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STUDENT LOANS AS AN OPPORTUNITY FOR INVESTMENTS FOR FINNISH STUDENTS

Investment behaviour for Finnish student loan recipients

Bachelor's thesis

Programme International Business Administration, specialisation Finance

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I hereby declare that I have compiled the thesis independently
and all works, important standpoints and data by other authors
have been properly referenced and the same paper
has not been previously presented for grading.
The document length is 8064 words from the introduction to the end of conclusion.

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ABSTRACT

This study aims to determine if Finnish government-granted student loans encourage Finnish students to invest more. Finnish student loan has had a potential compensation of 40% since 2014. The compensation is valid if recipients graduate from their higher education in the scheduled duration of the programme, among other perks, such as low-interest rates. This study also aims to find out if the field of study influences investment behaviour and in which products students prefer to invest after student loan withdrawal.

The study obtained 110 responses with an online questionnaire. The questionnaire was distributed to Finnish students studying across the globe via social media platforms and email. The questionnaire consists of questions regarding demographic and socioeconomic characteristics, which are followed by questions regarding investment behaviour. The data obtained from the questionnaire was used to achieve the study's goal. Future research can use the information from this study and build on it due this topic having limited previous research.

Keywords: student loan, student loan compensation, investing, investment behaviour, investment products.

INTRODUCTION

In 2014, the Finnish government announced that students who began their first higher education program on August 1, 2014, or after are eligible to accept government-guaranteed student loans with the possibility of a 40% discount if they graduate from their institution in due time and withdraw at least 2 500 € of student loan (Kela 2022). This policy aimed to encourage and give Finnish students the incentive to graduate from the institution within the planned time period of the degree. In addition to the discount, the government-granted student loan has a significantly lower interest rate compared to other forms of loans, such as mortgage and consumer loans. According to Suomen Pankki, Euribor tied student loans withdrawn in January 2020 had an average interest rate of 0.27 % (Nordea 2022).

Finnish students are granted government-guaranteed student loans by Kela, the Social Insurance Institution of Finland. These guarantees usually have a lifespan of about 30 years. Eligibility for the loan is easy to meet because of minimal requirements, including being paid a study grant or adult education allowance by the Finnish Employment Fund. The maximum amount of loan paid is approximately (6 500 € annually) spread as 650 € per month and (8 000 annually €) spread as 800 € per month for students studying abroad. In addition to the loan, students receive a monthly student income from the government, which is free money. The monthly student income amount varies depending on each student's financial situation. (Kela 2022).

The aim of this study is to determine whether receiving government-guaranteed student loans with the possibility of a forty percent discount encourages Finnish students to invest more. If so, where and how do they invest money. The study also aims to analyze different variables connected to investment and saving behavior, such as social status, education level, and where the loan is allocated. Mainly to analyze the difference of investment behaviour between business students and students studying in different fields. Variables such as gender will be considered even if they are not expected to affect the final results as other variables. The study attempts to determine if the different fields of study affect students' investing behavior.

There are a limited amount of previous studies related to this topic. This study wants explicitly to analyze how student loan affects investment behavior. Even though the subject has few references, the author created research questions. This is explained in more detail in other sections of the thesis. It is important to note that this thesis focuses on student loans' effect on investment behavior. To determine these claims, a questionnaire was conducted and distributed via multiple channels to current and former Finnish students who were eligible for the student loan with the possible discount. The questionnaire is divided into general information, financial skill, and investment behavior. The content and description of the questionnaire are explained in the methodology and data section of the thesis. The questionnaire also includes questions about investing behavior before withdrawing their first student loan.

As mentioned above, this study's aim is to determine if receiving government-guaranteed student loans with the possibility of a forty percent discount encourages Finnish students to invest more. In addition to the aim of the study, three research questions were formed:

1. Do students' investment behavior change after withdrawing government-guaranteed student loans with the possibility of a discount?
2. Are there significant differences in investment behavior between business students and other students?
3. Into what products do Finnish students decide to ínvest after receiving government-guaranteed student loans?

The research is divided into three chapters. The first chapter covers the background of student loan and how Finnish student loan is perceived. The first chapter also reviews two theories that the author decided were relevant to the study. The examples of previous studies and theories will be reviewed to help define research questions and similar studies regarding investment behaviour are also used to prove the functionality of the questions used in the questionnaire. The second chapter covers how data was gathered from the questionnaire and the methodology used to analyze the data. Quantitative method in the form of a questionnaire was utilized and two different statistical tests used to determine results. The questionnaire is shown in the appendices (See appendix 1). The third chapter showcases the results obtained and the discussion of these results. The elaboration of results of the aim of the study and each research question is individually explained in this chapter of the study.

1. LITERATURE REVIEW

This chapter covers the background of the Finnish government-granted student loans and how they have evolved through the years. This is illustrated to help justify the research questions. The chapter also focuses on previous research on investment beahviour and student loan. Two theories related to the topic are also reviewed in the following chapter.

1.1. Background of Student Loan

Finland is a welfare state, and in a welfare state, it is common to provide citizens with basic financial security through social institutions (Investopedia 2022). To enable students to conduct their studies full-time, students' financial aid transitioned from a loan-based to a grant-based system in the 1992 Finnish Student Aid Reform Act (Kivinen, Hedman 2000). The Finnish state provides Finnish students with many benefits, including free education, government aid, and housing. However, Finnish people start to endure debt-related problems after the age of 18, when they can obtain private debt. Critical life events such as leaving home or becoming a parent are reasons for young adults experiencing debt problems. The debt problems are more frequent among less-educated individuals and those who move out earlier. Issues such as adverse credit rating can exponentially decrease the chances of obtaining other future credit. On the contrary, a Finnish student loan comes with multiple perks, such as a guarantee by the state, a prolonged repayment period, and a possible discount. Therefore, young adults' payment problems in Finland are not generally caused by student loans (Oksanen, Aaltonen, Rantala 2016).

Finnish student loans are paid back with fixed monthly payments. Other types of loan payments are income-based loans, in which the payments are calculated to match the individual's income. Fixed monthly payments can cause issues for post-graduates with low incomes. To try and avoid these issues, the Finnish government tied incentives to the government-guaranteed student loans. These incentives allow a portion of post-graduates to benefit from reductions in the amounts due and possibly receive additional reductions if degrees are completed in the scheduled time. (Del Rey, Schiopu 2016). Since 2014, when the possible student loan compensation of forty percent

was put in place for Finnish higher education students, the loan withdrawal rate, overall loan amount, and the number of graduates have increased. About EUR 227 million in student loan compensation has been paid out by the government during the years 2015-2021, and the utilization rate has risen by 7 percent from 55 percent to 63 percent (Valtioneuvosto 2022).

The banks play an essential role within the trio that constructs the cycle of student loans. The trio consists of the bank, government, and students. The banks' objective is to manage and issue the loans and compile a repayment schedule for the students according to their stage of life. To minimize risk, banks require compensation from the government in the form of possible student loan compensation, among other things. On the other hand, when banks issue loans to students, the banks essentially invest in long-lasting customer ties, which enhance future endeavors and increase revenue (Zhang, You, Wang, Lin 2020). The shift from undergraduates' life after graduation is emphasized, and efforts are put into this transition because the students are regarded as the future revenue generators (Bamforth, Jebarajakirthy, Geursen 2018).

