

## Article

# The Impact of Financial Shock, Behavior, and Knowledge on the Financial Fragility of Single Youth

Zaimah Ramli <sup>1,\*</sup>, Henry Borromeo Anak Nyirop <sup>2</sup>, Sarmila Md Sum <sup>1</sup> and Abd Hair Awang <sup>1</sup>

<sup>1</sup> Development Studies, Faculty of Social Science and Humanities, Universiti Kebangsaan Malaysia (UKM), Bangi 43600, Selangor, Malaysia; sarmila.mdsun@ukm.edu.my (S.M.S.); hair@ukm.edu.my (A.H.A.)

<sup>2</sup> SBP Management Division, Ministry of Education Malaysia, Aras 3, Bangunan Mustapha Kamal, Cyberjaya 63000, Selangor, Malaysia; henryborromeo@gmail.com

\* Correspondence: zaimahr@ukm.edu.my

**Abstract:** Financial fragility is an important issue in the well-being of individuals. Previous studies have shown that many young people are vulnerable to financial fragility. To add value to previous findings, the issue of financial fragility was focused on single youths in the middle-income group (M40) in urban areas. The objective of the study was to determine the factors influencing the financial fragility of single youth (M40) in urban areas. A quantitative approach using a survey method was applied. The study's sample consisted of 25–34-year-old single urban youths. Questionnaires were used as research instruments and were distributed online. A total of 374 samples were analyzed using multilevel regression. The results of the analysis show that spending knowledge, financial behavior, saving behavior, and financial shock are the determining factors of financial fragility among M40 single youth in urban areas.

**Keywords:** spending; saving; indebted; middle income; urban



**Citation:** Ramli, Z.; Anak Nyirop, H.B.; Md Sum, S.; Awang, A.H. The Impact of Financial Shock, Behavior, and Knowledge on the Financial Fragility of Single Youth. *Sustainability* **2022**, *14*, 4836. <https://doi.org/10.3390/su14084836>

Academic Editor: Giuliana Birindelli

Received: 9 March 2022

Accepted: 8 April 2022

Published: 18 April 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

Financial fragility is an issue that needs to be addressed because it has a negative impact on individuals, society, and the country. Financial fragility is a situation in which a small financial shock can lead to an economic crisis [1,2]. Financial shocks, such as temporary or permanent unemployment, physical disability, divorce, death, changes in loan interest rates, as well as the stock market are also among the factors causing financial fragility [3–6]. Financial fragility not only occurs in backward and developing countries, but it also occurs in developed countries and is experienced by all income classes of households, whether high, middle, or low [7,8]. This situation suggests that financial fragility has a sensitivity to extreme changes in the financial situation. Financial fragility, widely occurring at the household microeconomic level, can affect the macroeconomics of a country.

Financial fragility studies conducted in the United States and several countries in continental Europe found that the millennial generation between the ages of 18 and 35 is financially fragile [9–11]. Financial fragility not only occurs among low-income individuals, but also occurs among middle-income individuals [3,5,12,13]. Financial fragility among youths needs more serious attention because they are the mainstay of a country's economic activity. The average youth of the millennial generation has filled the job market nowadays [14]. The purchasing power of the millennial generation has become a significant market force in the economy [15–17]. If financial fragility occurs a lot among youths, it not only complicates daily life, but also has a negative impact on the country's economic growth [14,18]. In this case, the financial well-being of youth becomes one of the determinants of economic growth, or in contradiction, due to the impact and crucial role of youth in economic activities.

According to [19], the median household income in Greater Kuala Lumpur (urban) is much higher than the median household income in Pitas, Sabah (rural). A comparison of

the median household income for urban and rural areas is important in providing a clear picture of the differences in income ranges [20]. This situation creates the probability of financial fragility occurring among M40 single youths in the Greater Kuala Lumpur area, including Putrajaya [21,22].

Previous studies have focused on financial knowledge, financial behavior, and financial fragility among individuals in Malaysia in general. Therefore, this study is needed to examine the financial fragility scenario among M40 youth in urban areas. This is very important because youth are the backbone and main contributor to the country's economic growth. Thus, the main objective of the study was to determine the factors influencing financial fragility among M40 single youth in urban areas.

## 2. Literature Review

This section describes past studies that discuss the issues of financial fragility, financial knowledge, spending knowledge, saving knowledge, indebtedness knowledge, financial behavior, spending behavior, saving behavior, indebtedness behavior, and financial shock among youth. Based on this literature review, a conceptual framework is explained at the end of this section.

### 2.1. Financial Fragility

Households with high incomes and high levels of education were also reported to have the potential to face financial fragility compared to middle-income households [3]. According to [23], nearly a quarter of respondents earning an annual income of between \$100,000 and \$150,000 cannot afford to provide \$2000 a month. This situation is not surprising given that the cost of living in urban areas is high [4,21,23,24]. The rate of indebtedness also needs to be controlled as it is one of the factors causing financial fragility. High-income households were more likely to be in debt than lower-income households [25]. This explains that financial fragility has the potential to occur in all segments of society, regardless of income level, race, gender, and age [26,27].

### 2.2. Financial Knowledge

According to [28], financial knowledge helps individuals manage and make the right financial decisions. Financial knowledge also plays an important role in dealing with indebtedness [29]. Financial knowledge allows youth to assess whether a loan has a positive or negative impact [30,31]. Financial knowledge can be enhanced over time through a variety of formal and informal sources [32,33]. Moreover, financial knowledge also has a relationship with financial behavior [21,26,34,35].

### 2.3. Spending Knowledge

Spending knowledge plays a role in ensuring that individuals spend according to their financial plan [36]. Knowledge of spending between men and women sometimes differs [26,37]. Women also plan daily expenses, and this allows them to have more cash than men [38].

### 2.4. Saving Knowledge

Previous studies found that there is a positive relationship between personal financial learning and saving knowledge [39]. Peers, newspapers, television, and social media play an important role in encouraging and influencing individuals to save [40,41]. There are individuals who are still reluctant to invest because they lack awareness of the importance of saving [33,42]. Saving knowledge needs to be further improved [36,43,44].

### 2.5. Indebtedness Knowledge

Poor financial knowledge has a positive relationship with the level of indebtedness and difficulty repaying loans [45–49]. Individuals with a good level of indebtedness knowledge can avoid the imposition of delay charges on credit cards, have a high net worth, access

to planned savings for emergencies and retirement, and a lower debt-to-overall income ratio [50,51]. Many young executives declare bankruptcy due to a lack of understanding of debt [52].

