The Impact of Altruistic Motivation for Environmental Well-Being on Young Individual Investors' Preferences for Sustainable Investing

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ABSTRACT,

Irresponsible corporate activities cause significant harm to the environment and society, a response to this issue is the growth of sustainable investments. Sustainable investments are increasingly implemented by investors to increase returns and avoid investments in companies that cause harm to the environment. In sustainable investments, investors incorporate ESG factors when making investment decisions. Just like any other investment, individual investors' preferences in sustainable investing are affected by a variety of different factors like financial, emotional, or individual biases. However, little is known about how characteristics influence young investors' likelihood of engagement in sustainable investments. Therefore, this research aimed to explore how young individual investors' altruistic motivation for environmental well-being can encourage them to engage in sustainable investing while taking into consideration their risk tolerance and profit motive. The research employed a combination of quantitative and qualitative methods, utilizing a survey for both quantitative and qualitative data collection. The survey was shared online on social media applications, and most respondents were from the age of 18 -25, of which the majority were university students. The survey included 61 participants of which 46 were males and 15 were females. Findings revealed that altruistic motivation for environmental well-being increases the likelihood of engagement in sustainable investing. Conversely, as investors' profit motive increases, the likelihood of engagement in sustainable investment, and altruistic motivation for environmental well-being decreases. furthermore, the analysis showed that risk tolerance had no significant effect on altruistic motivation and the likelihood of engagement in sustainable investing. Moreover, the thematic analysis revealed that altruistic investors derive non-monetary utility from sustainable investing because investors stated that they would feel happy if they invested in sustainable assets. Future research should explore possible ways to increase young investors' altruistic motivation for environmental well-being across different regions. Understanding ways to increase investors' altruistic motivation for environmental well-being allows the identification of methods or practices to implement, hence increase investors' engagement in sustainable investing.

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Keywords

Sustainable investing, altruistic motivation, environmental well-being, profit motive, risk tolerance, young investors

1. INTRODUCTION

Various irresponsible corporate activities cause damage to environmental wellness (Mesjasz-Lech, 2023). Corporate environmental irresponsibility is associated with issues like air pollution, deforestation, oil spills, and environmental issues from mining activities (Nunes et al., 2021). Those issues cause damage to wildlife, biodiversity, and quality of life. Moreover, firms' irresponsible use of natural resources reduces the access of future generations to natural resources (Nunes et al., 2021). In response to this issue, sustainable investments are getting more attention in the world of business as they aim to ensure that the present corporate needs are met while considering environmental and societal wellness. Additionally, sustainable investing is growing, as it considers ethical, social, and environmental objectives (Camilleri, 2017).

Sustainable investing is the act of incorporating ESG factors when making investment decisions, instead of focusing solely on financial interests. Sustainable investments can be investments in green bonds, or ESG funds, etc. Sustainable investing can be an investment in any company that has a positive profile in considering ESG factors when operating. Sustainable investing can lead to having a more sustainable and healthier environment, encouraging more sustainable innovations through investing in responsible companies (Kölbel et al., 2020). Nevertheless, just like any other type of investment, sustainable investing has some challenges associated with it like a lack of data to assess sustainable investments accurately, and greenwashing due to firms' dishonesty (Kölbel et al., 2020). In 2019 sustainable investments reached $30.7 Trillion in assets which represents a growth of 68% since 2014 (Uzsoki et al., 2020b). The significant growth of 68% in 5 years shows the rapid growth of interest towards sustainable investments due to increasing pension funds (Rvj, 2023), changing investment patterns, and developing countries' role in promoting and achieving sustainability utilizing sustainable development goals (*Overcoming the World's Challenges - the Global Goals*, 2024).

Individual investors' preferences in sustainable investing are affected by a variety of different factors which can be financial, emotional, or individual biases (Sayce et al., 2007). Investors do not only consider financial factors when making investments, instead, there are some non-financial motives and factors that affect investors and their decisions. Emotions and motives of investors can shape their investment preferences, as the analysis of Duxbury and colleagues has shown that emotions significantly impact the process of decision-making and investment choices (Duxbury et al., 2020). Exploring the emotions and motivations of investors can predict how investors may behave, for example, investors' fear may drive the investor to get rid of the asset by selling it. On the other hand, investors' optimism may encourage them to buy more risky assets (Duxbury et al., 2020). The objective of this research paper is to explore the specific effect of altruistic motivation for environmental well-being on young individual investors' likelihood of engagement in sustainable investing. Altruistic motivation is a non-financial factor that may influence investors' decisions and preferences. Altruism is defined as any behavior that is carried out for the benefit of others rather than for self-benefit (Bar-Tal, D. 1986). Behaviors that benefit others in society or cause a positive environmental impact are considered altruistic. Empathy is a main source of altruism because it drives individuals to act for the benefit of others (Toi & Batson, 1982). Empathy makes individuals feel more connected to others or the environment, hence they are more likely to engage in activities that may benefit them (Toi & Batson, 1982). This research will explore the altruistic motivation for environmental well-being because studies have shown that the majority of European citizens have a strong altruistic motivation for global environmental protection (Schäpke, Niko; Rauschmayer, Felix 2012), which can mean that altruistic motivation for environmental well-being may influence investors preferences in sustainable investing.

1.1 Research Objective and Question

The objective of this research paper is to identify how young individual investors' altruistic motivation for environmental well-being can encourage them to engage in sustainable investing. This research will generate an understanding of how concerns for environmental sustainability may encourage young investors to engage in sustainable investing. This thesis takes into consideration two control variables, investor profit motive and risk tolerance because they may have an impact on the results (Table 1). The exploration of variables that influence investor behavior can allow for determining motives behind engagement in sustainable investing. Young investors are chosen as a target group due to the importance of understanding their motives for sustainable investing to be able to identify future investment trends that may shape financial markets and identify actions that can be taken to encourage young investors to engage in sustainable investing.

How does altruistic motivation for environmental well-being affect young individual investors' likelihood of engagement in sustainable investing?

1.2 Academic and Practical Relevance

According to the literature, altruistic motivation can influence individual investors investing behavior. Daniel Brodback's research paper showed that altruistic individuals derive non-monetary satisfaction from sustainable investing, additionally, altruistic investors are less likely to rely on financial performance for investment evaluation (Brodback et al., 2019). The results of Brodback research show that altruism in general influences individual investors' preferences in sustainable assets, and investors with altruistic preferences seem to accept higher risk or lower returns (Brodback et al., 2019), assuming that there are some soft factors such as higher positive contribution to the environment or contribution to ESG improvements (Bäumer, 2020).

Brodback research paper does not examine the specific effect of altruistic motivation for environmental wellness, which creates a knowledge gap given that altruism can be motivated by various reasons like societal well-being, cultural norms, and ethics. Moreover, there is a lack of research on the topic of sustainable investing and factors affecting young investors' preferences in sustainable investing due to a lack of engagement by individual investors ("Sustainable Investing: Navigating the Inefficiencies of an Inefficient Market," 2022). The results of Brodback's research identified that investors focused on social responsibility are young, however, it does not explore the young investor preferences specifically, this inspires conducting further research on the effect of altruistic motivation for environmental well-being on young individual investors' preferences in sustainable investing.

