirement, which subsequently revealed if the respondents gave much attention to their financial health in their later years. Questions such as "How consistently do you save?" and "What proportion of your savings is for retirement?" were asked. However, for better accuracy of results, not all questions were used for analysis.

Data Analysis

All the responses gathered through the survey were coded for analysis in SPPS. Demographic questions were asked as part of the study to examine the relationship between demographic factors such as gender, race, marital status, education level, number of



dependents and income level, and financial literacy. With regard to income categorisation, the range of income for each category was in line with the national categorisation of income groups as provided by the Department of Statistics Malaysia (DOSM) in 2014.

Questions on financial awareness were designed in multiple ways with multiple answer choices. Some questions had five answer choices while others had only two. Therefore, for ease of data analysis, this study coded the answers to the questions into 1 or 0 where 1 indicated aware while 0 indicated not aware.

This also applied to Likert scale questions with answers ranging from 1 to 5 which were regrouped to 0 and 1. The questions included areas such as situational and statement-based questions. Statement questions such as QA1 and QA2 asked if the respondent knew the true intent of financial instruments such as insurance and credit cards. Credit cards are not for limitless spending and late payment is compounded with interest while insurance's main purpose is to mitigate the risk of financial loss. A correct answer was coded as 1 while a wrong answer was coded 0.

As some of the Likert scale questions in this section were "negative" where it comes to level of awareness, they were coded in reverse. For example, for question QA4, completely agree was coded 4 and 5 while completely disagree (this indicated a higher level of

Table 2

Variable	Question	Code	
QA1	Credit card holders can spend without limit	False = 1 True = 0	
QA2	Insurance is to provide you with excellent investment return	False = 1 True = 0	
QA3	Before I buy something I carefully consider whether I can afford it	Agree $(1,2,3) = 1$ Disagree $(4,5) = 0$	
QA4	I tend to live for today and let tomorrow take care of itself	Disagree (4,5) = 1 Agree (1,2,3) = 0	
QA5	I find it more satisfying to spend money than to save it for the long term	Disagree (4,5) = 1 Agree (1,2,3) = 0	
QA6	I set long-term financial goals and strive to achieve them	Agree $(1,2,3) = 1$ Disagree $(4,5) = 0$	
QA7	Money is there to be spent	Disagree (4,5) = 1 Agree (1,2,3) = 0	

awareness) was coded 1, 2 and 3. This approach also applied to QA5 and QA7. The questions and codes are as below:

Questions regarding Retirement Preparedness were designed in multiple ways. Some questions provided three answer choices while others had only two. Therefore, this study coded the answers to the questions into 1 or 0 where 1 indicated prepared while 0 indicated not prepared. The questions included those regarding propensity to save and proportion of saving for retirement.

For QR1, the more frequently a person saved, the more prepared they were for retirement. For QR1, this study assumed that a person who saved more frequently than each month and once in two months would be better equipped financially for retirement than those who saved at a less frequent rate i.e., once in six months, once a year or once a year or less frequently than once a year due to healthy saving habits even if not for retirement purposes yet.

For QR2, a person who saved for retirement was more prepared for retirement than those who did not save for retirement. For QR3, a higher proportion of savings for retirement made a person better equipped for retirement than those who had a lower



proportion of savings for retirement. Here, this study concluded that those who put more than 50% of their savings for retirement were better equipped for retirement than those who allocated less than 50% of their savings for retirement.

For QR4, this study considered those who saved earlier to be more prepared for retirement than those who saved later. As such, this study concluded that those who started saving up for retirement from year zero to year five were more prepared than those who did so later than five years after working.

Finally, for QR5, awareness is a good component in making a person informed regarding planning for their future. Therefore, this study concluded that a person was better prepared if they were aware of the developments in the retirement structures of the country to be able to take advantage of those retirement schemes.

The coded data was analysed via SPSS. The minimum criterion used for all tests adopted for this study was 95% confidence interval. All the results are in a later section.