#### 2.6. Financial Behavior

Financial behavior plays an important role in influencing an individual's well-being [53,54]. Most youth were found to be unprepared for increased financial responsibilities despite being active in financial transactions [53,55]. Healthy financial behavior can be seen through the attitude of individuals towards managing the inflow and outflow of money, managing loans, and investing [26,56]. The younger generation rarely makes budgets and plans their savings [57]. Financial behavior has a relationship with financial knowledge [26,58].

#### 2.7. Spending Behavior

Spending behaviors vary according to an individual's background, income, and lifestyle. The "buy first, pay later" credit mentality is very widespread among young people [59,60]. The hypersocial millennial generation will have more purchasing power than other generations [61,62]. Youth spending behaviors are heavily focused on food, shopping, and entertainment [57]. There is a positive relationship between income and spending behavior [26,63]. Preparation of a shopping list helps control spending [64].

#### 2.8. Saving Behavior

Saving behaviors differ according to each individual and motive [43,65–67]. Parental influence is the most significant factor for youth saving [41,49,68]. Saving behavior only persists in early youth and it will gradually change according to the living environment [66], and only a small number of millennial generations are able to save [69–71]. Savings in the form of gold investments or unit trusts tend to be driven by the positive impact of financial literacy [72].

#### 2.9. Indebtedness Behavior

The economic and financial crisis has led to an increase in household indebtedness to meet living needs [73]. Meeting lifestyle needs beyond means also causes individuals to become indebted [60]. Education level [49,68,74–78] and income level are also determinants of youths' propensity to go into debt [76–78]. High debt-to-income ratios leave individuals vulnerable to financial shock and financial fragility [30,79].

#### 2.10. Financial Shock

Failure to deal with financial shocks makes it more difficult to form sound finance [80,81]. According to [82], individuals experience financial shock in a variety of ages, ethnicities, and incomes. Financial shocks cause individuals to face difficulties in meeting survival and in saving, and results in a high use of loan credit [80,83]. The financial shock that occurred caused individuals to not be able to provide RM10,000 within a month in the event of an emergency [4,84].

#### 2.11. Conceptual Framework

In this study, financial fragility was influenced by financial knowledge, spending knowledge, saving knowledge, indebtedness knowledge, financial behavior, spending behavior, saving behavior, indebtedness behavior, and financial shock. Financial knowledge allows individuals to analyze and make comparisons before making financial decisions that can lead to financial fragility [29]. The knowledge of spending educates individuals to prioritize necessities over wants [36]. Spending knowledge is also important to control and set the mentality of individuals so as not to waste so much and cause financial fragility [37]. The knowledge of saving serves as a bulwark in the face of financial shocks that are a factor in the occurrence of financial fragility [39]. Indebtedness knowledge is important to ensure

that individuals do not fall into the problem of indebtedness [45]. Excessive indebtedness will lead to financial fragility [80].

Good financial behavior can curb financial fragility [53,54]. Good spending behavior is necessary so that individuals do not fall prey to financial fragility [59]. Good saving behavior is a barrier to financial fragility [43]. In addition, indebtedness behaviors are a trigger for financial fragility [73]. Financial shocks cause difficulties in meeting survival, difficulties in saving, and high credit utilization [81]. As such, financial shocks are also among the factors contributing to financial fragility [83].

The hypothesis of this study is that the financial fragility of urban single youth is influenced by financial knowledge, spending knowledge, saving knowledge, indebtedness knowledge, financial behavior, spending behavior, saving behavior, indebtedness behavior, and financial shock.

### 3. Methods

#### 3.1. Population, Sample and Sampling

The study population was made up of single youth aged 25–34 years in the middle-income group (M40) in the federal territory of Putrajaya. The income range of this group was RM3860 to RM8319. The target sample consists of officers working in the human resources divisions of each ministry in Putrajaya. Information from the Department of Statistics Malaysia (2018) shows that there are 5753 single youths aged between 25 and 34 years old in the Federal Territory of Putrajaya. Based on [85] formula, the study sample size was 374 people. The purposive sampling technique [86,87] was used because it fulfilled the scope of the study, i.e., M40 youth aged 25 to 34 years, unmarried, and settled in urban areas.

#### 3.2. Instruments and Measurements

Questionnaires were used as research instruments. The questionnaire was divided into five sections, namely: respondent profile, financial knowledge, financial behavior, financial shock, and financial fragility. Financial knowledge was broken down into four variables, namely financial knowledge, spending knowledge, saving knowledge, and indebtedness knowledge. A total of 25 statements were submitted by giving a choice of “correct” or “incorrect” answers for each statement. The correct answer was given a score of “1”, and the wrong answer was given a score of “0”. Financial behavior was broken down into four variables, namely financial behavior, spending behavior, saving behavior, and indebtedness behavior. A total of 20 statements were presented using Likert scale measurements, namely 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always. Financial shocks were measured based on four situations, namely the ability to provide cash of RM1000, RM2000, RM4000, and RM6000. The ability to provide cash was measured based on the Likert scale, namely 1 = very incapable, 2 = incapable, 3 = less capable, 4 = capable, and 5 = very capable. Financial fragility was measured based on the statement “I can provide cash of RM8000 immediately without compromising survival for subsequent months” with the Likert scale measurement, which is 1 = very incapable, 2 = incapable, 3 = less capable, 4 = capable, and 5 = very capable.

#### 3.3. Data Collection

Questionnaires were distributed online and via email and the WhatsApp application to M40 single youths. Emails and WhatsApp messages provided a brief description of the objectives of the study and the characteristics of the respondents required. The online primary data collection method was used because it saves time and costs because the complete primary data can be downloaded in Microsoft Excel format and accessed directly through the Google Drive website without requiring the researcher to provide the survey form in hard copy.

### 3.4. Pilot Study

A pilot study was conducted to ensure that the research instrument met the standards of reliability and validity. Measurements of reliability and validity were determined based on Cronbach alpha and Kuder-Richardson 20 values [88]. The test results recorded good and very good scores, namely financial knowledge (0.795), spending knowledge (0.870), saving knowledge (0.830), indebtedness knowledge (0.836), financial behavior (0.758), spending behavior (0.783), spending behavior saving (0.685), indebtedness (0.852), financial shock (0.835), and financial fragility (0.835). The test on the variable has a variance inflation factor (VIF) value ranging from 1.238 to 2.907, meaning all variables pass the multicollinearity test and multiple regression analysis can be performed.