Exploring the effect of young investors' altruistic motivation on sustainable investing preferences provides insight into how a personality trait or a developed characteristic such as altruism may affect the decisions of young investors. Moreover, knowing young investors' preferences allows companies to align their interests with the interests of investors (Mikesh. Nandha, 2023). Additionally, if this research shows a positive correlation between altruistic motivation for environmental well-being and sustainable investing preferences, that can motivate companies to become more sustainable because firms want to make investing in their company more attractive for investors. This research plays an important role in increasing the understanding

of socially impacted investing and behavioral economics since financial decisions are influenced by non-financial factors (Kristi & Yanto, 2020).

1.3 Outline of this Thesis

The following part of the report shows the theoretical framework that consists of theories related to the research question. Diverse literature related to this research question is reviewed to gain an understanding of the existing research and increase the overall understanding of the topic (Western Sydney University Library & University of Melbourne, 2016). After that, the methodology of collecting data and measuring variables is discussed. Additionally, the report analyses the results and elaborates the findings taking into account the strengths and limitations of the findings. Lastly, the report concludes with an answer to the research question and proposes further research.

2. THEORETICAL FRAMEWORK

The following section provides a clear explanation of altruistic motivation for environmental well-being derived from past research papers. Followed by a discussion of sustainable investing practices and their forms according to definitions from existing literature. Lastly, this section proposes theories that may explain the possible relationship between altruistic motivation for environmental well-being and preferences for sustainable investing.

2.1 Altruistic Motivation for Environmental Well-being

Altruism is an important personality trait that may influence investors' behavior and their investment decisions (Brodback et al., 2019). Altruism refers to the act of prioritizing the benefit and well-being of others over yourself (Pessi & Saukko, 2014). In an investing context, an altruistic investor would make investments that benefit and lead to the well-being of others or the environment. A study in Indonesia showed that altruism exerts a great positive influence on investors' decisions to invest in socially responsible assets, Conversely, egoism has had a significant negative impact on investors' decisions to invest in socially responsible assets (Amalia et al., 2022). Altruistic motivation can be for different means like societal well-being, environmental well-being, and ethics, etc. This thesis explored how altruistic motivation for environmental well-being can influence young investors' preferences in sustainable investing, moreover, the research assessed if altruism for environmental well-being encourages investors to invest in sustainable assets instead of traditional investing. Gutsche's findings suggest that when looking at social motives, altruistic motivation can be considered an important driver of sustainable investments (Gutsche et al., 2023). Furthermore, the data collected from Gutsche's experiment states that when an individual is altruistically motivated, the amount invested in sustainable funds increases by €28.97 (Gutsche et al., 2023). The studies on altruistic motivation can be used as evidence of the existence of altruism, however, it is also an inspiration to conduct further research on the specific effect of altruistic motivation for environmental well-being on sustainable investment preferences.

Environmental well-being is an important concept that nowadays investors need to take into consideration when making investment decisions due to the increasing concerns about climate change and the increasing negative impact businesses have on the environment. Business activities are now considered one of the main drivers of environmental issues like pollution in all its forms (air, plastic, water), climate change, loss of biodiversity, deforestation, etc. (SafetyStratus Research Advisory Group, 2023). Irresponsible firms cause harm to the environment through mismanagement of waste, carbon emissions, and destroying animals' habitats. Irresponsible firms pursue their interests without taking into consideration the interest of the environment, they aim to maximize returns and decrease costs regardless of the effect of their actions. The research of Lawrence (2022) has shown what could happen if environmental well-being and sustainability were not taken into account by firms since they cause the vast majority of environmental problems. Lawrence stated that failure to prioritize environmental sustainability threatens future generations, moreover, greenhouse gas emissions are contributing to climate change which increases floods, droughts, and triggers severe events (Lawrence, 2020). Additionally, extreme pollution is decreasing the quality of life for people (Lawrence, 2020). Lastly, Lawrence mentions that environmental stewardship is a necessity for the survival of the planet and humanity, hence investors' tendency to invest in more responsible and sustainable firms needs to increase due to the high importance of environmental protection (Lawrence, 2020).

Altruistic motivation for environmental well-being refers to the motivation to carry out practices that benefit the environment mainly for the positive effect those practices have on the environment. *Hypothesis: If an investor's altruistic motivation for environmental well-being increases, then the investor would be more likely to engage in sustainable investing activities.*

2.2 Sustainable Investing

In sustainable investing, investors achieve financial returns while promoting long-term environmental or social value (*What Is Sustainable Investing? | HBS Online*, 2022). Investors engaging in sustainable investing do not solely rely on financial returns to assess the performance of an investment, instead, they consider a comprehensive assessment technique that incorporates the ESG performance of the investment. Sustainable investing ensures that investors consider the potential impact of their investment on the environment and society, hence, it significantly contributes to environmental wellness (Gutterman, 2020). Sustainable investing started in the 1960s and 70s as a reaction to the significant need for social change. Labor unions and civil rights activists used sustainable investing to enforce social change among companies, this led to the creation of the first sustainable fund in 1971: the Pax World Fund (King, 2024). Over the past few years, investors have become eager to engage in sustainable investing that contributes to solving the world's economic, social, and environmental issues. The acceleration of sustainable asset growth is projected to reach 33.9 trillion by 2026 (King, 2024). Investors' increased awareness of societal and environmental issues forced firms to share more data on their ESG performance allowing investors to align their investments with their values. Various types of investments are considered sustainable due to their positive impact on the environment and society. In the following section, three types of sustainable investments are discussed.

2.2.1 Examples of sustainable investments

Green bonds are fixed-income investments issued to finance projects that contribute to environmental wellness like energy-efficient firms, renewable energy sources, climate change adapting projects, or sustainable infrastructure companies (Segal, 2024). They can be issued by various entities depending on the purpose of the bond including, governments, banks, municipalities, or firms (Bhutta et al., 2022). In order to increase the reliability of green bonds, some bonds are certified by third-party organizations or civil society groups. The certification ensures that the funds from the green bonds are used for projects that benefit the environment (Zirek & Unsal, 2023). Green bonds allowed funding green projects to be more reliable and easier for investors due to the increased availability of green bonds.

Moreover, it contributes to reducing carbon emissions because it promotes financing projects that use renewable energy sources which reduces the reliance on non-renewable energy like fossil fuels. The issuance of green bonds has significantly increased in the past few years, green bonds went from $2.3 billion in 2013 to $17 billion in 2016 (Bhutta et al., 2022). Additionally, green bonds are essential for achieving the goals of the Paris Agreement in 2016, because they fund sustainable projects, support actions that minimize climate change, and encourage investors to make more sustainable investments (Bhutta et al., 2022).

Clean technology investments are considered sustainable because they target technical companies innovating sustainable products like electric cars which reduce air pollution. Clean technology refers to alternative products, services, and processes that have a low negative impact on the environment in comparison to traditional alternatives (Doble & Kruthiventi, 2007). The technologies are innovated to minimize pollution and promote sustainability through reduced energy consumption. The main goal of clean technologies is to improve environmental wellness by utilizing the current rapidly developing technologies (Doble & Kruthiventi, 2007). Clean technologies include renewable energy sources, electric vehicles, innovating the process of recycling, and water filtration systems (Lanteri, 2023). The usage of clean technology correlates with significant environmental benefits because it aims to improve environmental wellness. The adoption of clean technologies increases firms' compliance with environmental regulations because they are more sustainable and can be innovated to fit the interests of the companies (Lanteri, 2023). From the investor's perspective, investing in clean technologies allows investors to increase their returns, diversify their portfolios, and consider ESG factors in their investment activities. Additionally, clean technologies can also be a part of companies' ESG activities as they are considered a great innovative opportunity for firms because global interest is shifting toward more sustainable and clean technologies (Mathews, 2016).