Tests and Procedures

Based on the literature review, it

Table	. 2
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Variable	Question	Code
QR1	How consistently do you save?	More frequently than a month, monthly and once in 2 months =1
		Once in 6 months, once a year and beyond once a year = 0



Table 4

Retirement Preparedn	ess Questions and	Code, continued
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Variable	Question	Code
QR2	Do you save/plan for retirement?	Yes = 1 No = 0
QR3	What proportion of your savings is for retirement?	51 to 75% and 76 to 100% = 1 0 to 25% and 26 to 50% = 0
QR4	What is the best time to start saving up for retirement?	As soon as we start to work and 2 to 5 years after working =1
		6 to 10, 11 to 20 and 20 to 30 years after starting to work = 0
QR5	Are you aware of retirement savings schemes such as EPF's i-Saraan Account or Private	Yes = 1 No = 0

is common to apply the model with good estimation performance. While a complex model is flexible, it can lead to a problem of overfitting. On the other hand, an insufficient model can lead to a problem of under fitting with a high chance of bias. This study employed a simple model based on the idea of parsimony with best validation performance focusing on unbiased assessment. This was done through a self-administered survey where results analysed were in line with the focus of the objectives of this study.

This study employed simple statistical tools as this study revolved around the behaviour of self-employed youths and thus did not call for sophisticated statistical tools. This study used ANOVA tests and t-tests to measure the relationship of demographic factors with retirement preparedness, and financial awareness with retirement preparedness, respectively. The Pearson Correlation Coefficient was also adopted to measure the significance of the relationships between financial awareness and retirement preparedness.

One-way ANOVA tests are mainly used to determine if the means of different variables are equal. It is suitable to be adopted when comparing the mean of three or more independent groups (Marshall & Boggis, 2016). The dependent variable should be in scale form while the independent variables are in nominal form. In this study, this test was used to determine the significance of the relationship between demographic factors such as gender, race, income level, education level, marital status, and number of dependents, which are in nominal form with retirement preparedness, which is in scale form. Therefore, one-way ANOVA was suitable for this section of the research. A significant relationship between the variables at 95% confidence interval is when the p-value of the result is less than 0.05. However, a different approach must be taken for measuring the significance of financial awareness to retirement preparedness.

When looking for relationships between one dependent variable that is in scale form and independent variables that are either nominal, ordinal or scale form, a multiple linear regression is suitable (Marshall & Boggies, 2016). This test of association is suitable to measure the significance of relationship between the level of retirement preparedness with the level of financial awareness as both variables are in scale form. A significant relationship between the variables at 95% confidence interval is when the p-value of the result is less than 0.05.

To measure the significance of the relationship between the independent variables sans demographic factors i.e. financial awareness, this study adopted Correlation the Pearson's Coefficient test as it is suitable to test the association between two continuous variables (Marshall & Boggis, 2016). A significant relationship between the variables at 95% confidence interval is when the p-value of the result is less than 0.05. This will be the measurement of reliability of the survey where the survey is reliable if there is significant relationship between the three independent variables.



Results and Discussion

Profile of Respondents

This study distributed 400 surveys and received 300 responses (75% response rate). Out of the total number of respondents, 82% were from the Klang Valley while 18% were from other states. This was in line with the profile of self-employed millennials found in a gig economy survey conducted by The Edge in 2018.

Tables 5 shows the profile of the respondents of this study. Slightly more than half or 50.7% of the respondents were male. Most of the respondents were Malays (72.3%) with Chinese making up 15.3% and Indians making up the rest. This was in line with the current national average where the Malay/ Bumiputera group make up 69.1% of the population, the Chinese make up 23.0% and the Indians and other racial groups make up 7.9% (DOSM, 2017).

The majority of the respondents (60.7%) were single, while 37.0% were married. The rest were either divorced or separated. Meanwhile, an overwhelming number of the respondents (54.0%) were bachelor's degree holders. Lastly, 92.7% of the respondents had less than five dependents with the balance percentage making up the rest.

Slightly more than half of the respondents (50.3%) were in the B40 group as they earned roughly between RM951 to RM3860 a month. The "less than RM950" and "RM3861 to RM8319" income group were divided almost equally at 21.0% and 22.3% respectively. This was slightly above the national average where those who earn



Table 5Respondent Statistic

Demographic Factors	Frequency (n)	Percentage (%)
Gender		
Female	148	49.3
Male	152	50.7
Race		
Malay	217	72.3
Chinese	46	15.3
Indian	37	12.3
Marital Status		
Married	111	37.0
Single	182	60.7
Divorced/Separated	7	2.3
Education Level		
No formal education	12	4.0
Completed primary school or equivalent	7	2.3
Completed secondary school or equivalent	28	9.3
Diploma, STPM, A-levels or equivalent	65	21.7
Bachelor's Degree	162	54.0
Postgraduate Degree	26	8.7
Number of Dependents		
None	144	48.0
1 to 5	134	44.7
11 and above	3	1.0
Income Level		
Less than RM950	63	21.0
RM951 to RM3,860	151	50.3
RM3,861 to RM8,319	67	22.3
Above RM8,319	19	6.3

RM951 to RM 3860 a month make up 40% of the country's population. The results are shown as in the tables 5.