Students from Finland who study in their home country, Nordic countries, or other EU countries benefit from little to no tuition fees compared to other countries. For example, in the United States, student loans have increased significantly due to increased tuition fees and competition. The U.S' current estimated outstanding student debt is approximately 1.9 trillion dollars (FinAid 2022). The U.S student loan system is on the threat of disintegration if not for federal backing of student loans. Due to the immense burdens of student loan repayments for graduates, student loan compensation and cancellations have been discussed within the U.S government. The current and former Presidents of the U.S, Joe Biden, and Donald Trump, have extended the current hold on student loan repayments due to the COVID-19 pandemic and repayment difficulties. Certain democratic lawmakers have also pushed President Biden to cancel up to 50 000 dollars of student debt per debtor (CNN 2022).

1.2. Previous Research

In Finland, the difference in income between age groups has grown throughout the years. The income evolution of the elderly population is increasing while the income evolution has remained stagnant for young adults (Mäki-Fränti, Kinnunen 2016). Pensions will likely decrease in the future, which should push young adults to invest in their future more (Laakkonen & Raja 2020).

The Eurostudent VII- research studies higher education students' income, social background, and internationalism. The results are used by the Finnish Parliament, Ministry of Education and Culture, and other similar parties to help them govern. There were 25 934 participants in the 2019 research, and the results showed that 59 percent of polytechnic and 55 percent of university students worked while studying (Saari, Koskinen, Attila, Sarén 2020).

Financial literacy refers to the comprehension of financial skills and money management. The better financial literacy an individual has, the better chanches they have to performing well in the financial markets (Investopedia 2021). PISA (Programme for International Students Assessment) is a research program created by the member countries of OECD (Organisation for Economic and Cultural Development). The purpose of the research is to produce data and information about the outcomes of studies. Finland participated in the PISA financial literacy section for the first time in 2018 and young Finnish people were ranked second, tied with Canada. The highest-ranked country was Estonia. Thirteen countries participated and the average grade point was 500 points. Finland's grade point average was 537 points (Laine, Ahonen, Nissinen 2020).

With all the benefits of the Finnish student loan, many students still prefer to work while studying because they see work income as a more risk-averse income than the loan (Mustajärvi 2017). However, withdrawing the student loan even if working can be beneficial. In Finland, it is not uncommon to find students who work, live in their parents' homes, or have someone else pay for their living expenses while studying. Kela student loan could be regarded as "free money" for such students because a 40% discount is applied if the student graduates according to schedule. This might encourage some of these students to invest the money. Using a imaginary situation, we can say that in a stable economic atmosphere, with a low interest rate, a student eligible for a student loan of 8 000 € a year would get a discount of 3 200 € on that debt if they graduated on time. If the student had invested all the 8 000 € in an imaginary index fund, he could get 9% interest a year with a low 0.4% interest on his debt. This will sum up to an 8.6% interest on their investment per year.

The concept of investing student loan has received conflicting opinions from Finnish professors. According to Emeritus Professor Pekka Pihlanto (2019), there should be a restriction that prevents students from investing their government-granted student loans because the loan is meant to aid academic years and student's investment hobbies should not be financed by taxpayer's money (Laakkonen, Raja 2020; Lassila 2019). However, finance Professor Timo Rothovius from the

University of Vaasa promotes the idea of investing student loan. He highlights that the loan is extremely cheap compared to other loans and should be invested if it does not intervene with studies (Lassila 2019).

The investment and saving habits of individuals are affected by macroeconomic and microeconomic factors (Cull, Whitton 2011). Macroeconomic factors are controlled by the economy, such as new technology or a financial crisis. Microeconomic factors vary depending on the individual's resources and decisions. Many people experienced rough times during the financial crisis of 2008. Prior to the crisis many students obtained debts but after the bubble crashed, critical challenges in the economic environment appeared for several countries. This ultimately created excessive unemployment rates and minimal income growth (United Nations et al. 2015).

Individuals have different risk preferences which implies that they allocate their investments differently. Investors can be divided into three categories: non-investors, who invest with minimal amount or do not invest at all, passive investors who tend to buy and hold with a long-term investment horizon and finally active investors who buy and sell actively. These investors can then also be further categorized based on their risk preferences:risk-aversee, risk-neutral and risk-takers. Risk-averse investors rarely take risk and prefer certain returns, even if minimal. Risk-neutral investors base their investment decision on expected return calculations with minimal concerns of risk. Risk takers are considered as gamblers as they prefer risky investments. (Hoffman, Sarkkinen 2021).

1.3. Theoretical framework

Theory of planned behavior by Icek Ajzen (1985) was used to help determine how habits and beliefs can affect investment decisions. The Theory of Emerging Adulthood by Jeffery Arnett (2004, 2007) was utilized in this research to understand if current stage of life is correlated with the investment decisions and loan withdrawal. These theories are not used to set a hypothesis since there is limited previous research but rather help to comprehend aspects of investment behaviour.

1.3.1. Theory of Planned Behaviour

Theory of planned behavior (TPB) demonstrates how certain beliefs that individuals possess, affect their behaviour. The theory has three main predictors that determine behavior: Attitude, subjective norms, and perceived behavioral control (Ajzen 1985). Theory of planned behaviour model supplies tools to analyze the factors that influence human behavior. The model is not restricted to one aspect of life, and it can utilized in personal finance, fitness, relationships etc.

Theory of planned behavior is a viable option to distinguish the purposes of investment decisions. Investment decisions are not the same as decisions concerning consumer items because investment decisions are not made impulsively (Sivaramakrishnan, Srivastava, Rastogi 2016). This theory assumes that people base their behaivour on rationality and reason applying their attitude, subjective norms and perceived behavioral control. However, it is not guaranteed that individuals won't act on emotion and impulse (Ajzen 1991). When an individual decides to withdraw a student loan even if they are not in need of it, it is a choice. Investing after receiving additional funds like student loan is also voluntary. These decisions are generally made after a deep understanding of the situation and potential profit. This makes TPB suitable because TPB is not used to analyze involuntary actions that are pressured by society or social circles (Bongini, Cucinelli 2018). For example, purchasing life insurance can be considered as an involuntary action.

As mentioned above, TPB has three main predictors of behaviour. Attitude refers to a person's point of view on a topic. If a person is optimistic about a specific behaviour, they will most likely be inclined to act upon this behaviour. Now, on the other hand, if an individual is pessimistic about certain behavior they will most likely not act on it if possible (Ajzen 1985). For example, if a student sees a student loan as a chance to earn a profit, they will probably invest more and if they see a student loan as a means to cover living expenses, they will most likely not invest. In other words, a positive attitude increases the chances of a certain behavior and a negative attitude decreases the chances.