### 3.5. Data Analysis

Data analysis was performed both descriptively and inferentially. Average scores were classified into three levels, namely low (1.00–2.33), medium (2.34–3.67), and high (3.68–5.00) [89]. Average scores were used to interpret the level of financial fragility of this study. Pearson correlation analysis and multiple regression were used to measure relationships and determine factors influencing financial fragility [90]. Normality and linearity tests were also performed to ensure data was normally distributed to meet the preconditions for performing multiple regression analysis. Multiple regression equations are as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots \dots + b_nX_n + \mu$$

where:

Y = Financial Fragility;

a = constant;

$b_1$  to  $b_9$  = the value of the coefficient of each variable;

$X_1$  = Financial Knowledge;

$X_2$  = Spending Knowledge;

$X_3$  = Saving Knowledge;

$X_4$  = Indebtedness Knowledge;

$X_5$  = Financial Behavior;

$X_6$  = Shopping Behavior;

$X_7$  = Saving Behavior;

$X_8$  = Indebtedness Behavior;

$X_9$  = Financial Shock.

## 4. Results and Discussions

### 4.1. Respondent Profile

Table 1 shows the profile of the respondents. A total of 374 people was involved in the study, namely males (52.7%) and females (47.3%). The majority of respondents have a bachelor's degree (93%), are Muslim (82.9%), and Malay (82.6%). More than half of the respondents were aged between 25 and 28 years (52.7%), followed by 29 to 31 years (27.5%), and 32 to 34 years (19.8%). Most of the respondents have an income of between RM3860–5346 (63.4%) and an estimated cash savings of in excess of RM15,001 (61.2%).

**Table 1.** Respondent Profile.

	Frequency (%)		Frequency (%)
Gender:		Religion:	
Male	197 (52.7)	Islam	310 (82.0)
Female	177 (47.4)	Christianity	38 (10.2)
Educational Qualification:		Buddha	18 (4.8)
Diploma	1 (0.3)	Hindu	8 (2.1)
Bachelor's degree	348 (93.0)	Ethnicity:	
Masters	23 (6.1)	Malay	309 (82.6)
PhD	2 (0.5)	Chinese	19 (5.1)
Age:		India	9 (2.4)
25–28 years	197 (52.7)	Indigenous Sabah	19 (5.1)
29–31 years	103 (27.5)	Indigenous Sarawak	18 (4.8)
32–34 years	74 (19.8)	Estimated Savings:	
Monthly Income:		<RM5000	71 (19.0)
RM3860–5346	237 (63.4)	RM5001–10,000	53 (14.2)
RM5347–6833	115 (30.7)	RM10,001–15,000	21 (5.6)
RM6834–8319	22 (5.9)	>RM15,001	229 (61.2)

#### 4.2. Respondents Financial Fragility

The results showed that only a handful of respondents were “very incapable” of providing cash of RM8000 (1.3%); the rest chose “incapable” (17.6%) and “less capable” (12.3%). The remaining 14.2% of respondents chose the “affordable” scale and 54.5% chose “very affordable” to provide cash of RM8000. This distribution shows that more than half of the respondents did not have a problem providing cash of RM8000 if needed. Overall, 31% of respondents experienced financial fragility and the rest did not face financial fragility (69%). These findings indicate that financial fragility occurs among respondents even though they belong to the middle class. This shows that respondents who have strong finances are supported by those who have an estimated cash savings of more than RM10,000. The findings of this study are in line with the recommendation that each individual should have sufficient financial resources to cover three to six months of expenses.

In general, the results of the study showed that 69% of M40 single youths did not face financial fragility and 31%, the opposite. Previous studies have also found that financial fragility is prevalent among the millennial generation aged 18 to 35, regardless of income and education level [3,4]. All M40 single youths who have an estimated cash savings of more than RM15,000 do not experience financial fragility. Only a small number of M40 single youths who have an estimated cash savings of less than RM15,000 do not experience financial fragility. This shows that many M40 single youths have good savings. This is in contrast to the findings of [70] who found that only a small number of millennial generations are able to save.

#### 4.3. Correlations Analysis

Table 2 shows the relationships between independent and dependent variables. Financial fragility had a very weak negative correlation with financial knowledge ( $r = -0.251$ ,  $p < 0.05$ ), spending knowledge had a weak positive correlation ( $r = 0.407$ ,  $p < 0.05$ ), saving knowledge had a weak positive correlation ( $r = 0.302$ ,  $p < 0.05$ ), indebtedness knowledge had a weak positive correlation ( $r = 0.361$ ,  $p < 0.05$ ), financial behavior had a very weak positive correlation ( $r = 0.079$ ,  $p < 0.05$ ), spending behavior also had a very weak positive correlation ( $r = 0.129$ ,  $p < 0.05$ ), investment behavior had a very weak positive correlation ( $r = 0.268$ ,  $p < 0.05$ ), indebtedness behavior had a very weak positive correlation ( $r = 0.048$ ,  $p < 0.05$ ), and financial shock had a strong positive correlation ( $r = 0.798$ ,  $p < 0.05$ ).

**Table 2.** Relationship between independent variables and dependent variable.

	<i>r</i>	<i>p</i>
Financial Knowledge	−0.251 **	0.000
Spending Knowledge	0.407 **	0.000
Investment Knowledge	0.302 **	0.000
Indebtedness Knowledge	0.361 **	0.000
Financial Knowledge	0.079	0.127
Spending Behavior	0.129 *	0.013
Investment Behavior	0.268 **	0.000
Indebtedness Behavior	0.048	0.354
Financial Shock	0.798 **	0.000

\* Correlation is significant at the 0.05 level (two-tailed). \*\* Correlation is significant at the 0.01 level (two-tailed).

Pearson correlation analysis found that the variables of financial knowledge and financial behavior, spending behavior, saving behavior, and indebtedness behavior had a very weak relationship with financial fragility. The variables of spending knowledge, investment knowledge, and indebtedness knowledge had a weak relationship with financial fragility, whereas only the financial shock variable had a strong relationship with financial fragility.