Level of Financial Awareness of Self-Employed Youth

This section consisted of a total of 300 respondents and seven questions.

For each question, 1 point was given for the answer that was perceived to evidence a sound financial awareness level. These points were later summed up and re-calculated in percentage form. The average scoring rate for this section among all respondents was 53.5% [[1123/ (300 x 7)] x 100]. Out of



Table 6

Financial Awareness: Total Score by Question

Questions	Frequ	Frequency (n)		Per cent (%)	
	Aware	Unaware	Aware	Unaware	
QA1: Credit card holders can spend without limit	192	108	64.0	36.0	
QA2: Insurance is to provide you with excellent investment return	127	173	42.3	57.7	
QA3: Before I buy something I carefully consider whether I can afford it	227	73	75.7	24.3	
QA4: I tend to live for today and let tomorrow take care of itself	133	167	44.3	55.7	
QA5: I find it more satisfying to spend money than to save it for the long term	130	170	43.3	56.7	
QA6: I set long-term financial goals and strive to achieve them.	230	70	76.7	23.3	
QA7: Money is there to be spent.	84	216	28.0	72.0	

the seven questions, more than half of the number of respondents correctly answered only three questions, i.e., QA1, QA3, and QA6, which meant they had a high level of perceived awareness in terms of these questions (refer Tables 6). The opposite was true for the rest of the questions. More than half of the respondents showed a lack of perceived awareness. QA7 had the lowest score with only 84 respondents or 28.0% of the total number of respondents answering it correctly. QA2 had the second last position in terms of the number of respondents with correct answers, at 42.3% of the total sample size. The question that had the highest marks for correct answer was QA6, with 76.7% of the total number of respondents answering it correctly.

The average scoring rate for financial awareness was 53.5%. In this study, it was



Score Percentages (%)	Number of Respondents (n)	Percentage of Respondents (%)
0 - 25	21	7.0
26 - 50	117	39.0
51 - 75	116	38.6
76 - 100	46	15.3
Total	300	100.0

Table 7		
Number of Respondents	by Financial Awareness	Score Percentages

assumed that the pass mark was 50%; therefore, due to this result, slightly more than half of the respondents (162 respondents) were perceived to be financially aware. Meanwhile, as many as 138 respondents of the self-employed millennials provided the wrong answer, resulting in them being perceived as lacking financial awareness. Nine respondents managed to answer all questions correctly, scoring 1 for all seven questions in this section while only three respondents got 0 for all questions. In terms of score percentage. 117 respondents achieved score percentages of 26% to 50%. This was closely followed by 116 who scored between 51% to 75% and 46 respondents achieved score percentages between 76% to 100% and 21 who scored 0% to 25% respectively. Table 7 details the respondents' score percentages.

Financial awareness refers to the level of information the self-employed youths hold. With an average scoring mark of 53.5% for this section, it was found that the self-employed had a relatively high level of financial awareness level. This meant that they were equipped with information on finances. This confirms the findings of Zickuhr in 2010 which revealed that millennials are the most educated as compared to previous generations. This can be mainly attributed to the ease of obtaining information via the internet and most of the respondents having tertiary education.

As Table 6 shows, question QA7 i.e. "Money is there to be spent" received the lowest score rate, with only 28% of respondents managing to give the correct answer, i.e., score 1. This statement question seeks to find out the self-employed youths' mind-set concerning money. While money is used to spend for instant gratification, it should also be thought of as something that should be saved for future use and for investments to generate a return. This is an important concept that the youths need to grasp to increase the level of savings for their future.

Question QA2 which states "Insurance is to provide an excellent investment return" received the second lowest scoring of 42.3% of the total respondents. This question also related to the awareness of selfemployed youths regarding certain

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financial instruments. In this regard, education is needed for this segment of the labour population. While some insurance products are investmentlinked products that generate a return, the traditional aim of insurance is in fact to mitigate the risk of any future financial loss, depending on the type of the insurance product (i.e., general insurance or life insurance) (Rappaport, 2015). As an insurance product is an important financial tool to mitigate any future financial losses, self-employed youths need to understand the concept of insurance first to properly plan their financial future and be prepared for their grey years.