Ajzen (1991) describes subjective norms as the perceived pressure to behave in a certain manner. This pressure comes from social circles, such as family and friends or from the society in the means of governance or trends. There are two types of subjective norms. The first type implies that seeing the majority act in a certain way will influence an individual to do the same. The second type implies that certain behavior is encouraged by social circles (Ibid). Student loan withdrawals can

be considered as the first type of subjective norms because a large number of students withdraw student loans. Increasing investing after withdrawal could be considered the second type of subjective norms because there is a high likelihood that this behaviour stems from personal interests which can come from social circles.

The third predictor is perceived behavioral control. This means that an individual's confidence in the ability to behave in a certain type of way predicts if the behaviour is actually conducted. As optimistic attitude and social support determine behaviours, confidence in abilities is the last component (Ajzen 1991). This predictor is sourcefull to answer one of the research questions of the study: *Are students studying in the business field more active investors than students in different fields?*

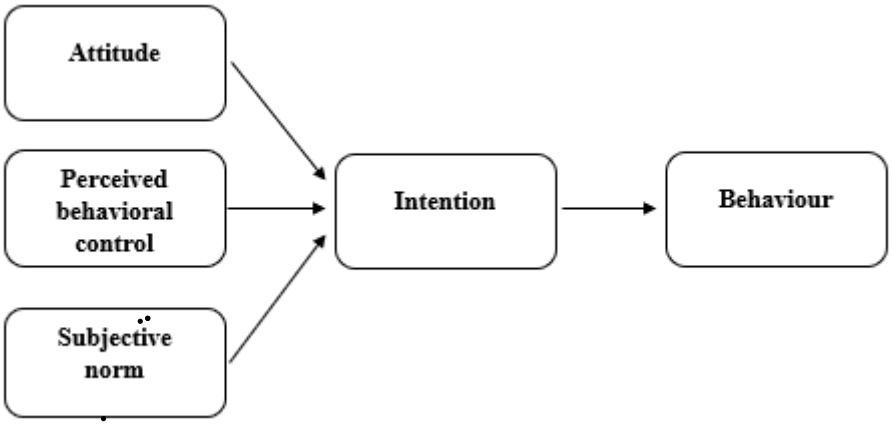

Figure 1. Theory of Planned Behaviour
Source: Icek Ajzen (1991, 182); prepared by the author

The TPB theory has received criticism for having only three predictors and that by adding more variables, it would make the theory more valid (Sniehotta, Presseau, Araújo-Soares et al. 2014). According to Ajzen (2008), other predictors can be added to the theory in addition to the three main components. However, if any additional predictors are used, they need to meet the criteria of behaviour-specific, and they should not be dependent on the three main predictors.

1.3.2. Theory of Emerging Adulthood

The Theory of Emerging Adulthood (Arnett 2004, 2007) implies that a new development stage of life in the middle of teenage years and late twenties has emerged. In the past, the assumptions for this age group (18-25) were that they generally had already found long lasting occupations and

serious relationships, if not families. However, by surveying students about adulthood, Arnett (2004) found out that most of them associated independence and responsibility with adulthood more than aspects like full-time work or post-graduation. The theory suggests that emerging adulthood should be acknowledged as a new demographic age range because the term young adult implies that a person is already an adult when that is not always the case.

The theory also claims that during this face of young adulthood, young adults establish habits that turn into financial independence. Reasons for these financial changes and conditions can be traced to the duration of higher education studies (Arnett 2004, 2007). According to the theory, most higher education students are emerging in adulthood and this study aims to find out if this theory applies to students' investment behavior due to their newly found financial independence. However, this does not mean that everyone in that age group has financial independence since many within that age group still need the financial support of parents for different reasons. However, even if students receive financial aid from different sources and are not fully financially independent, one would assume that aspects of individualism are inherited by students in the form of money management and budgeting.

The Theory of Emerging Adulthood has received notable criticism because it focuses only on a specific socioeconomic class (Bynner 2005). This theory mainly focuses on middle-class people living in developed countries who have financial and emotional guidance from parents and social circles, while there are people who do not have these privileges. However, as Finland is a welfare state and a developed country the author decided that the theory would be suitable for the study because people in Finland enjoy multiple benefits regarding financial well-being and independence. For this reason, in Finland, it is uncommon for students to have major differences in income levels. This study also examines students' socioeconomic situations and how these affect student loan usage and investment behavior.

2. METHODOLOGY & DATA

This chapter demonstrates how data for the study was collected and the methodology used to analyze the data to answer research questions. The aim of this study is to determine if Finnish student loan recipients are encouraged to invest more due to the government-guaranteed student loan.

2.1. Data collection & sample characteristics

The data used in the study was obtained by a survey-based questionnaire which was sent out to respondents via multiple channels and left open for respondents from March 28, 2022, to April 8, 2022. The questionnaire was distributed via student social media platforms and e-mails. The questionnaire was constructed with Microsoft Forms. The questionnaire was sent out to approximately 600 possible respondents. The precise number of potential respondents is unknown, so a response rate was not determined. The goal was to gather as many responses as possible, and a sample size of 110 (n= 110) was obtained. The questionnaire was anonymous, and the language used for the questionnaire was English because the study aims to gather data from Finnish students studying all over the world, not just in Finland. This is why the author attempted to use wording that every respondent would comprehend. The target group was Finnish people who started their higher education degree on August 1, 2014, or after because this makes them eligible for the student loan compensation. This means that some graduated students who already belong in the workforce could also belong to the target group.

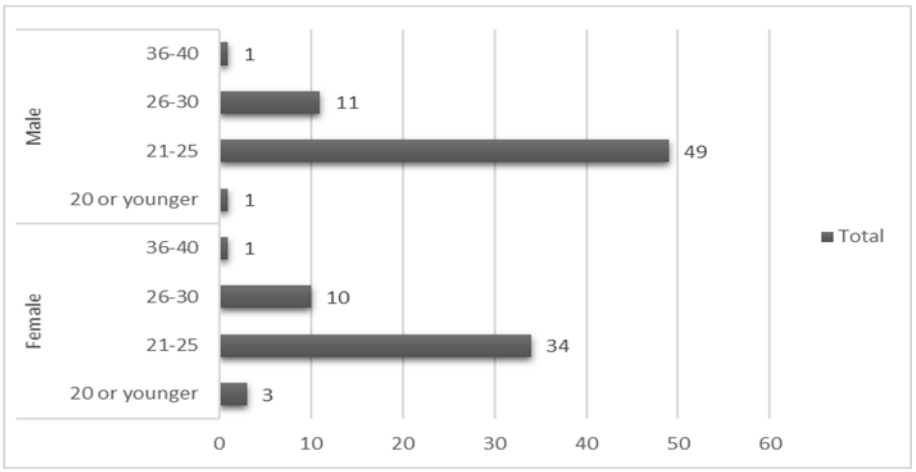

Figure 2. Sample Characteristics (gender & age), n= 110

Source: Author's calculations

As shown in Figure 2, 75.5 % of the respondents were in the age group of 21-25, and this fits into the emerging adulthood age group as suggested by the theory of emerging adulthood (Arnett 2004, 2007). The theory would suggest that most of the respondents are entering financial independence and naturally this would open the door for them to experiment with investments, especially if they have received Finnish student loans. The parameter of gender was somewhat evenly distributed even though male respondents were the majority with 14 more responses. The gender variable was not considered significant for this study's research questions, but as it is an individual characteristic question, it may be used for future reference.