#### 4.4. Multiple Regression Analysis

The results of the regression analysis showed that significantly as many as four predictor variables, namely spending knowledge ( $\beta = 0.914$ ,  $p < 0.05$ ), financial behavior ( $\beta = -0.647$ ,  $p < 0.05$ ), investment behavior ( $\beta = 0.545$ ,  $p < 0.05$ ), and financial shock ( $\beta = 10.693$ ,  $p < 0.05$ ) were significant factors in the occurrence of financial fragility. Meanwhile, there were five predictor variables that were not factors in the occurrence of financial fragility, namely financial knowledge ( $\beta = 0.151$ ,  $p > 0.05$ ), investment knowledge ( $\beta = 0.852$ ,  $p > 0.05$ ), indebtedness knowledge ( $\beta = -0.014$ ,  $p > 0.05$ ), spending behavior ( $\beta = 0.109$ ,  $p > 0.05$ ), and indebtedness behavior ( $\beta = -0.154$ ,  $p > 0.05$ ). The R-square value,  $R^2 = 0.720$  indicated that all four predictor variables contributed to 72% in the variance change in the financial fragility of M40 youth in urban areas [ $F(9, 364) = 440.714$ ,  $p < 0.05$ ]. Thus, the model of financial fragility among M40 youth in urban areas is represented by the following equations:

$$Y = -4.620 + 0.151X_1 + 0.914X_2 + 0.852X_3 + -0.014X_4 + -0.647X_5 + 0.109X_6 + 0.545X_7 + -0.154X_8 + 1.693X_9$$

Based on the results of the various analyses above, the study concludes that, namely spending knowledge, financial behavior, investment behavior, and financial shock are predictive factors of financial fragility among M40 single youth in urban areas. Table 3 shows the results of the coefficients analysis.

Multiple regression analysis found that spending knowledge, financial behavior, investment behavior, and financial shock were factors in financial fragility. This finding is in line with the findings of [37] who found that financial knowledge has no significant relationship on financial fragility. Indebtedness behavior was also found to not to be a predictor factor to financial fragility. According to [26], individuals with good financial knowledge have a low probability of getting into debt. Financial knowledge and indebtedness behaviors resulted in respondents' being disciplined in financing borrowing costs and less reliant on loans, which was also found in [22]. Education level has a relationship with financial behavior but no influence on financial fragility [3,55].

**Table 3.** Coefficient of Predictor Factors on Financial Fragility.

Independent Variable	B	Beta	t-Value	Sig.
Constant (Constant)	−4.620		−6.567	0.000
Financial Knowledge	0.151	0.050	1.494	0.136
Spending Knowledge	0.914	0.115	3.717	0.000
Investment Knowledge	0.852	0.056	1.815	0.070
Indebtedness Knowledge	−0.014	−0.001	−0.031	0.975
Financial Behavior	−0.647	−0.281	−5.955	0.000
Spending Behavior	0.109	0.037	1.067	0.287
Investment Behavior	0.545	0.149	3.741	0.000
Indebtedness Behavior	−0.154	−0.053	−1.394	0.164
Financial Shock	1.693	0.814	20.373	0.000

## 5. Discussions

Financial fragility is a phenomenon that is plaguing the youth nowadays. Lifestyle changes compared to previous generations have left youths vulnerable to financial fragility without realizing it [15–17]. Financial knowledge and financial behavior, spending behavior, saving behavior, and indebtedness behavior all demonstrated extremely poor associations with financial fragility, according to Pearson correlation analysis. Only the financial shock factors had a high link with financial fragility, whereas spending knowledge, saving knowledge, and indebtedness knowledge had a modest relationship with financial fragility.

Financial knowledge, saving knowledge, indebtedness knowledge, spending behavior, and indebtedness behavior were not factors in financial fragility, according to multiple regression analysis, contradicting earlier research findings [26,29,39,48]. Nevertheless, based on the primary data obtained from the respondents, it should be concluded that these five predictor factors do not affect financial fragility. Conversely, the results of this analysis are in line with the findings of a study conducted by [37] on 60 young employee respondents, who found that financial literacy had no significant relationship to spending behavior and that respondents practiced strict spending behavior.

The study by [37] also found that female respondents think more deeply about the importance of a purchase. Moreover, the indebtedness behavior, which was also found not to be a predictor factor for financial fragility, was influenced by the good financial knowledge scores among the respondents. This is because, according to a study conducted by [60], individuals with good financial management knowledge have a low probability of getting into debt. The relationship between financial knowledge and indebted behavior drives individuals to be more disciplined in financing borrowing costs and less dependent on borrowing. In the context of the findings of this study, good financial knowledge has a positive impact on respondents' financial behavior and indebtedness behavior.

The youth's knowledge of spending needs to be improved in the face of the rapid trend of online shopping [17]. Online shopping is proven to provide convenience for young people. Young people only need to press a button on their smartphone to research, select, and purchase the product they desire. At the same time, youths were also found to be easily swayed by discount offers and reviews submitted by previous buyers [15]. Therefore, the knowledge of spending needs to be adapted to the trend of online buying [16]. Young people also need to spend by prioritizing necessities over wants. Luxurious lifestyles



and a lack of adequate exposure to financial management can leave youth vulnerable to financial fragility.

Saving behavior among youths can be improved by increasing their financial knowledge [41]. This is because financial knowledge influences saving behavior. Simultaneously, the choice of a medium of delivery that suits the soul of the youth should be considered, as it influences the rate of information reception. In addition, the government may consider providing nonfinancial incentives to youth who achieve a certain amount of savings.

Financial shocks are predictive factors influencing financial fragility [82]. Financial shocks cause the loss of household sources of income as a result of unemployment or death. Financial shocks can also occur due to changes in government policies or financial institutions. To deal with financial shocks, youths must have savings or financial resources that can finance a minimum of three months of survival. Youth can also diversify investment assets in addition to savings, meaning that savings and investments can be used as tools to deal with financial shocks.

## 6. Conclusions

Overall, financial knowledge, financial behavior, spending behavior, investment behavior, and indebtedness behavior have a very weak relationship with financial fragility. Knowledge of spending, knowledge of investment, and knowledge of indebtedness had a weak relationship with financial fragility, whereas only financial shock had a strong relationship with financial fragility. Financial knowledge, investment knowledge, indebtedness knowledge, spending behavior, and indebtedness behavior were also found to be nonpredictors of financial fragility. Whereas spending knowledge, financial behavior, investment behavior, and financial shock were predictor factors in financial fragility, where these predictor factors contributed to 72% of a variance change.