The question that received the highest score was QA6 "I set long-term financial goals and strive to achieve them" as 76.6% of the respondents scored 1. This revealed the positive mind-set that the self-employed youths had. However, these youths will also need to be equipped with an adequate amount of information before they can set long-term financial goals and strive to achieve them. These youths will need to understand financial concepts such as use of money and financial products such as insurance and loans. This is so that self-employed youths can have reasonable and achievable financial goals and be better prepared to strive for those goals and consequently for retirement.

Level of Retirement Preparedness of Self-Employed Youths

There was a total of 300 respondents and five questions in this section. For each question, 1 point was given for the answer that was perceived to evidence a sound retirement preparedness level. These points were later summed up and re-calculated in percentage form. The average scoring rate for this section was 63.8% {[957/ (300 x 5)] x 100}. Out of the five questions, only one question had less than half of the number of respondents answer the questions correctly i.e., low level of perceived preparedness in QR3 as seen in Table 8. The opposite is true for the rest of the questions where more than half of the respondents showed a high level of preparedness. In fact, QR3 had the lowest score with only 25 respondents or 8.3% of the total number of respondents who managed to answer it in a way that can be perceived as prepared for retirement. QR2 had the second last position in terms of the number of respondents with correct answers at 67.3% of the total sample size. The question that had the highest correct marks was QR4 at 87.7% of the total number of respondents.

The average retirement preparedness scoring rate was 63.8%. In this study, it was assumed that the passing mark is 50%; therefore, more than half of the respondents (229 respondents) were in fact perceived to have a high level of retirement preparedness due to this result. Meanwhile, as many as 71 respondents comprising self-employed millennials answered wrongly, which resulted in them being perceived as lacking retirement preparedness. Only 10 respondents managed to answer all questions correctly, that is, scoring 1 for all five questions in this section. On the other hand, only four respondents got 0 for all questions.



Table 8

Retirement Preparedness Scoring by Question

Orrestiana	Frequ	ency (n)	Per cent (%)		
Questions	Prepared	Unprepared	Prepared	Unprepared	
QR 1: How consistently do you save?	255	45	85.0	15.0	
QR2: Do you save/plan for retirement?	202	98	67.3	32.7	
QR3: What proportion of your savings is for retirement?	25	275	8.3	91.7	
QR4: What is the best time to start saving for retirement?	263	37	87.7	12.3	
QR 5: Are you aware of retirement savings schemes such as EPFs i-Saraan account or Private Retirement Schemes (PRS)?	212	88	70.7	29.3	

Table 9

Number of Respondents by Retirement Preparedness Score Percentages

Score Percentages (%)	Number of Respondents (n)	Percentage of Respondents (%)
0 - 25	29	9.6
26 - 50	42	14.0
51 - 75	78	26.0
76 - 100	151	50.3
Total	300	100.0

An overwhelming number of respondents or 151 respondents scored a percentage range of between 76% to 100%. 78 respondents scored between 51% to 75%, followed by 42 respondents who scored a percentage of between 26% to 50% while 29 received score percentages of between 0% to 25%. Table 9 details the respondents' score percentages.

The question with the lowest score was QR3 "What proportion of your savings is for retirement?". As many as 8.3% of the total respondents did allocate much (more than 50% of their savings) of their savings money for their retirement. An overwhelming number of respondents (91.7% of the total number of respondents) did not allocate much of their savings for their retirement. This means that youths do not find retirement to be a top priority to save money, as they are more concerned with financial obligations closer to the present than those for the future. This confirms previous findings where savings are concerned; youths do not allocate much for the long-term. A higher allocation of savings would be dedicated to short-term obligations (MFPC, 2018).

The question with the second lowest scoring was QR2 "Do you save/ plan for retirement?" with 67.3% of respondents saving or planning for retirement. Although more than half of the respondents did save or plan for retirement, as related to question QR3, many did not allocate much for their retirement. While many of the respondents did save for retirement, there is room for improvement. The level of saving up for retirement can increase with self-employed youths being given the right exposure and education on the importance of saving for retirement. This finding also is parallel to the current level of retirement of formally employed youth. While the latter plan for their retirement, they also overwhelmingly depend on their EPF savings to sustain them during their grey years (MFPC, 2018).