ESG stands for environmental, social, and governance, ESG funds are a type of mutual fund that collects capital from investors and invests it in companies that comply with ESG requirements (Finserv, 2024). The environmental dimension considers the firm's environmental impact. The social dimension focuses on employee welfare, gender diversity, equality among employees, and the external societal impact of the firm. The governance component directs attention to compliance with governmental regulations (Finserv, 2024). There are four types of ESG mutual funds, exclusionary funds, best-in-class funds, thematic funds, and impact funds. Exclusionary funds exclude investments in products that do not comply with ESG parameters like tobacco, weapons, and fossil fuels (Sahu, 2023). Best-in-class funds aim to invest in companies that have the highest ESG rating within the industry they operate in (Sahu, 2023). Thematic funds invest in companies that focus solely on improving sustainability through diverse themes like clean energy, water conservation, and greener quality (Sahu, 2023). Lastly, impact funds invest in companies that thrive for positive societal impact and maximize investors' returns simultaneously (Sahu, 2023). ESG funds are assessed based on a specific ESG score that evaluates the company's contribution to ESG factors (Finserv, 2024). ESG scores are calculated by gathering data on the firm's ESG performance, after that, the data forms indicators which are scored with a specific weight assigned to each indicator, scores are then combined to compute a final score for the company's ESG rating (Finserv, 2024). There are benefits and challenges associated with ESG fund investments. ESG fund investments play an important role in improving risk management, investors adopting an ESG approach avoid companies that do not comply with environmental, societal, and governmental regulations which reduces losses due to fines associated with regulatory violations (Nathan, 2023). Additionally, ESG investments diversify and enhance portfolio performance as it has been proven that ESG investments outlast non-ESG investments, according to a 10-year study, 77% of ESG funds still exist, meanwhile, 53% of traditional funds have dissolved (*Can ESG Investments Perform Better Than Traditional Ones?*, n.d.). On the other hand, ESG funds are exposed to transparency challenges since companies do not have the required software and data to produce accurate ESG metrics, moreover, companies' interpretation of what a good ESG performance is may significantly differ (Nathan, 2023). Additionally, unethical companies may take advantage of the lack of data to pursue greenwashing where companies can claim that their products and production process are more sustainable than what they are (De Freitas Netto et al., 2020).

2.3 Expectancy Value Theory

The expectancy-value theory is a psychological theory that illustrates the relationship between motivations or behaviors and the certainty of achieving specific results, taking into account the value of those results (Wigfield & Eccles, 2000). The theory suggests that individuals are motivated to pursue certain actions when they believe that the results of the actions will be the desired outcome they value (Wigfield & Eccles, 2000). In the context of this research paper, expectancy-value theory can explain young investors' investment decisions due to the significant effect investment outcomes have on investors' preferences. Fulton mentioned in his research that sustainable investing aims to create long-term value, which means that investors may hold sustainable assets based on optimistic long-term expectations (Fulton et al., 2012). Investors derive optimistic long-term expectations when engaging in sustainable investing, this makes it important to control those expectations in the task-based simulation questions in the survey by making the investment return in the options the same. Another possible expectation is the psychological return that altruistic investors expect from sustainable investing, for example, the non-monetary utility altruistic individuals derive from sustainable investing. The non-monetary utility and psychological return are the focus of this research because they arise from altruistic motivation (Amalia et al., 2022).

"Maximizing utility is not the same as maximizing returns", utility measures value by taking into consideration the overall satisfaction derived from investing in an asset (Tabithal, 2022). The utility is influenced by other non-financial factors that affect the satisfaction individuals derive from an investment, emotions are the main effective factor that contributes to the overall satisfaction investors derive (Tabithal, 2022). The process of investing can include emotional benefits in some cases, and emotional costs in other cases (Tabithal, 2022). As an example, when an altruistic investor decides to sell the assets they own in a company with a large carbon footprint, the investor may derive high emotional benefits due to the emotional satisfaction from contributing to a more sustainable environment (Baker, 2022). Altruism is a personality trait that arises from empathy which is an emotion that can influence how investors perceive a certain asset or assess an investment (Toi & Batson, 1982). Empathy can be for other people in society or for environmental wellness, individuals with empathy for environmental wellness are more likely to engage in activities that benefit the environment without expecting anything in

return, hence they are considered more altruistically motivated for environmental well-being (Puaschunder, 2017).

2.4 Theory of Utilitarianism

The theory of utilitarianism is an ethical theory associated with the philosopher Jeremy Bentham, it suggests that what is considered morally right is what brings happiness or utility to most people (McCarthy et al., 2020). The theory aims to maximize the overall well-being of people in a society. It focuses on the happiness of the society instead of taking an individualistic approach that does not consider the well-being of the society or environment. The theory of utilitarianism can explain the relationship between altruistic motivation for environmental well-being and investment preferences in sustainable investing. Utilitarianism encourages individuals to develop altruistic motivation for environmental well-being, therefore, individuals would engage in sustainable investing to benefit the environment due to the societal benefits that are concurrent with environmental well-being. Environmental wellness correlates with abundant societal benefits as it enhances personal health, ensures the future health of communities, and eliminates pollution and excessive waste (*Environmental Wellness - - Western University*, n.d.). The societal benefits that arise with environmental well-being cause happiness to the greatest number of people, this shows how utilitarianism theory can explain the relationship between variables in this research.

In history, the motivation behind the development of the classical approach to utilitarianism was to see useless social practices and corrupt laws changed (*The History of Utilitarianism (Stanford Encyclopedia of Philosophy)*, 2014). However, since the 20th century, the theory of utilitarianism has gone through various refinements by philosophers to improve the classical approach to utilitarianism (Baujard, 2013). These improvements allow the theory of utilitarianism to be applicable in today's society because this theory can still be used to explain the behaviors of individuals since it simply suggests that individuals pursue a certain behavior because they consider it morally right due to the utility it brings to others. The theory of utilitarianism further supports the hypothesis that individuals with higher altruistic motivation for environmental well-being are more likely to engage in sustainable investing.

2.5 Investor Profit Motive

Investor behavior and decisions are influenced by their profit motive, some investors focus solely on profit, while others may consider other non-financial factors. The profit motive is thought to be one of the main drivers of economic activity, assessing an asset using profit performance only could simplify investment decisions because investors would simply choose the investment with the highest profits (Kagan, 2020), however, relying on the profit motive solely to make investment decisions has advantages and drawbacks. For firms, profit motive may be a source of motivation for innovation because it increases returns, moreover, profit motive allows the firm to increase their income, hence improving their shares performance which aligns with the interests of investors and shareholders (Bhattacharjee et al., 2017). For investors, relying on profit motive to make investment decisions can allow investors to increase their participation in investment activities due to profits from previous investments (Bhattacharjee et al., 2017). The increase in investors' participation in investment activities improves the overall wealth of the market, firms, and investors (Derwall et al., 2011). Conversely, there are drawbacks associated with relying on profit motives solely when making investment decisions for firms and investors. The profit motive can encourage firms and investors to make unethical decisions to maximize their returns, and that can cause damage to their reputation mainly via the emergence of externalities. Additionally, short-term profit is not everything an investor should consider, some other factors like risk, sustainability, and future development need to be taken into consideration (Cohen, 2017).