The knowledge of spending among the youth needs to be improved in the face of the rapid trend of buying online or digitally through shopping applications. The selection of a medium of delivery that suits the souls of the youth should also be considered as it affects the rate of information reception. In addition, youths need to spend by prioritizing needs over wants. Saving behavior among youth needs to be improved as it affects financial fragility. Financial shocks have a strong relationship and influence on financial fragility. Therefore, youths must have an amount of savings that they can afford to finance at least three months of expenses for survival. In fact, youths can also diversify their investment assets in addition to savings. This is because savings and investments can be tools for dealing with financial shocks.

This study can be a reference for policymakers such as the Ministry of Education Malaysia and Bank Negara Malaysia. The Ministry of Education Malaysia may consider and introduce financial literacy education at the early school stage to university level. This early disclosure is important because it will shape financial behavior from an early age. Bank Negara Malaysia, on the other hand, needs to formulate financial policies, especially credit loan facilities, whether credit cards, vehicle loans, personal loans, or real estate loans, that are suitable for youth. Apart from that, Bank Negara Malaysia must also ensure that any change in monetary policy does not cause financial shocks to the detriment of youth personal finances.

The study was limited to youth aged 25 to 34 years because youth in this age category had access to a variety of financial products early in their careers. This study is also limited to single youth, and was in line with the findings that there is a significant difference between expenditures between married youth and single youth. Further research should be conducted in metropolitan cities, such as the Federal Territory of Kuala Lumpur, Johor Bharu, or Penang, by maintaining the criteria of respondents, namely single youth M40. This is because the higher cost of living is different in those states and this would potentially produce different findings from this study. Further studies can also be conducted on married youth in the high-income group (T20) in metropolitan cities. This suggestion

emanates from the problem of financial fragility, which can also occur among those with high incomes in the city.

**Author Contributions:** Conceptualization, H.B.A.N. and Z.R.; methodology, Z.R. and A.H.A.; formal analysis, Z.R. and H.B.A.N.; writing—original draft preparation, Z.R.; writing—review and editing, S.M.S.; supervision, Z.R. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research and APC was funded by Fundamental Research Grant Scheme FRGS/1/2019/SS08/UKM/02/1.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** Appreciation goes to Fundamental Research Grant Scheme FRGS/1/2019/SS08/UKM/02/1 for funding the research. Appreciation also goes to the Socio-Electoral Forensic Grant SK-2017-002 for supporting this publication.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Allen, F.; Gale, D. Financial Fragility, Liquidity, and Asset Prices. *J. Eur. Econ. Assoc.* **2004**, *2*, 1015–1048. [CrossRef]
- Bolton, P.; Santos, T.; Scheinkman, J.A. Savings Gluts and Financial Fragility. *Rev. Financ. Stud.* **2021**, *34*, 1408–1444. [CrossRef]
- Lusardi, A.; Schneider, D.; Tufano, P. Financially Fragile Households: Evidence and Implications. 2011. Available online: [https://www.brookings.edu/wp-content/uploads/2011/03/2011a\\_bpea\\_lusardi.pdf](https://www.brookings.edu/wp-content/uploads/2011/03/2011a_bpea_lusardi.pdf) (accessed on 9 November 2018).
- Yusof, S.A.; Rokis, R.A.; Wan Jusoh, W.J. Financial Fragility of Urban Households in Malaysia. *J. Ekon. Malays.* **2015**, *49*, 15–24. [CrossRef]
- Hasler, A.; Lusardi, A. Financial Fragility among Middle-Income Households: Evidence beyond Asset Building. 2019. Available online: <https://www.pgpf.org/sites/default/files/US-2050-Financial-Fragility-Among-Middle-Income-Households-Evidence-Beyond-Asset-Building.pdf> (accessed on 18 May 2020).
- Leclaire, J. Does Household Debt Matter to Financial Fragility? *Rev. Polit. Econ.* **2021**, 1–20. [CrossRef]
- Ampudia, M.; Vlokhoven, H.V.; Zochowski, D. Financial Fragility of Euro Area Households. *J. Financ. Stab.* **2016**, *27*, 250–261. [CrossRef]
- Gupta, R.; Hasler, A.; Lusardi, A.; Oggero, N. Financial Fragility in the US: Evidence and Implications. 2017. Available online: [https://www.nefe.org/\\_images/research/Financial-Fragility/Financial-Fragility-Final-Report.pdf](https://www.nefe.org/_images/research/Financial-Fragility/Financial-Fragility-Final-Report.pdf) (accessed on 18 May 2020).
- Society of Actuaries. Financial Fragility Across the Generations. 2019. Available online: <https://www.soa.org/globalassets/assets/Files/resources/research-report/2019/financial-fragility-across-generations.pdf> (accessed on 25 February 2021).
- Bolognesi, A.; Hasler, A.; Lusardi, A. Millennials and Money: Financial Preparedness and Money Management Practices before COVID-19. 2020. Available online: <https://gflec.org/wp-content/uploads/2020/08/Millennials-and-Money-Technical-Report-August2020.pdf?x38887> (accessed on 25 February 2021).
- Greenwald Research. Exploring Financial Fragility across Generations, Race and Ethnicity. 2021. Available online: <https://www.soa.org/globalassets/assets/files/resources/research-report/2021/2021-financial-fragility.pdf> (accessed on 15 January 2022).
- Brunetti, M.; Giarda, E.; Torricelli, C. Is financial fragility a matter of illiquidity? An appraisal for Italian households. SAVE-PHF conference demographic trends, saving and retirement security. *Rev. Income Wealth* **2012**, *62*, 628–649. [CrossRef]
- Bialowolski, P.; Weziak-Bialowolska, D.; McNeely, E. The Role of Financial Fragility and Financial Control for Well-Being. *Soc. Indic. Res.* **2021**, *155*, 1137–1157. [CrossRef]
- Chletsosa, M.; Sintos, A. The effect of financial fragility on employment. *Econ. Model.* **2021**, *94*, 104–120. [CrossRef]
- Andrew, C.B.; John, P.; Kemble, N.; Charles, M. The Millennials and Money Management. *J. Manag. Mark. Res.* **2010**, *4*, 1–28.
- Endsley, F.; Matthews, L.; Ward, C. An Analysis of Millennials and their Interactions with Financial Institutions. *Atl. Mark. J.* **2020**, *9*, 1–8.
- Foster, B.; Sukono; Johansyah, M.D. Analysis of the Effect of Financial Literacy, Practicality, and Consumer Lifestyle on the Use of Chip-Based Electronic Money Using SEM. *Sustainability* **2022**, *14*, 32. [CrossRef]
- Foo Yu, K.; Jupri, N. Factors that Lead to Financial Distress of Generation Y in Malaysia. *Int. J. Account. Bus. Manag.* **2015**, *3*, 109–120. [CrossRef]
- Ng, A.; Firouz, A.M.M.; Khalidi, J.R.; Muhtar, M.A.; Tumin, S.A.; Man, T.K.; Theng, T.T.; Gen, T.Z. *The State of Households 2018: Different Realities*; Khazanah Research Institute: Kuala Lumpur, Malaysia, 2018; Available online: <http://www.krinstitute.org/assets/contentMS/ing/template/editor/FullReportKRISOH2018.pdf> (accessed on 27 July 2020).
- Peng Tey, N.; Li Lai, S.; Tho Ng, S.; Leng Goh, K.; Osman, A.F. Income Inequality Across States In Malaysia. *Plan. Malays.* **2019**, *17*, 12–26.
- Md Hashim, S.L.; Mohamad Nor, N.I. Financial Behavior and Financial Literacy towards Financial Fragility: A Case of Household in Klang Valley. *Int. J. Bus. Econ.* **2021**, *3*, 91–103.