The question that scored the highest was QR4 where the respondents stated that the time to start saving for retirement should be as soon as they start working to at most five years after they start working, which was 87.7% of the total respondents. This is a positive mind-set of the youths, which



is also indicative of their financial awareness level as previously discussed. It is also worth noting that while the self-employed youths were aware of retirement savings scheme such as EPFs i-Saraan account or Private Retirement Schemes (PRS), as many as 39% of them were not aware of any tax incentives given for saving for retirement.

These findings regarding retirement preparation are in harmony with previous studies which revealed that youths are aware that they need to save for their retirement; however, much of their resources is allocated for shortterm financial obligations. As stated in previous discussions, education is needed for this segment to learn how to manage their resources properly to balance between short-term and longterm obligations.

Relationship between Financial Awareness and Retirement Preparedness of Self-Employed Youths

The relationship between financial awareness and retirement preparedness was significant at 95% confidence interval. Hence, this study rejects the null hypotheses H1. That, retirement preparedness self-employed for millennials is influenced by financial awareness level. 10.7% of the variation in retirement preparedness can be explained by the level of financial awareness of self-employed youths. In addition, an increase by 1% of financial awareness level will increase the level of retirement preparedness by 0.316%. The model summary and ANOVA table are represented in Table 10 and Table 11 respectively.



Table 10Model Summary

Model	R 0.327ª	R Square 0.107	Adjusted R Square 0.104	Std. Error of the Estimate 0 204				
	Unstandardized Coefficients	01107	Standardized Coefficients	t	Sig.			
	В	Std. Error	Beta					
(Constant)	0.469	0.031	-	152 86	0.00 0			
Financial Awareness				5.96	0.00			
	0.316	0.053	0.327	8	0			
a. Predictors: (Constant), Financial Awareness								

Table 11

ANOVA IUDIE	ANOVA	Table
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Model	Sum of Squares	df	Mean Square	F	Sig.	
Regression	1.487	1	1.487	35.612	0.000	
Residual	12.440	298	0.042			
Total	13.927	299				
a. Dependent Variable: Retirement Preparedness						
b. Predictors: (Constant), Financial Awareness						

Figure 2

Retirement Preparedness (Y) vis-à-vis Financial Awareness (X1) Score Percentages (%)



As seen in Figure 2, the modal range of financial awareness score percentage when the percentage score of retirement preparedness was at 76% to 100% was 51% to 75% (68 respondents). What this means is that while people are perceived to be prepared for retirement, they are also financially aware. The opposite holds true when the score percentage for retirement preparedness is 0% to 25%, the modal score percentage for financial awareness is 26% to 50%. The relationship between retirement preparedness and financial awareness was thus found to be positive. Here, the study categorised 0% to 25% marks as very low, 26% to 50% as low, 51% to 75% as average and 76% to 100% high level of financial awareness. The same categories apply for retirement preparedness marks. This confirms a finding by Lusardi and Mitchell in 2011, where financial awareness which is part of financial literacy affects preparation for retirement. A more financially aware self-employed youth



will take necessary efforts in preparing themselves for their grey years, thus making themselves more prepared for retirement.

Influence of Demographic Factors on Retirement Preparedness

At 95% confidence interval, there was no positive association between gender and retirement preparedness as its p-value 0.840. Here, this study failed to reject the null hypotheses H2. As such, gender does not influence retirement preparedness. This finding departs from previous research (Jeyaram & Mustapha, 2015) which can be explained by the nature of self-employment and the narrowing educational attainment and income gap between males and females in the millennial category. Table 12 presents the test results.

At 99% confidence interval, there was a positive association between race and retirement preparedness as its p-value was 0.000. Here, this study can reject null hypotheses H3. Retirement

Table 12

T-Test Results	for	Gender	Influence	on	Retirement	Prepared	ness
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	Independent Samples Test							
f	Levene's or Equa Variar	s Test lity of nces	t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Std. Error Diff.	95% C	. I. D
							Lower	Upper
А	0.039	0.840	1.73	298.00	0.085	0.025	-0.006	0.092
В			1.73	296.66	0.085	0.025	-0.006	0.092
Note: A = Equal variances assumed; B = Equal variances not assumed;								
	C. I. D. = Confidence Interval of the Difference; Diff. = Difference							



	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.847	2	0.423	9.616	0.000
Within Groups	13.080	297	0.044		
Total	13.927	299			

 Table 13

 ANOVA Test Results: Influence of Race on Retirement Preparedness

preparedness was relatively higher among Chinese self-employed youths as compared to other racial groups. This is in line with a finding where Chinese students have a significantly higher level of literacy than students of other races (Jeyaram & Mustapha, 2015). This is as educational attainment in the Chinese community is high which leads to higher exposure and awareness to financial products and its uses. This brought forth a higher level of retirement preparedness. The test results are presented in Table 13.