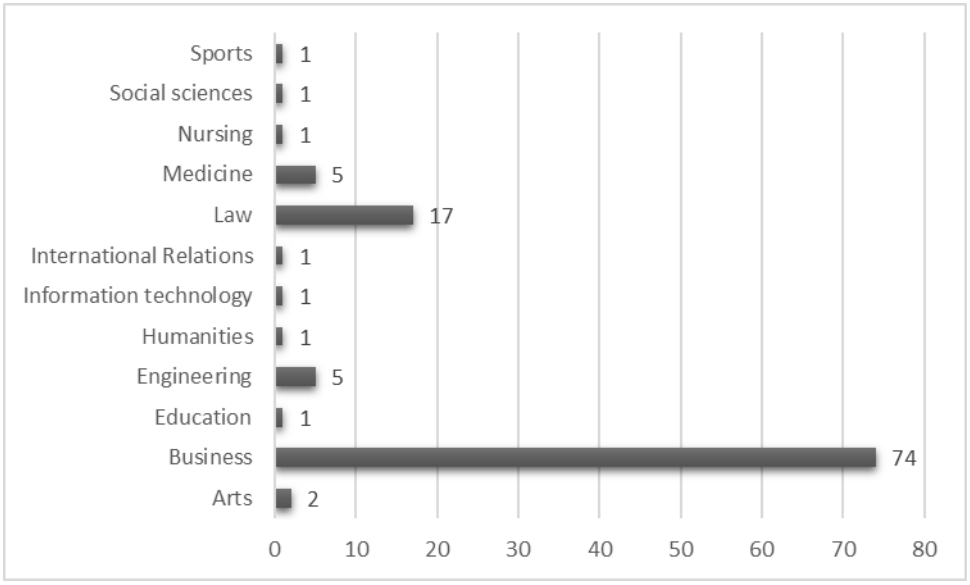

Figure 3. Education field, n= 110

Source: Author's calculations

The majority of the respondents were third-year students, but first, second, fourth, fifth and graduated students also responded to the questionnaire. The questionnaire also determined the field of education of the respondents (see appendix 1). In Figure 3, it is shown that an overwhelming majority (67.3%) of the sample were business students. This implies that there might be a situation of a selection bias. However, this did not raise issues in the study because the comparison is with all other fields combined. Students studying in other fields are 32.7% (n=36) of the sample, so the size is comparable. Although there is not any evidence to prove it, the reason for the majority of respondents being business students could be due to business students being more interested in the topic than students from other fields. The Theory of planned Behaviour by Ajzen (1985, 1991) could be applied here assuming that business students have confidence in their financial skills, and this would equate to active investment behaviour as a perceived beahvioural predictor.

2.2. Research methods

The quantitative research method was chosen to attain direct information and data. Quantitative research is the process of obtaining arranged numerical data for the purpose of analysis. The objective of a qualitative study, by contrast, is to explore elements or themes that are important in understanding human behaviour and experience (Goertzen 2017). The quantitative research method is used as a survey-based questionnaire, and only primary data was used for analysis. Primary data is data that is gathered directly by researchers in the form of either quantitative or qualitative research methods (Hox, Boeije 2005). In the case of this study, the data was gathered quantitatively using a questionnaire. The questionnaire had 32 questions, and it took respondents an average time of 5 minutes and 25 seconds to complete.

The questionnaire was formed with the combined influence of theories reviewed in Chapter 1. Ajzen (2002) suggests that to measure attitude towards beahviour, standard attitude scaling is an efficient method. However, attitude scales are not difficult to form so a large sample size is preferable (Ibid). Aspects of the Theory of Emerging Adulthood (Arnett 2004, 2007) were also taken into consideration in the construction of the questionnaire.

The author also examined previous research papers that studied investment behaviour to see what type of questions were suitable for the questionnaire (Hoffman, Sarkkinen 2021; Vuori 2020). The

aim was to create a questionnaire that was simple and easy to comprehend. The author emphasized objectivity while constructing the questionnaire because results can't have any dependency on the researchers. Objectivity within the context of this study means that there should not be any influence of individual bias in the creation of questions based on own viewpoints and experiences with the topic. Therefore, it was important for the researcher to be impartial in the forming of the questionnaire.

The questionnaire aimed to determine the individual's investment habits before and after withdrawing their first student loan and if the loan encourages students to invest more. Further aims of the questionnaire also involved finding out how different variables affect investment behaviour. Descriptive statistics was used to represent characteristics within the population (See appendix 1). Some of the parameters were not used in the research because of significant reoccurring answers by respondents and the author decided to focus only on certain data points.

The questionnaire was divided into two parts. The first part of the questionnaire was demographic information combined with personal financial knowledge. The second part consists of questions regarding investment behaviour. The questions in the questionnaire were multiple-choice and most of the questions were close-ended. This makes for efficient and easy analysis of data. The questionnaire used the branching option from Microsoft Forms to weave out insignificant data. Branching means that if a respondent chooses a choice from a specific question, the respondent's further answers are not needed.

Each research question and the research method used:

1. Do students' investment behavior change after withdrawing government-guaranteed student loans with the possibility of a discount?

Regression analysis with Microsoft Excel was used to analyze the first research question. Regression analysis allows for the examination of two or more variables. In the case of this study, the Simple Regression Model (Zou, Tuncali, Silverman 2003; Alexander, Kusleika, Walkenbach 2019) was utilized to determine statistical significance. The Simple Regression Model was utilized because only one independent and one dependent variable were analyzed. A simple regression model has only one independent variable. Thus, the relationship between the dependent variable, Y and one independent variable, X, was calculated as follows.

Formula 1. Simple Regression Model

$$Y_i = a + bX_i + e_i$$

Where,

Y = Dependent Variable

X = Independent Variable

a = Intercept on the y axis

b = Slope

i = Number of subjects

In this study, the variable X stands for income invested by students before withdrawing student loans and the variable Y stands for income invested after withdrawing student loans. The a refers to the intercept and the b stands for the slope of the regression. The random error, e has a constant variance and a mean of 0. The i stands for the number of subjects within the variable (Zou, Tuncali, Silverman 2003).

2. Are there significant differences in investment behavior between business students and other students?

This second research question was also analyzed with Microsoft Excel (Alexander, Kusleika, Walkenbach 2019) data analysis tool using the Two-sample t-test. This study uses the Two-sample t-test because two-sample tests are used to compare the means of two independent groups and if they are different. The two groups compared are business students and other students. To determine whether there is a statistical difference between the two independent groups, a null hypothesis, and an alternative hypothesis is formed (Gönen. Johnson, Lu, Westfall 2012; Alexander, Kusleika, Walkenbach 2019). To receive statistically significant results, the null hypothesis can be rejected if the p-value is smaller than the significance of 0.05.