Sapienza conducted research that discusses the difficulty of comprehending an entrepreneur's preferences, it suggests that the impact of the investor's profit motive on their decisions can be significant, which emphasizes the importance of exploring the significance of profit motive in this research (Sapienza et al., 2004). According to Sapienza's findings, investors are driven by their desire to increase their financial returns, and profit motive encourages investors to coordinate their investments carefully (Sapienza et al., 2004). *Hypothesis: If investors have a higher profit motive, then they will be less likely to engage in sustainable investing*. The profit motive is controlled in this research by controlling the return on investment in the task-based simulation questions in the survey, given that it is the main factor that leads to the profit motive since higher returns make investments more desirable for investors (Lodhi, 2014).

2.6 Investor Risk Tolerance

In an investing context, risk is the uncertainty of achieving the expected future results from an investment (Hertz, 2014). Risk can significantly influence decision-making due to the absence of data about the future, and the uncertainty of achieving the expected future results (Virlics, 2013). Some investors tend to be more risk-tolerant than others due to their ability to handle risk. Investor risk-taking is the willingness of an investor to invest in assets that are less likely to succeed, however they would generate higher returns if they became successful (Lindner et al., 2021). Each investor has a different risk tolerance, some risk-averse investors would prefer to choose safe options even if it might lead to lower returns (Harris, 2015). On the other hand, some risk-tolerant investors may prefer to invest in risky assets because they prefer higher returns even if there are high prospective losses (Harris, 2015).

There are diverse sources of risk, and the weights of the risk from each source differ depending on the investment. The diversity of sources of risk makes understanding risk preferences a complex topic to tackle in investing because the risk is exposed to change and errors. Market risks are a source of risk for investors, fluctuations in interest rates, stock prices, and product prices impact the value of the investment for the investor (Dowd, 2002). Liquidity risk is another type of risk that investors consider before investing, some assets are challenging to sell or turn into cash, and this has a significant negative impact on their value (Acerbi & Scandolo, 2008). Additionally, some investors deal with credit risk because they invest with borrowed money, and they are obliged to pay back creditors. Investors need to prioritize credit risk because any failure to pay back can lead to legal and financial issues (Peterdy, 2023). Moreover, some businesses may find it challenging to comply with regulatory and political changes, which introduces political and governmental risks. Political policies and governmental regulations are subject to change, the changes can impact industries and markets, and affect firm profitability. Regulatory changes can increase the firm's cost of compliance with governmental regulations; hence profitability may decrease (Corneliussen, 2005). Lastly, all investment risks are either systematic or unsystematic. Systematic risk is non-diversifiable due to its inherence to the whole market, for example, risks arising from global pandemics (Beja, 1972). On the other hand, unsystematic risk is diversifiable because it is inherent to a specific asset or company, such as risk from firm management issues (Beja, 1972). Each investor reacts differently to those risks, and preferences for risk engagement differ significantly among investors which influences investors' decisions. Like any investment, sustainable investing is associated with diverse risks.

However, research has shown that incorporating ESG factors into decision-making leads to a potential decrease in risk for investment choices because investors would consider the firm's impact on a wider variety of stakeholders (Bernow, 2017). Additionally, responsible investments reduce investors' engagement in negative events that may damage the environment or society. The negative events can significantly harm investment returns through increasing environmental, social, and governance risks.

Investor's risk tolerance is a control variable in this research because it can influence investor behavior and decisions, regardless of the altruistic motivation for environmental well-being. Understanding an individual's risk tolerance is important because it directly impacts their investment choices and the type of investment, they are willing to engage in. Mubaraq's statistical analysis accepted the hypothesis, stating that risk tolerance increases investors' engagement in investing because they would feel more comfortable when making investment decisions (Mubaraq, 2021). Investor risk tolerance is controlled by making investments in the task-based simulation question equal in terms of risk. Moreover, a survey question was added to assess participants' risk tolerance.

3. METHODOLOGY

3.1 Research Design

The research employed a combination of quantitative and qualitative methods, utilizing a survey for both quantitative and qualitative data collection (Appendix 1). Each approach allows for answering different types of questions, however, combining the two approaches generates more detailed results that can better answer the research question. Utilizing both methods can ensure that the limitations of one type of data are balanced with the strengths of another (*Combine Qualitative and Quantitative Data*, n.d.). Self-assessment questions were used to allow investors to rate their altruistic motivation for environmental well-being. Survey questions allowed the identification of investors' likelihood of engagement in sustainable investing and their altruistic motivation for environmental well-being, hence, the correlation between the two variables can be identified to show the effect of altruistic motivation for environmental well-being on young individual investors' preferences in sustainable investing. Rating scale questions are considered quantitative, and questions asking for descriptive answers are considered qualitative (Ponto, 2015).

In this thesis, quantitative data produced objective data that is communicated through numbers and statistics (Gcu, 2021). Those numbers and statistics were used for inferential statistics analysis in the form of regression and correlation analysis to identify the relationship between the variables. Moreover, Inferential statistics were used to make conclusions and predictions about the population based on the data (Kalish & Thevenow-Harrison, 2014). The numbers collected in this research are derived from the responses to the rating scale questions in the survey. Participants' answers were used to compute four composite scores from sub-scores based on the participant's answers to each question, the first score represents the participant's altruistic motivation for environmental well-being, the second score represents the likelihood of engagement in sustainable investing, the third score represents investor risk tolerance, and the fourth score represents investor profit motive. On the other hand, qualitative data allows for a deeper analysis of hidden factors and motivations behind certain behaviors that can't be communicated through numbers and statistics (Berkwits & Inui, 1998). In this research, the qualitative data is collected from the survey by asking participants questions that require descriptive answers. The answers are analyzed using a thematic analysis approach to identify the motivations behind the investor's decisions and produce a further understanding of how their altruistic motivation for environmental well-being affects their preferences in sustainable investing. Moreover, participants were asked a task-based simulation question based on a real-life situation that gave them the choice between two different investments. The First investment is in a solar energy company, and the other is in a traditional oil company. Both investments have the same risk and returns over the next year to control the effect of risk and profit motive on the respondent's decisions. This type of question allowed the identification of participant's preferences in investing and the reasoning behind their preferences because they were asked why they chose the investment.

3.2 Data Collection

The data was collected in an online survey sent to young individuals, and the majority were individual investors from the age of 18 - 25. The online survey was created using Google Forms and shared on WhatsApp groups and social media. The majority of participants were university students, and some were employees as well. The survey did not ask for additional private information from participants due to privacy concerns. Each participant answered the questions without any outside pressure that may influence their answers. This thesis utilized data collected and analyzed on an individual level as it focused on the characteristics and behaviors of individuals. The data consists of scores derived from survey participants' answers, and each participant answered the survey once with the freedom to not answer a specific question if they wanted. The scores represent each respondent's altruistic motivation for environmental well-being and likelihood of investing in sustainable assets. The scores are derived from questions asking participants to rate on a scale of 1 - 10, and all rating scale questions are on a scale of 1 - 10 to ensure that participants use the same scale for all answers. Scores were out of 100, and the dependent and independent variables scores were derived from 5 rating scale questions about each. Meanwhile, for the control variables, one question was asked for each to keep the survey short for respondents. Participant risk tolerance and profit motive were measured as a control variable to gain insight into the significance of the independent variable effect. Lastly, the survey contained an informed consent that showed that participants entered the research voluntarily, additionally, it provided the participants with information about the purpose of this research.