22. Cai, Y.; Yusof, S.A.; Mohd Amin, R.; Mohd Arshad, M.N. The Multi-dimensional Effect of Household Debt on Urban Individual Well-Being in Klang Valley Malaysia. *Soc. Indic. Res.* **2021**, *158*, 23–44. [CrossRef]
23. Warren, E.; Tyagi, A.W. *The Two Income Trap: Why Middle-Class Mothers and Fathers Are Going Broke*; Basic Books: New York, NY, USA, 2003.
24. Lusardi, A.; Mitchell, O.S.; Curto, V. Financial Literacy among the Young. *J. Consum. Aff.* **2010**, *44*, 358–380. [CrossRef]
25. Azman, N.; Zakaria, R.H.; Marican, S. Sikap Isi Rumah Terhadap Hutang dan Keberhutangan: Kajian Kes di Lembah Klang, Malaysia. *Malays. J. Soc. Adm.* **2013**, *9*, 59–86. (In Malaysian) [CrossRef]
26. Dewi, V.; Febrian, E.; Effendi, N.; Mokhamad, A. Financial Literacy among the Millennial Generation: Relationships between Knowledge, Skills, Attitude, and Behavior. *Australas. Account. Bus. Financ. J.* **2020**, *14*, 24–37. [CrossRef]
27. Mokhtar, N.; Sabri, M.F.; Ho, C.S.F. Financial Capability and Differences in Age and Ethnicity. *J. Asian Financ. Econ. Bus.* **2020**, *7*, 1081–1091. [CrossRef]
28. Potrich, A.C.G.; Vieira, K.M.; Mendes-Da-Silva, W. Development of a financial literacy model for university students. *Manag. Res. Rev.* **2016**, *39*, 356–376. [CrossRef]
29. Anderloni, L.; Vandone, D. Risk of Over-Indebtedness and Behavioral Factors. In *Risk Tolerance in Financial Decision Making*; Lucarelli, C., Brighetti, G., Eds.; Palgrave Macmillan: London, UK, 2011; pp. 113–132.
30. Jia, L.Y. Financial Vulnerability of Working Adults in Malaysia. *Contemp. Econ.* **2016**, *11*, 205–218.
31. Aristei, D.; Gallo, M. Financial Knowledge, Confidence, and Sustainable Financial Behavior. *Sustainability* **2021**, *13*, 10926. [CrossRef]
32. Folk, J.Y.; Beh, L.S.; Baranovich, D. Financial Education: Determinant of Retirement Planning in Malaysia. *J. Bus. Manag. Econ.* **2012**, *3*, 69–78.
33. Yong, C.C.; Yew, S.Y.; Wee, C.K. Financial Knowledge, Attitude and Behaviour of Young Working Adults in Malaysia. *Inst. Econ.* **2018**, *10*, 21–48.
34. Huston, S.J. Measuring financial literacy. *J. Consum. Aff.* **2010**, *44*, 296–316. [CrossRef]
35. Hung, A.; Parker, A.M.; Yoong, J. *Defining and Measuring Financial Literacy*; Working Paper Series WR-708; RAND Corporation: Santa Monica, CA, USA, 2009; Available online: [https://www.rand.org/content/dam/rand/pubs/working\\_papers/2009/RAND\\_WR708.pdf](https://www.rand.org/content/dam/rand/pubs/working_papers/2009/RAND_WR708.pdf) (accessed on 25 February 2019).
36. Lusardi, A.; Oggero, N. Millennials and Financial Literacy: A Global Perspective. 2017. Available online: <https://gflec.org/wp-content/uploads/2017/07/Millennials-and-Financial-Literacy-Research-Paper.pdf> (accessed on 25 February 2021).
37. Andriani, D.; Nugraha, N. Spending Habits and Financial Literacy Based on Gender on Employees. In Proceedings of the International Conference on Informatics, Engineering, Science and Technology (INCITEST), Bandung, Indonesia, 9 May 2018; pp. 1–7.
38. Abd Rahman, A. Wanita dan Pengurusan Kewangan: Semasa dan Pasca-PKPB. 2020. Available online: <https://images.bernama.com> (accessed on 22 August 2021). (In Malaysian).
39. Wagner, J. An Analysis of the Effects of Financial Education on Financial Literacy and Financial Behaviors. Ph.D Thesis, University of Nebraska-Lincoln, Lincoln, NE, USA, 2015. Available online: <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1054&context=businessdiss> (accessed on 24 January 2018).
40. Ismail, S.; Serguieva, A.; Singh, S. Integrative model to students' attitude to educational loan repayment: A structural modelling approach. *J. Int. Educ. Bus.* **2011**, *4*, 125–135. [CrossRef]
41. Kadir, J.M.A.; Jamaluddin, A.A. Saving Behavior in Emerging Country: The Role of Financial Knowledge, Parent Socialization and Peer Influence. *J. Soc. Sci.* **2020**, *23*, 65–73.
42. Lewis, S.; Messy, F. *Financial Education, Savings and Investments: An Overview*; OECD Working Papers on Finance, Insurance and Private Pensions. No. 22; OECD Publishing: Paris, France, 2012; Available online: [https://www.oecd-ilibrary.org/financial-education-savings-and-investments\\_5k94gxrw760v.pdf](https://www.oecd-ilibrary.org/financial-education-savings-and-investments_5k94gxrw760v.pdf) (accessed on 24 January 2018).
43. Mahdzan, N.S.; Tabiani, S. The Impact of Financial Literacy on Individual Saving: An Exploratory Study in the Malaysian Context. *Transform. Bus. Econ.* **2013**, *12*, 41–55.
44. Aren, S.; Aydemir, S.D. A Literature Review on Financial Literacy. *Finans. Araştırmalar Çalışmalar Derg.* **2014**, *6*, 33–49. [CrossRef]
45. Gerardi, K.; Lorenz, G.; Stephan, M. *Financial Literacy and Subprime Mortgage Delinquency: Evidence from a Survey Matched to Administrative Data*; Federal Reserve Bank of Atlanta Working Paper 2010-10; Federal Reserve Bank of Atlanta: Atlanta, GA, USA, 2010; Available online: <https://www.atlantafed.org/-/media/documents/research/publications/wp/2010/wp1010.pdf> (accessed on 15 February 2019).
46. Disney, R.; John, G. Financial Literacy and Indebtedness: New Evidence for UK Consumers. 2011. Available online: <https://www.nottingham.ac.uk/cfcm/documents/papers/11-05.pdf> (accessed on 15 February 2019).
47. Janor, H.; Abd Rahman, A.; Mohd Amin, S.I. Peranan dan Kepentingan Literasi Kewangan Islam kepada Masyarakat Islam. In *Literasi Kewangan Islam di Malaysia*; Mohamad, H., Abdul Jalil, N.S., Eds.; Institut Kefahaman Islam Malaysia: Kuala Lumpur, Malaysia, 2021; pp. 53–88.
48. Idris, N.H.; Yazid, Z.H.; Faique, F.A.; Daud, S.; Ismail, S.; Bakri, M.H.; Md Taib, N. Financial Literacy and Debt Burden among Malay Youth Workers in Malaysia. *Adv. Sci. Lett.* **2016**, *22*, 4288–4292. [CrossRef]
49. Bentley, M.J.; Bogan, V.L. Boomerang Bias: Examining the Effect of Parental Coresidence on Millennial Financial Behavior. *Financ. Plan. Rev.* **2019**, *2*, 1–28. [CrossRef]