At 99% confidence interval there was a positive association between marital status and retirement p-value preparedness as its was 0.005. Here, this study can reject null hypotheses H4. There is a positive association between marital status and retirement preparedness. A married self-employed youth is more likely to be more prepared for retirement than a

non-married self-employed youth. This finding is in line with previous findings where married people demonstrated higher financial literacy (Agnew et al., 2003). The sense of commitment for married couples is high, which leads to proper financial planning and selfdiscipline. This leads to higher level of retirement preparedness. The test results are presented in Table 14.

At 99% confidence interval, there was a positive association between education level and retirement preparedness as its p-value was 0.000. Here, this study can reject null hypotheses H5. A self-employed with a higher level of education is more likely to be prepared for retirement than a self-employed youth with a lower level of education. This is in line with a finding by Lusardi and Mitchell in 2014 where educational attainment is correlated with financial literacy and hence, would be correlated to retirement preparedness. This could

Table 14

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.481	2	0.241	5.316	0.005
Within Groups	13.445	297	0.045		
Total	13.927	299			

ANOVA Test Results: Influence of Marital Status on Retirement Preparedness



Table 15

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.398	5	0.280	6.559	0.000
Within Groups	12.529	294	0.043		
Total	13.927	299			

Table 16

ANOVA Test Results: Influence of Number of Dependents on Retirement Preparedness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.583	3	0.194	4.312	0.005
Within Groups	13.344	296	0.045		
Total	13.927	299			

stem from a higher level of exposure to financial education for those with a higher level of education, thus leading them to be more aware and prepared for retirement. The test results are presented in Table 15.

At 99% confidence interval, there was a significant relationship between number of dependents and retirement preparedness as its p-value was 0.005. Here, this study can reject null hypotheses H6. A self-employed youth with a higher number of dependents will likely be more prepared for retirement than a self-employed youth with a lower number of dependents. This could be due to cultural impact and high level of familial commitment where youths with children would be forced to plan finances carefully to avoid unnecessary losses which would impact themselves and their family members. The test results are presented in Table 16.

Table 17

ANOVA Test Results: Influence of Income Lev	el on Retirement Prepared	ness
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	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.277	3	0.426	9.963	0.000
Within Groups	12.649	296	0.043		
Total	13.927	299			



confidence 99% interval. At there was a significant relationship between income level and retirement preparedness as its p-value was 0.000. Here, this study can reject null hypotheses H7. A self-employed youth with a higher level of income is more likely to be more prepared for retirement than a self-employed youth with a lower level of income. This is echoed in a finding by Lusardi and Mitchell in 2014 where lower income individuals exhibit a lower level of financial awareness, which would impact their retirement preparedness levels. With a higher income, self-employed youths would have more opportunity to plan their finances and would be exposed to a variety of financial instruments and savings channels which would naturally lead them to save more and be prepared for retirement. The test results are presented in Table 17.

The findings generally indicate that there is a significant relationship between demographic factors tested with retirement preparedness except for gender.

Conclusions and Recommendations

that like This study proves millennials of other professional backgrounds, self-employed millennials are also unprepared for retirement. Despite the seeming high marks in terms of financial awareness and retirement preparedness, which have a positive relationship, awareness of important topics such as understanding the right use of certain financial instruments is still lacking among self-employed

youths. Interestingly, as can be seen from the responses to QA2, many understand insurance as another investment tool that is aimed at generating a return for themselves rather than as a financial tool to mitigate risks. This may have an impact on these youths as, unlike their formally employed counterparts. they are not covered under any mandatory retirement saving schemes. Meanwhile, all demographic factors tested, except for gender, do affect level of retirement preparedness. This may have impact on policy directions from policymakers for self-employed youths in Malaysia where targeted policies can be crafted strategically to serve groups of self-employed youths differently. The statistical tool employed for this study was modest as the study only aimed to investigate the level of financial awareness and retirement self-employed preparedness among millennials, which is behavioural in nature. The implication of this study is in the crafting of policies by the government for the self-employed sector which is increasingly comprising younger people. The relevant authorities can organise conferences, hold roadshows, campaigns, and intervention programmes which can focus on topics aimed to meet the needs of selfemployed Malaysian millennials

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