3.3 Sample

The survey was shared online on social media applications like university WhatsApp groups because the target group is young individual investors. Convenience sampling was used in order to ensure ease of access (Sedgwick, 2013). The research focuses on university students because they are more likely to be more educated on the importance of environmental concerns and sustainability, where a total of 94.4% of students identified the existence of significant environmental issues (Pérez et al., 2023). Knowledge about environmental concerns and sustainability importance is an important factor that influences an individual's altruistic motivation for environmental well-being, hence 96% of respondents agreed with the statement: "I have a basic knowledge background on environmental concerns, environmental wellness, and sustainability.". The data was collected from surveys distributed to students from different universities like the University of Twente which centers its education, research, and innovation around environmental, social, and economic sustainability. Most individuals participating in the survey are young investors from

the age of 18 – 25 who have any type of involvement in investing in cryptocurrencies, gold investments, saving accounts, stocks, bonds, mutual funds, etc, meanwhile, only 9 never engaged in investing activities. The reason behind choosing young investors is that young investors can play a crucial role in shaping the future financial markets and how investment interests might change in the future (Beers, 2024). The survey included 61 participants of which 46 were males and 15 were females, and obviously the sample was male dominated which can skew results. Overall increasing the number of participants can minimize the margin of error, additionally, a larger sample creates a better representation of the population (Andrade, 2020). The average age of participants was 22 years old, and their average scores and standard deviation for each variable can be seen in Table 5.

3.4 Measures

3.4.1 Altruistic Motivation For environmental well-being

Altruism was measured using a self-assessment altruism scale where investors participating in the survey rated how frequently they participated in altruistic activities on a scale of 1 – 10 (MSc, n.d.). Rushton measured altruism using a similar approach in his study utilizing a self-report altruism scale, participants rated their altruism on different levels like moral reasoning, social responsibility, empathy, and personal values (Rushton et al.,1981 pg. 296). Respondents in Rushton's study were instructed to rate the frequency of their engagement in altruistic behaviors. After that, the peers of respondents were instructed to use the same scale and rate the altruism of the respondent (Rushton et al.,1981 pg. 296). The findings of Rushton's study suggested that the self-report altruism scale can be considered reliable because the peer ratings of altruism had a significant positive correlation with the self-report altruism scale. In this study, participants were asked 5 rating scale questions that allowed them to rate their altruistic motivation for environmental well-being. Participants answered questions about the frequency of their participation in activities that benefit the environment, the importance of environmental concerns, the use of environmentally friendly products, and the likelihood of prioritizing the interests of the environment over their interests. The ratings across the 5 questions about altruistic motivation were considered as points and they were summed and divided by 50 because 50 is the maximum number of points that can be obtained. The average score was represented as a final score that represents their altruistic motivation for environmental well-being. The higher the final score of altruistic motivation for environmental well-being, the higher the individual's altruism for environmental well-being.

3.4.2 Preferences and Likelihood of Participation in Sustainable Investing

To measure the individual preferences and likelihood of engagement in sustainable investing (DV), participants were asked five rating scale questions about the likelihood of investing their funds in sustainable assets, and the importance of environmentally friendly investments. Similar to the variable (altruistic motivation for environmental wellness) each rating represented a certain sub-score that contributed to the respondent's final score out of 100 which represented their preferences and likelihood of engaging in sustainable investing (*LibGuides: SPSS Tutorials: Computing Variables*, n.d.). A higher final score shows that the individual investor is more likely to engage in sustainable investing. Moreover, investor preferences were identified through task-based simulation questions that gave them the choice between two different investments, one is sustainable and the other is not. Task-based simulation questions were used to show investor preferences. A similar approach is used in Barreda's research, different scenarios were given to the investors, and they chose how they preferred to act (Barreda-Tarrazona et al., 2011). The scenarios have fixed risk and return to ensure that the preferences are not affected by external variables.

3.4.3 Control Variables

3.4.3.1 Investor Profit Motive

Measuring investor profit motive required asking participants a rating scale question that showed if participants were willing to consider factors other than profit when investing. In previous research, an approach to measure profit motive involved assessing if investors are willing to sacrifice their financial returns to invest in more responsible and sustainable assets, and this was identified through interviews and surveys (Derwall et al., 2011). In this paper, a similar approach is used, survey participants were asked if their only goal in investing is to maximize profit or if they consider other goals like environmental and societal well-being. The question about profit motive provided participants with a statement: "Maximizing profit is the main goal of investing, and other goals like environmental or social goals are not important." After that, the participants would rate the extent to which they agree with the statement on a scale of 1 - 10. The answer represented a score out of 100 for investor profit motive, and if participants strongly agreed with the statement, they would choose a higher rating scale number, and the higher that rating, the stronger the investor profit motive. In this research, the investor profit motive is a control variable that allows identifying the significance of the independent variable "altruistic motivation for environmental wellness". Additionally, the profit motive is controlled in the task-based simulation question because both choices have the same return on investment, and the profit motive arises from investment returns.

3.4.3.2 Investor Risk Tolerance

The importance of measuring risk tolerance in this research arises from the significant effect risk perception has on investor preferences because the way investors perceive risk affects their investment preferences (Putra & Wayan, 2023). Measuring investor risk tolerance required investigating previous methods used in research papers to measure investors' risk tolerance. Research has shown various methods that measure risk tolerance. Hanna's research utilized self-reported risk tolerance measures based on economic theory, which assumes that investors make the best choices for themselves (Hanna, 2001). It used a survey that included diverse questions related to the willingness to accept risk for investments, revised versions of exiting risk tolerance questions, and imaginary scenarios that assess risk tolerance levels (Hanna, 2001). In this research risk tolerance was measured using the same method, a rating scale question about the likelihood of engaging in risky assets was asked in the survey. Answers were converted to a score out of 100 because the participants rated on a scale of 1 - 10. A higher score for risk tolerance indicated that the participant is more risk tolerant. The risk tolerance score is a control variable that aims to show the significance of the effect of the independent variable. In addition, risk tolerance was controlled by making the investment risk in the task-based simulation question the same for both investment choices, thus minimizing the effect of risk perception on the investment choice made by the participants.

3.4.3.3 Other Sample Characteristics

To avoid any third variable influence on the results of this research, sample characteristics were taken into consideration.

Talpsepp's research has identified that young investors' decisions tend to be significantly different from older investors (Talpsepp, 2013), hence, this research focused on young individual investors. Additionally, it was important to control the participant's awareness of environmental concerns, as altruistic motivation is affected by participants' understanding of environmental issues and their importance. Hence, a question was added to the survey about that, and it showed that all respondents have a basic knowledge background on environmental concerns.

Table 1 – Variables Table

Category	Variable	Source
IV	Altruistic motivation for environmental well-being	(Rushton et al.,1981 pg. 296).
DV	Preferences for sustainable investing	(Barreda-Tarrazona et al., 2011)
Control Variables	Risk Tolerance	(Hanna, 2001)
	Investor Profit motive	(Derwall et al., 2011).

3.5 Data Analysis

3.5.1 Thematic analysis

Thematic analysis was used as a qualitative data method to analytically identify existing patterns within the data derived from survey questions that required descriptive answers (Clarke & Braun, 2016). The analysis was based on the four open-ended questions asked on the survey. The first question asked about the importance for investors to consider environmental wellness as a goal of investment. The second question asked for the reason behind the investment choice made in the task-based simulation question. The third question was about the feelings that survey participants would develop if they engaged in sustainable investing to discover the non-monetary utility investors derive from sustainable investing. The fourth question asked for the factors investors would consider when making investment decisions (Appendix 1). This analysis required getting familiar with the data by exploring the content of the answers and the possible patterns. After that, the data was color-coded to label specific texts that show existing patterns within respondents' answers. The color codes were grouped to form themes that represent specific patterns in the text (Delahunt, 2017). This analysis technique allowed identifying the most frequent patterns in investors' answers to make valid conclusions about respondents' answers. To increase the reliability of the analysis, a peer was asked to review the observations and conclusions made from the data to minimize the effect of researcher bias (Clarke & Braun, 2016).