H0: *The mean answers of business students and other students are equal.*

H1: *The mean answers of business students and other students are not equal.*

3. Into what products do Finnish students decide to invest after receiving government-guaranteed student loans?

Results regarding the third research question can be obtained from data gathered through the questionnaire. The questionnaire questioned the respondents about various investment products and asked to which products have they invested after withdrawing student loan. The respondents also had the chance to indicate products they have invested in that were not on the list of products in the specific question. Figures of the investment allocation by Finnish students after student loan withdrawal is showcased in the next chapter.

3. RESULTS & DISCUSSION

This chapter covers the findings obtained from the research with the methods mentioned in the previous chapter. In addition to the findings, this chapter also discusses and interprets these findings. It is important to note that for both the Two-sample t-test and the Simple Regression Model, this study requires the p-value of results to determine statistically significant differences. For the Two-sample t-test the study only required the p-values. For the Simple regression model, the regression line and coefficient will be analyzed. To narrow down the data and focus on specific datasets, the author decided to not use all of the responses from some of the questions.

3.1. Results

The questionnaire used for this research obtained 110 responses (n=100). As mentioned above, the questionnaire used branching to filter out insignificant data depending on the way respondents answered specific questions. Due to the branching aspect of the questionnaire, the sample size varies depending on what the subject of research is.

Table 1. Two-sample t-test results for respondents' self-perception

Variable	**P-value**	**Difference**
Actively follow financial markets	0,0003	Significant
Skilled investor with knowledge of financial markets	0,0053	Significant
Diverse investment portfolio	0,0769	Insignificant

Source: Author's calculations, n=110

Prior to the branching aspect of the questionnaire, the respondents were asked about their self-perception regarding investments. The Two-sample t-test comparing business students and other students shows that there is a significant difference in how the two groups perceive themselves.

However, the results imply that both groups prefer diverse investment portfolios. The results shown in Table 1 are determined by the P-values obtained from the t-tests. When the P-value is lower than 0.05, it implies that the difference is significant and when it is higher, the difference is insignificant. For the first two perception points, we can reject the null hypothesis, H0: *The mean answers of business students and other students are equal.* For the third point, we can't do this.

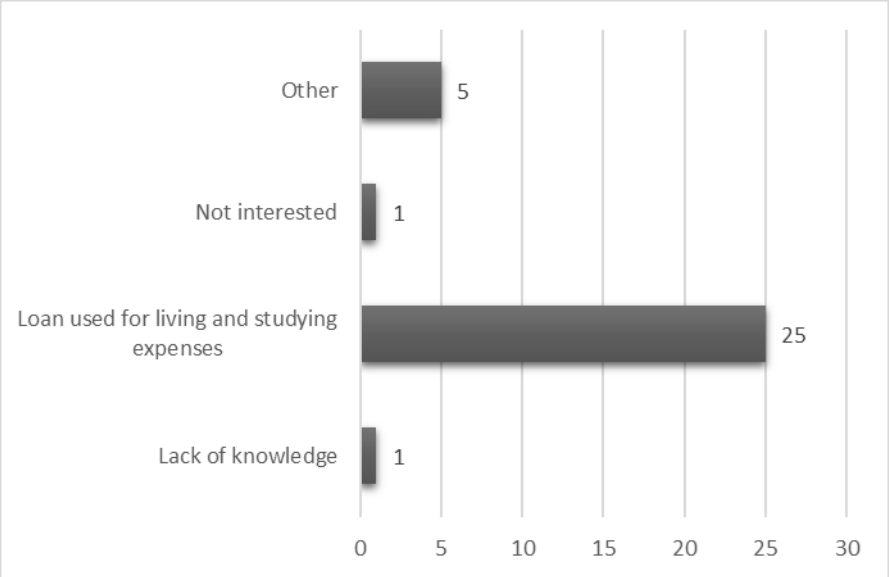

Figure 4. Reasons for not investing after loan withdrawal, n= 32
Source: Author's calculations

The questionnaire had 13 respondents (11.8%) who answered ``No´´ to question 19: Have you at any time withdrawn government guaranteed student loan? (See appendix 1). This study does not prioritize those students who have not withdrawn student loans, but it was essential to distinguish what percentage of the sample withdraws student loans. Finally, the sample which analyzed those who withdrew student loans was 97 (n=97). In addition, Figure 4 shows why 32 out of 97 (33.0%) of the respondents did not invest after their first student loan withdrawal. The top reason was that the loan was used for living and studying expenses (25.8%), with 2 % of respondents indicating a lack of knowledge and interest and the remaining 5.2% indicating other reasons. This shows that the majority of students are investing and do not withdraw student loans just for living and studying expenses.

Out of the sample of 97 (n=97) who withdrew student loans, 68 respondents (70.1%) were business students and 29 respondents (29.9%) were other students. In order to compare the two groups' investment habits before and after their student loan withdrawal, it was necessary to filter out those

who did not invest after the withdrawal. As mentioned above, 32 (33.0%) of the respondents who withdrew student loans, did not invest after student loan withdrawals. The data showed that 13 (13.4%) of them were other students and 19 (19.6%) were business students. After filtering out those who had not invested after withdrawal, a new sample size of 65 (n=65) was formed. Out of the new sample size, 49 (75.4%) were business students and 16 (24.6%) were other students.

Table 2. Two-sample T-test result for investing behaviour (after student loan withdrawal)

Variable	**P-value**	**Difference**
Amount of income invested (annually)	0.8057	Insignificant
Investment horizon	0.4964	Insignificant
Type of investor	0.2252	Insignificant

Source: Author's calculations, n=65

In Table 2, it is shown that the differences in the amount of income invested (annually) are not significantly different within the two groups compared, which are business students and other students. This is determined by the P-value obtained from the t-test like the previous t-tests. The P-value is higher than 0.05, which means that the difference is insignificant. We can also see that the investment horizons and investment types do not have significant differences. In this case we can't reject the null hypothesis, H0: *The mean answers of business students and other students are equal.*

Table 3. Simple Regression Model results for investment behaviour before and after student loan withdrawal

Variables	**P-value**	**Difference**
Amount of income invested (annually)	0,0110	Significant

Source: Author's calculations, n=65

As mentioned in the previous chapter, for the simple regression model, the study analyzed the relationship between the dependent variable, Y, and the independent variable, X. The dependent variable is students' investment habits after withdrawing student loans and the independent variable is students' investment habits before withdrawing student loans. Table 3 shows that there

is a significant difference in how Finnish students invest before and after student loan withdrawal due to the P-value being lower than the confidence level of 0.05.

In appendix 2, we can see the regression line that illustrates the relationship between investment behaviour of respondents before and after student loan withdrawal. The trendline also shows the direction and strength of the relationship. The regression line is slightly upward and the the coefficient is weakly positive (0.233), which implies that the more a student invests prior to withdrawing student loan, the more they will invest when they receive student loan. (Zou, Tuncali, Silverman 2003). The bigger the change, the stronger the relationship between variables. The X-axis represents investment amount in percentages before student loan withdrawal and the Y-axis represents the investment amounts after withdrawal.