50. Bartley, J. What Drives Financial Literacy among the Young? *Undergrad. Econ. Rev.* **2011**, *7*, 1–16.
51. Andrzej, C.; Wiktor, C.; Wais, K. Debt Literacy and Debt Literacy Self-Assessment: The Case of Poland. *J. Consum. Aff.* **2019**, *53*, 24–57.
52. Noordin, N.; Zakaria, Z.; Mohamed Sawal, M.Z.H.; Ngah, K.; Hussin, Z.H. Bankruptcy among young executives in Malaysia. *Int. Conf. Econ. Mark. Manag.* **2012**, *28*, 132–136.
53. Calvin, M.; John, W.; Muteba, M.; Jacobus, N.K. Financial behavior, confidence, risk preferences and financial literacy of university students. *Cogent Econ. Financ.* **2018**, *6*, 1–25.
54. Ono, S.; Yuktadatta, P.; Taniguchi, T.; Iitsuka, T.; Noguchi, M.; Tanaka, S.; Ito, H.; Nakamura, K.; Yasuhara, N.; Miyawaki, C.; et al. Financial Literacy and Exercise Behavior: Evidence from Japan. *Sustainability* **2021**, *13*, 4189. [[CrossRef](#)]
55. De Bassa Scheresberg, C. Financial Literacy and Financial Behavior Among Young Adults: Evidence and Implications. *Numeracy* **2013**, *6*, 1–21. [[CrossRef](#)]
56. Mei Lyn, S.H.; Sahid, S. Economic Literacy and Its Effects on Students' Financial Behavior at Malaysian Public University. *Int. J. Acad. Res. Bus. Soc. Sci.* **2021**, *11*, 736–750. [[CrossRef](#)]
57. Birari, A.; Patil, U. Spending and Saving Habits of Youth in the City of Aurangabad. *SIJ Trans. Ind. Financ. Bus. Manag.* **2014**, *2*, 158–165. [[CrossRef](#)]
58. Robb, C.A.; Woodyard, A.S. Financial Knowledge and Best Practice Behavior. *J. Financ. Couns. Plan.* **2011**, *22*, 60–70.
59. Diana-Rose, F.; Zariyawati, M.A. *Factors Affecting Youth Bankruptcy in Malaysia*; UPM-SAGE Publications Young Writer's Award 2015 Papers; Perpustakaan Sultan Abdul Samad, Universiti Putra Malaysia: Selangor, Malaysia, 2015; Available online: <http://upmsage.upm.edu.my/wp-content/uploads/2017/04/paper2.pdf> (accessed on 21 March 2018).
60. Haji Idris, F.; Krishnan, K.S.D.; Azmi, N. Relationship between Financial Literacy and Financial Distress among Youths in Malaysia—An empirical study. *Malays. J. Soc. Space* **2013**, *9*, 106–117.
61. Alidiniah, N.A.R.; Ahmad, S.; Mohd Noor, M.A.; Moi, M.R. Gelagat Hutang Isi Rumah Mengikut Kaum di Bandar Baru Bangi, Selangor. *Malays. J. Soc. Space* **2015**, *11*, 110–119. (In Malaysian)
62. Melovića, B.; Šehovića, D.; Karadžića, V.; Dabićbc, M.; Ćirovića, D. Determinants of Millennials' Behavior in Online Shopping—Implications on Consumers' Satisfaction and E-Business Development. *Technol. Soc.* **2021**, *65*, 101561. [[CrossRef](#)]
63. Syuhaily, O.; Benjamin, Y.B.C.; Yeoh, F.Y. Simulation of Sales Promotions towards Buying Behavior among University Students. *Int. J. Mark. Stud.* **2011**, *3*, 78.
64. Mokhtar, N.; Moga Dass, T.; Sabri, M.Z.; Ho, C.S. A Preliminary Evaluation of Financial Literacy in Malaysia. *J. Wealth Manag. Financ. Plan.* **2018**, *5*, 3–16.
65. McGuigan, J.R.; Moyer, R.C.; Harris, F.H. *Managerial Economics: Applications, Strategy and Tactics*; Thomson South-Western: Mason, OH, USA, 2005.
66. Chudzian, J.; Anioła-Mikołajczak, P.; Pataraiia, L. Motives and Attitudes for Saving Among Young Georgians. *Econ. Sociol.* **2015**, *8*, 165–188. [[CrossRef](#)]
67. Sundarasan, S.D.D.; Rahman, M.S. Attitude towards Money: Mediation to Money Management. *Acad. Account. Financ. Stud. J.* **2017**, *21*, 1–17.
68. Salikin, N.; Ab. Wahab, N.; Zakaria, N.; Masruki, R.; Nordin, S.N. Students' Saving Attitude: Does Parents' Background Matter? *Int. J. Trade Econ. Financ.* **2012**, *3*, 479–484.
69. Boon, T.H.; Yee, H.S.; Ting, H.W. Financial Literacy and Personal Financial Planning in Klang Valley, Malaysia. *Int. J. Econ. Manag.* **2011**, *5*, 149–168.
70. Ganesan, A.S. Consumption, Spending and Investment Behaviour of Malaysia Generation Y. Master's Thesis, Universiti Tunku Abdul Rahman, Perak, Malaysia, 2012. Available online: <http://eprints.utar.edu.my/id/eprint/683> (accessed on 28 March 2018).
71. Espiño, M.A.; Fernández-López, S.; Rey-Ares, L.; Castro-González, S. Financial Capability and Financial Behaviour of The Millennial Generation in Spain. *Rev. Galega Econ.* **2020**, *29*, 1–20.
72. Letkiewicz, J.C.; Fox, J.J. Conscientiousness, financial literacy, and asset accumulation of young adults. *J. Consum. Aff.* **2014**, *48*, 274–300. [[CrossRef](#)]
73. Cavalletti, B.; Lagazio, C.; Vandone, D.; Lagomarsino, E. *Consumer Debt and Financial Fragility in Italy*; Departmental Working Papers 2014-08; Department of Economics, Management and Quantitative Methods at Università Degli Studi di Milano: Milano, Italy, 2014; Available online: <https://ideas.repec.org/p/mil/wpdepa/2014-08.html> (accessed on 28 March 2018).
74. Wickramasinghe, V.; Gurugamage, A. Effects of social demographic attributes, knowledge about credit cards and perceived lifestyle outcomes on credit card usage. *Int. J. Consum. Stud.* **2012**, *36*, 80–89. [[CrossRef](#)]
75. Zuroni, M.J.; Lin, L.Y. Personal Financial Knowledge and Attitude towards Credit Card Practices Among Working Adults in Malaysia. *Int. J. Bus. Soc. Sci.* **2012**, *3*, 176–185.
76. Gardarsdottir, R.B.; Dittmar, H. The Relationship of Materialism to Debt and Financial Wellbeing: The Case of Iceland's Perceived Prosperity. *J. Econ. Psychol.* **2012**, *33*, 471–481. [[CrossRef](#)]
77. Ishak, S.; Che Omar, C.O. Belia dan Hutang: Meneliti Perspektif dan Amalan Mengurus dalam Kalangan Belia. *Glob. J. Al Thaqafah* **2020**, *10*, 48–57. (In Malaysian) [[CrossRef](#)]
78. Adzis, A.A.; Abu Bakar, J.; Shahar, H.K. Factors Influencing Young Adults' Debt in Malaysia. *J. Bus. Retail. Manag. Res.* **2017**, *12*, 76–85. [[CrossRef](#)]
79. Michelangeli, V.; Pietruni, M.A. Microsimulation Model to Evaluate Italian Households' Financial Vulnerability. 2014. Available online: <https://www.bancaditalia.it/pubblicazioni/qef/2014-0225/QEF-225.pdf> (accessed on 9 July 2018).