3.5.2 Inferential Statistics Analysis

The data from the survey was first exported from Google Forms to Excel to calculate the scores. The Excel sum () function was used to sum the sub-scores from the five rating scale questions about altruistic motivation for environmental well-being and sustainable investing preferences. The sum of sub-scores was divided by 50 because 50 is the maximum points that can be obtained and multiplied by 100 so that scores could be out of 100. For risk tolerance and the profit motive, only one question was asked since they are control variables, and the scores for each participant were divided by 10 and multiplied by 100. Each variable had its final score, which was used to identify the regression model and the correlation matrix. The analysis of the relationship between variables was done using inferential statistics in the form of a regression model. The regression model was utilized to show if changes observed in the young investors' preferences for sustainable investing are related to their altruistic motivation for environmental well-being. Analyzing the regression model identified if there is an existing relationship between the variables. Moreover, the data collected was analyzed to test the hypothesis about the effect of altruistic motivation for environmental well-being on young investors' preferences in sustainable investing.

Rgression formula without control variables:

$$y = 0.835 + 0.990x1 + \varepsilon$$

Resgression formula with control variables:

$$y = 16.23 + 0.894x1 - 0.099x2 - 0.069x3 + \varepsilon$$

In these regression formulas, y is the non-normally distributed dependent variable (young individual investor's preferences for sustainable investing), and (0.835 / 16.23) represents the intercept, which is the value of (y) when (x) equals 0. X1 represents the independent variable (altruistic motivation for environmental well-being), the independent variable is considered the explanatory variable which explains the changes seen in the young individual investor preferences for sustainable investing if there were any. X2 represents the control variable (investor profit motive), and X3 represents the control variable (investor risk tolerance). Lastly, ε is the random error term that represents the effect of potential measuring errors in the dependent and independent variables.

For analysis, data was imported to R-studio. First, a Shapiro-Wilk test was conducted to identify if the data was normally distributed. If the data is normally distributed, the Pearson correlation coefficient would be used to test the correlation between variables (Schober et al., 2018). If the data is not normally distributed, then Spearman's rank order method would be used to identify the correlation (Schober et al., 2018). Identifying the correlation between variables allows for understanding the direction, shape, and strength of the relationship between variables (Aggarwal, 2016). Moreover, a multi-regression model is utilized to show the effect of the variables on preferences for sustainable investing, and how the independent variable can predict the value of the dependent variable (Profillidis & Botzoris, 2019). If the data is normally distributed and the relationship between variables is linear, traditional linear regression techniques would be used, for example using the lm() function in R. Meanwhile if the data is not normally distributed and the relationship between the predictor variables and response variable is linear, then generalized linear models would be used to consider the non-normal distribution of data (Phillips, 2018). Additionally, the data was tested for linearity using scatter plots (Appendix 2).

4. RESULTS

The following section presents the results of this study derived from the survey created. First, the results of the thematic analysis are shown in the form of tables that exhibit the number of mentions of each theme found to identify patterns in the received answers. After that, the descriptive statistics and the results of the inferential statistics are shared in a table.

4.1 Thematic Analysis of Open-ended Survey Answers

The results of the open-ended question "Do you believe that environmental wellness should be considered a goal for investors

when making investment decisions due to the negative impact firms may have on the environment? Why?" are in Table 2.

Table 2 – Themes of Open-ended answers 1

Themes	Mentions
Yes, to promote long-term sustainability	31
Only said yes without a reason	14
No, it is not important for investors to consider environmental wellness as a goal	12

For the task-based simulation question, the results were that 53 respondents chose investment 2 which was a sustainable investment in a solar energy company, 6 indicated that they don't care because both have the same financial return, and only two respondents chose investment 1 which was an investment in a traditional oil company. 32 of the respondents who chose the more sustainable investment said they chose that investment due to the positive effect it has on the environment. Meanwhile, 17 respondents chose the sustainable investment because it provides the same return as the other unsustainable investment. On the other hand, the two respondents who chose Investment 1 said they selected that investment for personal preferences such as viewing unsustainable investments as more trustworthy or being more interested in it.

Hidden feelings that may develop after investors engage in sustainable investing were revealed through the following question: “How would you feel if you invested in sustainable assets?”. The results are represented in Table 3.

Table 3 – Themes of open-ended answers 2

Themes	Mentions
Increases happiness and satisfaction	32
No effect on the way they feel	14
Investment returns are the highest priority	**7**
No answer	6

To distinguish any other hidden factors that investors consider when making investment decisions, survey respondents were asked the question: "Are there any factors other than financial returns you would consider when making investment decisions? What are they?". (Results in table 4)

Table 4 – Themes of open-ended answers 2

Themes	Mentions
Environmental and societal impact of the company	20
Wouldn't consider other factors than financial	11
The investment risk	11
No answer	15
Others (Making connections through investing, long term value, and diversification)	4

4.2 Explanatory Quantitative Statistics

Descriptive statistics are used in this thesis to provide a summary and describe the main characteristics of the sample and the average score for each variable. Table 5 below shows the mean scores, the standard deviation, and the mode for all the variables. A score from (0 - 20) is very low, (21 - 40) is low, (41 - 60) is a medium score, (61 - 80) is high, and (81 - 100) is a very high score.

Table 5 – Descriptive Statistics

Variable	Mean Score out of 100	SD	Mode
Altruistic motivation	60.59	18.73	64
Preferences in sustainable investing	60.46	20.55	72
Risk Tolerance	63.44	21.44	80
Investor Profit motive	54.75	26.31	70

Initially, the Shapiro-Wilk test showed that the scores for preferences for sustainable investing and the control variable profit motive were likely not to be normally distributed. Moreover, even after applying a log transformation, the Shapiro-Wilk test rejected the null hypothesis, suggesting that the data is not normally distributed. On the other hand, scores for altruistic motivation for environmental well-being and the control variable risk tolerance can be assumed to be normally distributed. Taking into consideration the non-normal distribution of some variables despite the sample size (N = 61), Spearman's rank correlation test was used for creating the correlation matrix in Table 6 and conducting the correlation analysis.

Table 6 – Correlation Matrix (* = p < 0.05, ** = p < 0.01)

Measure	1	2	3	4
1. Altruistic motivation	---			
2. Preferences for sustainable investing	0.75**	---		
3. Risk Tolerance	0.06	0.04	---	
4. Profit motive / Investment return	-0.35**	-0.44**	0.29*	-

Table 6 shows the correlation matrix that identifies how each variable correlates with the other. The results show a strong positive correlation between altruistic motivation for environmental well-being and preferences for sustainable investing. The "cor.test" function in R was used to investigate the significance of the correlation coefficient, and it showed that there is strong evidence that the correlation between altruistic motivation for environmental well-being and preferences for sustainable investing is statistically significant since the test’s p-value = 3.253e-12. Similarly, a significant negative correlation between investor profit motive and preference for sustainable investing was identified (p=0.0004184). On the other hand, no significant correlation between risk tolerance and preferences for sustainable investing was found (p=0.7866). The correlation matrix revealed that there is a negative relationship between altruistic motivation for environmental well-being and the profit motive, and there is enough evidence to state that the correlation is statistically significant (p=0.005431). Additionally, the correlation matrix suggested that there is a very weak positive relationship between risk tolerance and altruistic motivation for environmental well-being and it is not significant (p=0.6532). Lastly, there is a moderately positive correlation

between risk tolerance and profit motive, additionally, their correlation is considered statistically significant (p=0.0213).