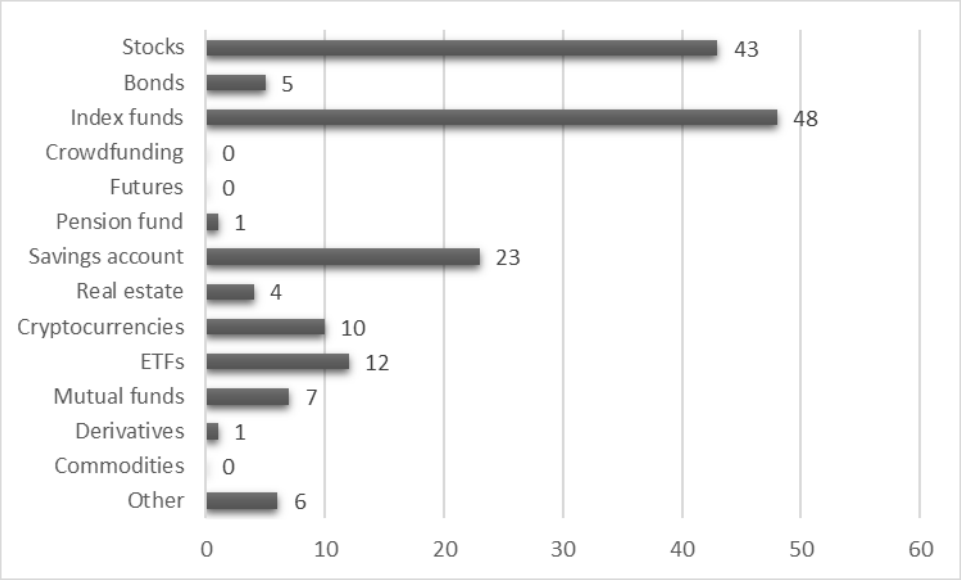

Figure 5. Investment allocation after loan withdrawal, n=65
Source: Author's calculations

Figure 5 illustrates that among Finnish students, the most popular investment product was Index funds, with 48 (73.8%) of students investing in them. Stocks (66.2%) and regular savings accounts (35.4%) came in at second and third. Notice that the sample size that answered this specific question could choose multiple options.

The aim of this study was to determine if receiving government-guaranteed student loan with the potential discount, encourages Finnish students to invest more. The final question of the

questionnaire asked respondents if the student loan encouraged investing. The specific question used a scaling system of 1-5, where 1 stands for a total disagreement and 5 a total agreement. The mean answer for this question was 3.38 which implies that respondents were slightly over neutral. The sample that answered this question was 97 (n=97) because 13 respondents had not withdrawn student loans.

3.2. Discussion of results

Based on the results obtained in the study, the majority of respondents (88.2%) had withdrawn Finnish government-granted student loan at some point in their lives. This leads to believe that most of the students do not consider student loan as a risky loan and might look at it as a viable asset for their future. As mentioned in the first chapter, debt problems associated with Finnish people generally do not come from student loans because the loans come with multiple perks such as low interest rate, potential discount, government-granted guarantee and a prolonged repayment period (Oksanen, Aaltonen, Rantala 2016). However, 64.5% of the respondents pay tuition fees (See appendix 1), so this might have an effect on the student loan withdrawal ratio being as high as it is in this study.

The Two-sample t-tests showed that students studying the business field have more confidence in their investment behaviour than students studying in other fields. Results from the questionnaire showed that 7 out of 36 students not studying in the business field did not withdraw student loan 13 out of the 29 other students who withdrew student loans did not invest after withdrawal. This statistic already determines that other students not studying business are more reluctant to invest than business students. The Theory of Planned Behaviour (Ajzen 1985, 1991) suggests that the attitude towards a beahviour would incline an individual to act according to the specific beahviour. In other words, optimism should equate to the more frequent act of the beahviour. Even tough business students in this study had better self-perception about their investment habits than other students, the results of actual behaviour of those invested after loan withdrawal, showed otherwise. When actual investing habits among this group (n=65) were observed, there was no significant difference between the two groups.

The most popular investment products after student loan withdrawal (n=65) were Index funds, stocks and savings accounts. ETFs and Cryptocurrencies came in at fourth and fifth. These

rankings would suggest that majority of the respondents are risk-averse since index funds are seen as less-risky investment options but the results showed that for Q. 15 (See appendix 1) in the questionnaire that questioned respondents if they are risk-averse on a scale of 1-5 the mean was 2.8 which means that most of the respondents slightly disagree with being risk-averse. On the other hand, the mean for Q. 16 (See appendix 1) which asked if the respondents prefered a diverse portfolio was 3.83. This is explained by the fact that the question regarding investment products allowed respondents to choose multiple options.

The aim of this study is to find out if Finnish student loan encourages students to invest more, and as mentioned in the previous chapter, most of the students were slightly agreeing with it. This resognates with the results from the Simple Regression Model as they showed that there was a significant difference in how students invested before and after student loan withdrawals. This suggests that Finnish government-granted student loan ecourages students to invest more to some extent. However, majority of the respondents could be categorized as young adults, the change in investment habits could also be explained by the Theory of Emerging Adulthood (Arnett 2004, 2007), since the theory suggests that when people reach ages of 18-25 and move on their own, they obtain characteristics of individualism and this often results in financial independence where these students start to experiment with different financial instruments individually.

The results of this study could be used by all parties connected to Finnish student loans such as banks, the government, and current or potential loan recipients. This study can be also used to observe investment behaviour. As the ruling of the potential compensation of 40% on a Finnish student loan is fairly recent, this study could be used by students who are exploring whether or not to withdraw student loan.

3.3. Limitations of the study

There is a lot of studies researching investment behaviour but there is limited amount of studies focusing on student loan's affect on investmen behaviour. This is why the author decided to form three research questions in addition to the aim of the study to determine statistically significant results. Hypothesis could not be set due to the fact that there is little to no previous research on Finnish student loan effect on investment beahviour. The topic is rare because Finnish student loan is much different than other student loans in the world. It is challenging to know exactly how the

loan effects investment beahviour because when students begin their higher education, multiple other factors might have an impact on the beahviour. These factors might be student aid, parental aid, or other loans. This is why future research should form more specific questions about investment behaviour and find out how to filter out other factors that might affect investment behaviour. The author decided that the Simple Regression Model which was used for the first research question was the most suitable for the objective. However, the regression model only analyzed one independent and one one dependent variable, so other potentially significant variables were not used.

The sample size of the study was enough to receive significant results (n=110), but the characteristics of the respondents, regarding field of education might be skewed because selection bias might affect the results of this study. The majority of the respondents were business students and results might alter if the sample size was more diverse concerning field of education. The author believes that the reason for this is due to the interest levels of students. In other words, business students are more likely to be interested in answering a questionnaire concerning aspects of finance than other students.

All of the responses from the questionnaire were not used in the study because the author decided to narrow down the data and focus on specific points of findings. However, the data gathered (see appendix 1) can be used for future references. In hindsight, the author thinks that if more specific questions about investment habits were on the questionnaire, the study might have received more precise data. At the same time, the objective was to make the questionnaire as clear as possible for respondents because everyone does not have equal financial literacy knowledge.