80. Bratberg, A.; Monstad, K. Worried sick? Worker Responses to a Financial Shock. *Labour Econ.* **2015**, *33*, 111–120. [[CrossRef](#)]
81. Bufe, S.; Roll, S.; Kondratjeva, O.; Skees, S.; Grinstein-Weiss, M. Financial Shocks and Financial Well-Being: What Builds Resiliency in Lower-Income Households? *Soc. Indic. Res.* **2021**, 1–29. [[CrossRef](#)]
82. The Pew Charitable Trusts. The Role of Emergency Savings in Family Financial Security: How Do Families Cope with Financial Shocks? 2015. Available online: [https://www.pewtrusts.org/~/media/assets/2015/10/emergency-savings-report-1\\_artfinal.pdf](https://www.pewtrusts.org/~/media/assets/2015/10/emergency-savings-report-1_artfinal.pdf) (accessed on 9 November 2018).
83. Heltberg, R.; Lund, N. Shocks, Coping, and Outcomes for Pakistan’s Poor: Health Risks Predominate. *J. Dev. Stud.* **2009**, *45*, 889–910. [[CrossRef](#)]
84. Jusoh Hussain, N.B.; Abd Samad, K.; Masdek, N.R.N.M.; Abdul Rahman, N.; Ismail, W.M.W.; Zaki, B.M. Does Income Shock During Covid-19 Make Any Difference on Consumption among Malaysian Household. *Int. J. Acad. Res. Econ. Manag. Sci.* **2020**, *9*, 21–30.
85. Yamane, T. *Statistics: An Introductory Analysis*, 2nd ed.; Harper and Row: Manhattan, NY, USA, 1967.
86. Maxwell, J.A. *Applied Social Research Methods Series: Qualitative Research Design: An Interactive Approach*; Sage Publishing: London, UK, 1996.
87. Taherdoost, H. Sampling Methods in Research Methodology: How to Choose a Sampling Technique for Research. *SSRN Electron. J.* **2016**, *5*, 18–27. [[CrossRef](#)]
88. Fisher, P.J.; Montalto, C.P. Effect of Saving Motives and Horizon on Saving Behaviors. *J. Econ. Psychol.* **2010**, *31*, 92–105. [[CrossRef](#)]
89. Landell, K. *Management by Menu*; Wiley & Sons Inc.: Hoboken, NY, USA, 1997.
90. Chua, Y.P. *Mastering Research Statistics*, 2nd ed.; McGraw-Hill: Kuala Lumpur, Malaysia, 2020.