Table 7 shows the coefficients table, Model 1 includes the control variables and Model 2 does not. The scatter plot revealed a strong positive linear relationship between altruistic motivation for environmental well-being and the response variable (Appendix 2). Meanwhile, the profit motive had a negative linear relationship with the response variable (Appendix 2). Lastly, risk tolerance did not correlate with the response variable (Appendix 2). Hence, the generalized linear model function in R was used to identify the regression model because GLMs are developed to handle the non-normal distribution of data, especially when the response variable does not fit the bell-shaped distribution (Ohyama, 2023). Since the scores of the response variable are continuous and non-normal the GLM family used was (Gamma) with an identity link function (Ruíz et al., 2023).

Table 7 – Coefficients Table: (* = p < 0.05, ** = p < 0.01)

	Model 1	**Model 2**
Intercept	16.231*	0.835
Altruistic motivation (X1)	0.894**	0.99**
Investor Profit motive (X2)	- 0.099	
Risk Tolerance (X3)	-0.069	
Adjusted R^2	0.668	0.635

5. DISCUSSION

5.1 Theoretical Implications

This thesis investigated the effect of altruistic motivation for environmental well-being on young investors' preferences for sustainable investing while taking into consideration the profit motive and risk tolerance. Additionally, it explored the possible hidden feelings investors develop when engaging in sustainable investing and the factors they might consider.

The first notable finding is the statistically significant positive correlation between altruistic motivation for environmental well-being and the likelihood of engaging in sustainable investing. Similar to previous research, the results of the correlation analysis showed that if an individual has higher altruistic motivation for environmental well-being, then they are more likely to engage in sustainable investments, additionally, they will prioritize sustainable investing in comparison to non-altruistically motivated individuals (Amalia et al., 2022). In contrast, the results have shown a negative correlation between investors' profit motive and the likelihood of engagement in sustainable investing, as profit motive increases, the individual investor would be less likely to invest in sustainable assets. This suggests that there is a common misinformation that profitability and sustainability are an either-or proposition which might be the cause of this negative correlation, especially because higher returns make investments more desirable for investors as seen in previous literature (Lodhi, 2014), although research has shown that this is false because sustainability can align with profitability (Sneirson, 2008). Indeed, when considering the effect of the profit motive, it is noteworthy that altruistic motivation for environmental well-being had a negative correlation with investor's profit motive. When an investor's profit motive increases, they are less likely to have high altruistic motivation for environmental well-being since they care about financial returns more, and financial considerations can contribute to unethical conduct in business as seen in previous literature (Fassin, 2005). Interestingly, correlation analysis revealed that risk tolerance has no significant correlation with the likelihood of engagement in sustainable investing and altruistic motivation for environmental well-being, although previous literature has shown that risk tolerance has a significant effect on investors' preferences (Virlics, 2013). This seems to suggest that investors who are more likely to engage in sustainable investing can be risk-averse or risk-tolerant, however, their choices within sustainable assets may differ depending on their risk tolerance because the thematic analysis in this research showed that investment risk is a crucial factor that investors consider when investing.

The results of the multi-regression model 1 showed that altruistic motivation for environmental well-being has a high positive effect on the likelihood of engagement in sustainable investing in comparison to investor profit motive and risk tolerance. Increasing a non-financial factor such as young investors' altruistic motivation for environmental well-being increases their likelihood of engagement in sustainable investing, however, profit motive has a low negative effect on the likelihood of engagement in sustainable investing. Additionally, according to the data collected, risk tolerance has a low negative effect on the likelihood of engagement in sustainable investing. This might be because risk tolerance has a higher influence on the choice of assets within sustainable investing, however, it is not an influential factor that affects whether an investor is willing to engage in sustainable investing or not. Both regression models suggest that the only significant variable is the altruistic motivation for environmental well-being as seen in Table 7. Lastly, Computing the R-squared of the generalized linear model is more complex than the traditional linear model because GLM does not have a sum of squares. Hence, the pR2() function in R was used to compute Nagelkerke's r-squared which was 0.668 for model 1 and 0.635 for model 2 (*SPSS Statistics Subscription - Classic*, n.d.). This means that 66.8% of the variability in the response variable is explained by the predictors for model 1 and 63.5% for model 2, this can be considered a relatively high Nagelkerke's r-squared which indicates a good fit between the two models and the data.

The thematic analysis has shown that 45 individuals participating in this research believe that investors must consider environmental wellness as a goal when making investment decisions, meanwhile, the majority of them believe that because it is crucial to protect the environment and promote long-term sustainability. This can be used as evidence of the effect of the utilitarianism theory because investors chose to consider environmental wellness as a goal for investment due to the utility it brings to the environment and society (McCarthy et al., 2020). Additionally, 53 respondents chose the more sustainable investment in the task-based simulation question, and 32 of them indicated that the main reason they chose that investment was because of its positive impact on the environment which can be used as evidence of utilitarian principles. The results have shown that altruistic investors are very likely to invest in sustainable assets because of the positive impact their investment can have on the environment or society, which shows utilitarianism. According to the findings, investors feel happy after engaging in sustainable investing, where 32 respondents said that investing in sustainable assets would potentially make them feel happier due to a sense of fulfillment and satisfaction that arises from such positive behavior. This shows that altruistic investors derive non-monetary utility from sustainable investing because happiness is not a financial return, instead, it is an emotional reward that investors expect and give value to when engaging in sustainable investing as stated in the

expectancy-value theory “Maximizing utility is not the same as maximizing returns” (Tabithal, 2022). It is crucial to mention that 14 respondents said that they try their best to ignore emotions when making investment decisions. This shows that some investors refuse to allow emotions to influence their preferences or investment decisions. Meanwhile, when exploring the different non-financial factors that influence young investors' decisions, the results showed that investors with a high score for altruistic motivation would consider the environmental and societal impact of the firms they invest in, and investors with a low score for altruistic motivation said they wouldn't consider factors other than financial returns. Lastly, some investors said they would consider the risk of their investment, and those had diverse scores for altruistic motivation, some were high, and some were low.

5.2 Practical Implications

The findings of this research can be used to explain investor behavior and increase the understanding of non-financial factors' effect on financial decision-making. Moreover, firms can benefit from the findings of this research by aligning their interests with the interests of investors and becoming more sustainable. The findings show that current young investors have a high altruistic motivation for environmental well-being, additionally, it encourages them to become more sustainable and engage in sustainable investing. This research has shown that there is a significant positive relationship between altruistic motivation for environmental well-being and young investors' preferences in sustainable investing which increases our understanding of socially impacted investing and the motives associated with it. This research can be used to identify future investing trends because young investors were the target group, and according to the results, there is a great shift of interest among young investors towards sustainability.