CONCLUSION

The aim of this study was to determine how government-granted student loan influences Finnish students' investment behaviour. Finnish student loan is an affordable loan which comes with perks and incentives, such as pro-longed repayment period, low interest rate and a potential discount of forty percent (Kela 2022). Previous research has stated that student loan usually does not cause debt problems for Finnish people like other loans such as consumer loans (Oksanen, Aaltonen, Rantala 2016). The fact that Finnish student loan is affordable and reasonable this study assumes that it would encourage Finnish students to invest more. However, the idea of investing student loan has received conflicting opinions from Finnish professors because some believe student loan is supposed to cover living expenses while studying, and some believe that it is a good opportunity for students to explore financial markets with minimal risk (Lassila 2019). To discover significant results, a survey-based questionnaire was formed and distributed via social media platforms and emails to Finnish students who are eligible for student loan compensation. The questionnaire obtained a total of 110 responses.

The Simple Regression Model was utilized to search for differences in investment behaviour before and after student loan withdrawal because there was only one dependent and one independent variable being analyzed. The results illustrated that there is a statistical difference in how students invest before and after the withdrawal. The regression test also showed that the more students invest prior to withdrawing student loan, the more they will invest after withdrawing the loan. The coefficient obtained from the regression test is weakly positive (0.233), so even though the reasons for the change in behaviour are most likely not only due to the student loan, the results imply that the loan alters investment behaviour even if the effect is minimal. As suggested by the Theory of Emerging Adulthood (Arnett 2004, 2007), in normal circumstances, individuals enter a space of independence when they enter a specific age range. Most of the respondents were in the age range of 21-25, which according to the theory would imply that as these respondents start a new phase of life. For example, moving out and starting higher education studies would lead to independency in multiple aspects of their life such as money management and investing.

In addition to goal of the study, three research questions were formed to polish the knowledge of the information gathered for the study.

1. Do students' investment behavior change after withdrawing government-guaranteed student loans with the possibility of a discount?
2. Are there significant differences in investment behavior between business students and other students?
3. Into what products do Finnish students decide to ínvest after receiving government-guaranteed student loans?

The research questions focus on where income is allocated regarding investments and differences between respondents and how specific characteristics may affect investment behaviour. Most of the respondents prefer unrisky investment products but the results also implied that Finnish students are actively investing in relatively new investment products such as cryptocurrencies and ETFs. The second research question aimed to find out the differences between business students and students studying in other fields. The Two-sample t-test was used to analyze the data concerning this research question because two independent groups were compared. The results showed that business students have higher confidence in investing than other students studying in other fields. However, when actual investment habits of both groups were analyzed, the results showed that the habits do not have statistically significant differences. The Theory of Planned Behaviour (Ajzen 1985, 1991) states that attitude, subjective norms, and perceived behavioural control all play a role in an individual's behaviour. This would suggest that if business students have a more positive attitude towards investing they would actually be more active in the financial markets. However, the results of the study do not match the theory. The fact that the majority of the sample size were business students brings up a case of selection bias and this might cause unrealistic results.

Notable limitations of this study were that there was limited previous research on the specific topic so the results did not have legitimate comparison points. As mentioned above, most of the sample size were business students which might have an effect on the results. The author also thinks that more specific questions about investment behaviour should have been utilized in the questionnaire. Some of the data from the questionnaire were not used for the study because the author focused specifically on certain parameters. The author suggests taking these limitations into consideration in possible future research on the topic.

Findings of this study show that Finnish student loan is seen as an asset rather than a liability. In other words, most of the sample size had withdrawn student loan. This is not saying that the student loan is withdrawn specifically to invest more but the results show that the loan represents a possibility for investments and many of the respondents have taken advantage of this opportunity. The Theory of Planned Behaviour suggests that subjective norms are one of the three predictors that affect behaviour. This would imply that if investing after student loan withdrawal becomes more popular within Finnish student loan recipients, it will likely become a subjective norm within that specific communtiy.

Based on the results and findings, the study recommends that banks, students and the government have an open dialogue about Finnish student loan. This would help students understand what kind of opportunities the loan can provide for them. The banks issuing these loans could also benefit from increased communication because while they issue the loans, they essentially create potential life-long relationships with their customers and banks could benefit from the investment opportunities the loan creates for students. In the case of the government, if the dialogue is open and active with students, more students might become motivated to complete their studies quickly enough to receive compensation for the loan. One would think that this would actually be costly for the government but the government also pays free student aid to students. Thus, the faster students enter the workforce the better it is for the Finnish economy as a whole. The study also recommends that before students withdraw their preferred amount of student loan, they calculate how much of their funds is surplus, and if possible, they can explore potential investment options suitable for them.

The main objective of the study was accomplished and all research questions were answered. Finnish student loan opens a door of opportunity for Finnish students that may have not been opened before. The results show that, at least to some extent, Finnish student loans encourage Finnish students to invest more than they did before withdrawing the loan. All of the results are not definitive due to certain limitations, but the results can be reviewed and used as future reference if required.

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APPENDICES

Appendix 1. Questionnaire & results

Questions	Percentages/means
1. Gender	• Male, 56.36% • Female, 43.64% • Other, 0% n=110
2. Age	• 20 or younger, 3.64% • 21-25, 75.45% • 26-30, 19.09% • 31-35, 0% • 36-40, 1.81% • 41 or older, 0% n=110
3. What is the size of your household?	• 1, 53.64% • 2, 41.82% • 3, 2.73% • 4, 0.91% • Over 4, 0.91% n=110
4. Do you pay for all your major living expenses by youself?	• Yes, 77.28% • No, 22.78% n=110
5. What is your marital status	• Single, 46.37% • In a relationship but living alone, 22.73%

	• Domestic couple (i.e living as a couple, 27.28% • Married, 3.64% • Separated, 0% • Divorced, 0% • Widowed, 0% • Other, 0% n=110
6. Current or highest level of education	• Secondary school, 15.45% • Vocational education, 4.55% • Polytechnic education, 2.73% • Bachelor's degree, 65.45% • Master's degree,10.91% • Doctoral degree, 0.91% n=110
7. What year student are you?	• 1st year, 14.55% • 2nd year, 20.91% • 3rd year, 40.00% • 4th year, 4.55% • 5th year, 0.91% • Over 5th year, 0% • Graduated, 19.09% n=110
8. Country of education	• Finland or other Nordic country, 54.55% • Other EU country, 43.64% • Other, 1.82% n=110
9. Do/did you pay tuition fees?	• Yes, 64.55% • No, 35.45% n=110

10. Field of education	• Law, 15.45% • Medicine, 4.55% • Business, 67.27% • Engineering, 4.55% • Information technology, 0.91% • Nursing, 0.91% • Other, 6.36% n=110
11. Do/did you work while studying	• Yes, full-time, 11.82% • Yes, part-time, 53.64% • No, 26.36% • Other, 8.18% n=110
12. What is the amount of your monthly surplus funds after regular costs (i.e., after deducting housing costs, food, bills, etc.)? (In EUR)	• I have to use loans to finance my studies and living, 38.18% • 0-300, 16.36% • 301-600, 18.18% • 601-900, 5.45% • 901-1200, 5.45% • Over 1200, 7.27% • I don't know, 9.09% n=110
13. I actively follow the financial markets	1. Totally disagree 2. Disagree 3. Neither or nor 4. Agree 5. Totally agree n=110, Mean = 3.24
14. I consider myself a skilled investor with knowledge of financial markets	1. Totally disagree 2. Disagree 3. Neither or nor

	4. Agree 5. Totally agree n=110, Mean = 2.56
15. I am risk averse regarding investing (i.e., not comfrotable with taking risks).	1. Totally disagree 2. Disagree 3. Neither or nor 4. Agree 5. Totally agree n=110, Mean = 2.80
16. I prefer a diverse investment portfolio	1. Totally disagree 2. Disagree 3. Neither or nor 4. Agree 5. Totally agree n=110, Mean = 3.83
17. Do you have a budget for your personal finances?	• Yes, 31.82% • No, 20.00% • Occasionally, 48.18% n=110
18. Do/did you receive regular student and/or housing aid from KELA?	• Yes, 92.73% • No, 7.27% n=110
19. Have you at any time withdrawn government guaranteed student loan?	• Yes, 88.18% • No, 11.82% n=110
20. What porpotion of the loan did you withdraw from your latest withdrawal?	• 25% or under, 7.22% • 26-50%, 7.22% • 51-75%, 5.15% • 76-100%, 80.41% n=97
21. Have you invested your money after you withdrew your first government guaranteed student loan?	• Yes, 67.01% • No, 32.99% n=97

22. If you answered No to Q.21, please indicate your reason.	• Loan used for living and studying expenses, 78.13% • I do not want to invest in the current market situation, 0% • Lack of knowledge, 3.13% • Not interested, 3.13% • Other, 15.63% n=32
23. Please indicate what are the products you invested in after your latest student loan withdrawal. You can choose multiple options.	• Stocks, 66.15% • Bonds, 7.69% • Index funds, 73.85% • Crowdfunding, 0% • Futures, 0% • Pension funds, 1.54% • Savings account, 35.38% • Real estate, 6.15% • Cryptocurrencies, 15.38% • ETFs, 18.46% • Mutual funds, 10.77% • Derivatives, 1.54% • Commodities, 0% • Other, 9.23% n=65, multiple options
24. What percentage of your income do you invest or save annually?	• 1-20%, 55.38% • 21-40%, 32.31% • 41-60%, 10.77% • 61-80%, 1.54% • 81-100%, 0% n=65
25. What is your investment horizon?	• Short-term (1-5 years), 3.08% • Medium-term (5-10 years), 16.92% • Long-term (Over 10 years), 78.46%

	• None of the above, 1.54% n=65
26. What type of investor are you?	• Not an investor (i.e., someone who invests with minimal amount or is not investing, 4.62% • Passive investor (i.e., buy and hold, long-term horizon), 87.69% • Active investor (i.e., buy and sell actively. Someone who follows financial markets), 7.69% • I don't know, 0% • Other, 0% n=65
27. Did you invest money before withdrawing your first government-guaranteed student loan?	• Yes, 72.31% • No, 27.69% n=65
28. Please indicate what are the products you invested in before withdrawing your first student loan. You can choose multiple options.	• Stocks, 63.83% • Bonds, 10.64% • Index funds, 63.83% • Crowdfunding, 2.13% • Futures, 0% • Pension funds, 0% • Savings account, 36.17% • Real estate, 8.51% • Cryptocurrencies, 10.64% • ETFs, 12.77% • Mutual funds, 6.38% • Derivatives, 0% • Commodities, 2.13% n=47, multiple options

29. What percentage of your income did you invest or save annually before withdrawing your first student loan?	• 1-20%, 68.09% • 21-40%, 21.28% • 41-60%, 6.38% • 61-80%, 2.13% • 81-100%, 2.13% n=47
30. What was your investment horizon before withdrawing your first student loan?	• Short-term (1-5 years), 8.51% • Medium-term (5-10 years), 6.38% • Long-term (Over 10 years), 82.98% • None of the above, 2.13% n=47
31. What type of investor were you before withdrawing your first government guaranteed student loan?	• Not an investor (i.e., someone who invests with minimal amount or is not investing, 14.89% • Passive investor (i.e., buy and hold, long-term horizon), 74.47% • Active investor (i.e., buy and sell actively. Someone who follows financial markets), 8.51% • I don't know, 2.13% • Other, 0% n=47
32. Withdrawing your first government guaranteed student loan encouraged you to invest and save more.	1. Totally disagree 2. Disagree 3. Neither or nor 4. Agree 5. Totally agree n=97, mean = 3.38

Source: Author's calculations

Appendix 2. Simple Regression Model results & regression line

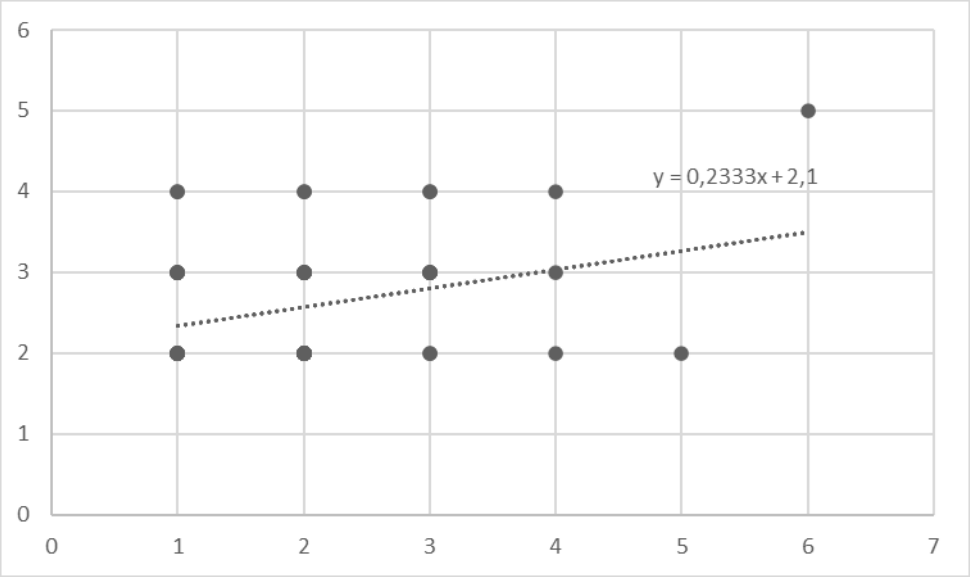
Regression Statistics	
Multiple R	0,313542614
R Square	0,098308971
Adjusted R Square	0,083996415
Standard Error	0,715660053
Observations	65

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3,517948718	3,517949	6,868722	0,010981165
Residual	63	32,26666667	0,512169		
Total	64	35,78461538			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	2,1	0,205112288	10,23829	4,96E-15	1,690115799	2,509884201	1,690115799	2,509884201
Before	0,233333333	0,089030499	2,620825	0,010981	0,055420077	0,41124659	0,055420077	0,41124659

Source: Author's calculations, n=65 (Coefficient & P-value highlighted)



Source: Author's calculations, n=65

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