6. LIMITATIONS AND FUTURE RESEACH

Similar to any other research, this research encountered some limitations that are worth mentioning. Firstly, the data was collected from surveys distributed to personal contacts on "WhatsApp" and WhatsApp groups created by study associations at the University of Twente. This can lead to possible biases because most findings are derived from students in one specific community, therefore, it may not accurately represent the broad population. Future research should take into consideration different occupations like employees or non-employed young investors, and it should consider other communities from diverse universities. Additionally, due to time constraints, it was not possible to collect data from a larger sample, and increasing the number of gathered responses creates a better representation of the population. Future research should be conducted on a larger scale, and the sample size should at least be N = 100. Furthermore, individuals who responded to the survey participated with a voluntary bias, which could lead to biases in the data collected because they may be more interested in sustainability, hence they chose to participate in this research. Such bias could significantly affect the results, and avoiding such bias is necessary for future research by including individuals who may have a low interest in sustainability. Another limitation in data collection is that some respondents chose not to answer some open-ended questions, this might be due to the complexity of the questions or because it requires more effort to answer those questions. For future research, open-ended questions should be as simple as possible, and they should require less effort by providing respondents with possible choices to choose from to answer the questions. In addition, altruistic motivation is a complicated characteristic, and a rating scale may not fully represent their motives, moreover, individuals have different understandings of a scale because what some individuals view as an 8 may be a 5 in the perspective of others. In future research, this can be avoided by indicating what each number on the scale means. The analysis of data encountered some noteworthy limitations. In this thesis, the regression model was created using generalized linear models in R. GLMs are not as direct as simple linear models. To avoid the limitations of using GLMs in future research, it is crucial to obtain data from a larger sample to ensure normal distribution.

For future research, a topic worth exploring is identifying ways to increase altruistic motivation for environmental well-being among young investors. According to this thesis, altruistic motivation for environmental well-being increases the likelihood of engagement in sustainable investing, hence, identifying ways to increase altruistic motivation among young investors increases our knowledge of how to increase investors' engagement in sustainable investing. Increasing young investors' engagement in sustainable investing will lead to promoting sustainable practices among firms because firms would want to align their practices with the values of the investors, moreover, applying the ways identified in that research can lead to a more sustainable environment and society.

7. CONCLUSION

This thesis investigated the effect of altruistic motivation for environmental well-being on the likelihood of young investors' engagement in sustainable investing while taking into consideration risk tolerance and investor profit motive. The findings revealed several conclusions from analyzing the data collected through the survey. Initially, altruistic motivation for environmental well-being had a significantly positive correlation with preferences for sustainable investing, meaning that young individual investors with higher altruistic motivation for environmental well-being are more likely to engage in sustainable investing and choose sustainable investments over other traditional investments. Moreover, the regression model showed the significant effect of altruistic motivation for environmental well-being on preferences for sustainable investing because it encourages investors to participate in sustainable investing. Investor profit motive, on the other hand, had a negative correlation with the likelihood of engagement in sustainable investing. Furthermore, the regression model showed that increasing profit motive makes investors less likely to participate in sustainable investing since they would care more about the financial returns of their investments. Lastly, results have shown that risk tolerance does not affect the likelihood of engagement in sustainable investing, however, risk is an important factor that investors consider when making decisions. According to the thematic analysis, it can be concluded that altruistic investors derive non-monetary utility from sustainable investing.

According to the results, it seemed that increasing altruistic motivation for environmental well-being could potentially lead to higher engagement in sustainable investing. Moreover, findings show that there is a common misconception among some young investors in the sample, which is that profit does not correlate with sustainable investments, although research has shown that profit and sustainability are not an either-or situation (Sneirson, 2008). Hence, it is important to increase young investors' understanding of the financial benefits of sustainable investing and not only the societal and environmental benefits.

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Appendices:

Appendix 1:

Survey Used:

Informed Consent:

This is a study being conducted by a student researcher from The University of Twente. In this study, I am trying to explore the impact of altruistic motivation for environmental well-being on young individual investors' preferences for sustainable assets. You will be asked to complete the following survey which should take approximately 10 minutes. If at any time you do not want to participate anymore, you may close your browser and leave the survey.

Your name or any other identifier will not be collected in this survey, and your data will not be identified in the results. All responses will be kept completely confidential. Your de-identified data will not be used or distributed for future research studies.

If you have any questions or concerns about this study or any of these procedures, please contact Saif Al Dayeh at saifraedhasanaldayeh@student.utwente.nl. If you have questions or concerns about the rights and welfare of research participants, please contact the University of Twente ethics committee BMS.

Your participation is completely voluntary. You may quit the survey without penalty.

By continuing with this survey, you confirm that you are at least 18 years of age and that you consent to participate. If you do not consent to participate, please exit this survey, or close your browser.

Survey questions:

1- How old are you?
2- What is your gender?
3- Are you a?
    a. University student
    b. Employee
    c. Others
4- Did you ever engage or currently engaging in any investing activity or any type of trading assets on the finance market like (having a saving account, cryptocurrencies, gold investment, bit coin, stocks, real estate, retirement accounts or any type of investing activity)?
    a. Yes
    b. No
5- Would you say you have a basic knowledge background on environmental concerns, environmental wellness, and sustainability?
    a. Strongly agree.
    b. Agree
    c. Somewhat agree
    d. Somewhat disagree
    e. Disagree
    f. Strongly disagree

Question to determine altruistic motivation for environmental well-being score:

6- On a scale of 1 - 10, how often do you participate in activities that benefit the environment (for example: using sustainable transportation like e-bus and bikes, recycling, saving energy, planting trees, etc.)?
7- On a scale of 1 – 10, how important do you find environmental concerns like climate change and pollution?
8- On a scale of 1 - 10 how likely are you to use products that are more environmentally friendly? (For example, reusable bags over plastic bags)
9- On a scale of 1 - 10, how important do you think it is for individuals to prioritize environmental well-being over their own interests, for example choosing to walk or bike over driving a car for environmental well-being?

10- On a scale of 1 – 10, how likely are you to donate money for environmental protection causes like waste management for example?

Questions to determine likelihood of engaging in sustainable investing score:

11- On a scale of 1 - 10, how likely are you to use your investment funds to invest in sustainable assets like renewable energy companies even if it might generate lower returns?
12- On a scale of 1 - 10, How important do you think it is to make environmentally friendly investments like investment in renewable energy sources or energy efficient companies?
13- On a scale of 1 – 10, How likely are you to buy sustainable assets (for example stock in renewable energy company) due to non-financial satisfaction, for example, satisfaction due to environmental well-being?
14- If you were a shareholder in a company like H&M, which is criticized for its unsustainable practices, on a scale of 1 – 10, how willing are you to speak up and motivate the company to become more sustainable?
15- On a scale of 1 - 10, to what extent do you agree with the following statement: Investors need to consider and assess the environmental and societal impact of the firm they invest in?

Question to determine risk tolerance score:

16- On a scale of 1 – 10, how likely are you to make a financially risky investment where the return is high, however potential loss is also high?

Question to determine profit motive score:

17- On a scale of 1 - 10, to what extent do you agree with the following statement: Maximizing profit is the main goal of investing, and other goals like environmental or social are not important.

Task Based simulation question:

18- If you have the chance to invest in two energy projects: Investment 1 is in a traditional oil company like Shell, and Investment 2 is in a solar panel company. Both investments offer the same expected return over the next year and have the same risk, but investment 2 is more sustainable for the environment because it emits less greenhouse gases. Which investment are you choosing?
    a. Investment 1
    b. Investment 2
    c. I don't care, I would invest in any since they both have the same return.
19- Why did you choose the investment you chose?

Open-ended questions:

20- Do you believe that environmental wellness should be considered a goal for investors when making investment decisions due to the negative impact firms may have on the environment? why?
21- How would you feel if you made an investment in sustainable assets, does it make you happier regardless of returns? (You can say it doesn't affect the way I feel if that's your case)
22- Are there any factors other than financial returns you would consider when making investment decisions? What are they?

Appendix 2:

Scatter plots: