

TALLINN UNIVERSITY OF TECHNOLOGY

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**THE EFFECT OF INVESTMENT PREFERENCES IN
UTILITARIAN-, EXPRESSIONAL- AND EMOTIONAL
BENEFITS ON TENURE CHOICE**

Bachelor's thesis

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I hereby declare that I have compiled the paper independently and all works, important standpoints and data by other authors has been properly referenced and the same paper has not been previously presented for grading.
The document length is 7502 words from the introduction to the end of conclusion.

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ABSTRACT

Attitudes towards homeownership have changed in line with the changes in preferred lifestyle. In the past homeownership has been one of the most important objectives of families and the only investment many households had. These days many families choose to rent even if they could afford buying a home but they prefer to spend the extra money in lifestyle containing for example more traveling and eating out. This research evaluates the psychological factors of homeownership and the household preferences between buying their home and renting. Psychological factors used in this research are preferences in utilitarian benefits, expressional benefits and emotional benefits according to professor Meir Statman who wrote that people want these benefits from their investments. In this research home is considered an investment in that sense and the purpose is to find correlations between household attitude towards these three kind of benefits and preference in homeownership. An OLS-regression was used as a research method and data for the research was collected by the survey. Results show that there is a positive correlation between preference in homeownership over renting and preference in utilitarian benefits, negative correlation between preference in homeownership and expressional benefits and negative correlation between preference in homeownership and preference in emotional benefits.

Keywords: Behavioral finance, tenure choice, homeownership, renting

INTRODUCTION

This research topic was selected because usually the household selection between buy or rent an apartment is evaluated based on numerical data and calculated prices or net present values of each choice. These calculations are usually based on estimations about mortgages, home prices, rental prices and expenses of each housing method. However the choice between buy or rent is made based on other things too than just calculations. We as, human beings are not usually as rational as we think or as rational as we wish when it comes to large decision in life such as buying or not to buy a home. This research is made from the perspective of behavioral finance aiming to assess the decision making of people in the process of making a tenure choice. This research is useful especially for people in the decision making process as it is useful to analyze how the process works in order to make the best choice in each situation. Meir Statman wrote in his book that people want also other things from their investing than money. Money refers to utilitarian benefits but Statman wrote that there are other benefits too that people want from their investments, expressional benefits and emotional benefits. In this research the purchase of a home refers to an investment decision and the aim is to evaluate factors affecting to that investment decision.

The structure of this thesis consists of three chapters and their subchapters. The first chapter will provide theoretical background for this thesis. Background will consists of typical aspects of homeownership and renting, reasons for and against homeownership and how the situation has changed along with the recent trends, market conditions and preferences of households. Both, psychological and economical factors of homeownership are included in theoretical background. The second chapter is methodology. OLS-regression analysis is conducted as a quantitative method to evaluate correlation between the individual preferences and preferences about homeownership. The third chapter is conclusion which sums up the thesis and answers to research questions.

The aim of this research is to evaluate the factors affecting to preferences between buying and renting, more specifically how the benefits we want from investing according to Statman affect our tenure choice. This research is needed and up to date especially because nowadays families

are buying first homes later and later compared to families 20 or 30 years ago. It is important to evaluate the reasons affecting their tenure choice in order to offer service needed for families these days. The research question in line with three hypotheses will be:

- Does investors preference in utilization benefits, expressional benefits or emotional benefits have an effect on decision between buying and renting?

And the three hypotheses that are set for the research:

- Hypthesis 1: Investors preference in utilization benefits have a positive correlation on favouring homeownership over renting.

Investor preferring utilization benefits is interested to receive high profits from an investment and on the long run ownership has historically been more profitable than renting as the apartment prices typically have gone up and there is no profits in renting unless the investor systematically invests his/hers money into something more profitable than a home.

- Hypothesis 2: Investors preference in expressional benefits have a positive correlation on favouring homeownership over renting.

Typically homeownership has been seen as an “american dream” or a goal and homeowner is able to express certain wealth over renter.

- Hypothesis 3: Investors preference in emotional benefits have a negative correlation on favouring homeownership over renting.

According to hedonic adaption our level of happiness is not permanently impacted big the big events of our lives but temporarily instead and renting increases variety in peoples lives which makes them happier and makes them feel better according to this theory.

Major findings were positive correlation between preferring homeownership over renting and preference in utilitarian benefits supporting the hypothesis one, negative correlation in preferring homeownership over renting and preference in expressional benefits as well as negative correlation

between preferring homeownership over renting and preference in emotional benefits. Therefore, hypothesis two was not supported but hypothesis one was supported. These findings are in line with recent research and literature about young households more and more willing to rent their apartment and spending the extra money in lifestyle containing things like travelling and eating out, which brings more happiness for modern families than owning their home.

1. THEORETICAL BACKGROUND

The internet is full of calculators telling you if you should buy or rent your home and the choice between those two is based on simple maths. Usually buying an apartment is considered to be the best solution any time if one just can afford it and is not going to move soon. Among the discussion there can sometimes be identified disturbing evidence according to which there exists a financial superiority of ownership over tenancy. Still, according to some researches the question in many situations is not about basic finance but the psychological factors are found to be more significant in explaining the choice between buy or rent.

According to recent study conducted in the US, the renter population is increasing especially in the metropolitan areas as in 2014 the number of renters has increased by nearly 22 million compared to what it was in 2006 and the number of renters grew in both the principal cities and the surrounding suburbs. Also in the metropolitan areas the number of homes affordable to the typical renter fell between 2006 and 2014. More and more renters are living in single-family homes and there is a considerable gap in supply and demand of rental apartments which leads to the situation when renters can no longer afford living in proper rental apartments and are unable to find an apartment in the first place. (Ellen and Karfunkel 2016) Monica Bazyl found in 2010 that there are differences between European countries in terms of microeconomical factors influencing housing tenure choice and that these differences arise mainly from different approaches of governments toward housing. Some countries may support ownership and some renting. These government policies still do not explain all the differences as they remained even if different government approaches were eliminated in the study. One common factor towards homeownership in each county studied was marriage. In southern European counties for example it is typical for young people to stay with their parents up to late age, even 30 or longer, if they can not afford home so there is little percentage of renters among young households in these countries compared to other European countries. That's why in Southern Europe the likelihood to homeownership does not increase with age as rapidly as in European countries usually while people rent an apartment if they can't afford buying. (Bazyl 2010) According to study conducted by Heidi Schauman from Finlands Bank in 2012, the dwelling markets in Northern countries are quite similar. Denmark,

Norway, Sweden and Finland are quite wealthy countries where people are willing to invest in quality of living. Even if around the world people are living more and more in rental apartment because of reasons some of which mentioned below, in Nordic countries most of the people tend to own their homes. In Norway even 85,4% owned their homes in 2009. In Denmark the proportion of people owning their homes in 2009 was the smallest in Nordic countries, 66,3%. The average percentage in Euro-area was 72%. In Denmark it has been possible to get a mortgage lasting about 30 years, which seems quite a long period of time.

1.1. Psychological factors of homeownership

When it comes to behavioural aspects of housing decision the study in the Journal of Consumer Psychology found that owning a house is not essentially satisfying nor is renting a home essentially disappointing. The more important is the question, what do people actually do with what they have bought? This effect is also partly due to the concept called the “hedonic treadmill” or “hedonic adaptation”, introduced by Brickman and Campbell in 1971 in their essay "Hedonic Relativism and Planning the Good Society", and stating that our level of happiness is not permanently impacted by the big events of our lives but temporarily instead. In housing decision making this means that the pleasure from finding a dream home is only short term and will disappear in time. Extremely this can even mean that renting might provide more happiness to our lives as it increases the variety in our lives. After all, the decision between renting and buying usually matches the individual preferences of different people. Someone with preference in freedom might choose renting over buying while the other with preference in security and stability might be happier owning an apartment. (Brickman and Campbell 1971)

Nicole Shea from Consumer Financial Protection Bureau wrote about the process and decision making of home buying and a process of buying wealth when purchasing a home in 2017. According to what she said, people choose to buy homes for quite different reasons. Some buy because they want more space or freedom to decorate or renovate the home according to their personal wishes and others end up buying because they want to build equity or have stable housing costs. Some people are not ready to take the financial and maintenance responsibilities coming with a homeownership and they might also seek for flexibility of knowing that they will be able to move whenever they want. (Shea 2017) Sujana Patel said in 2017 that millennials have a reputation for forgoing traditional norms and they are buying their homes much later than previous

generations because they want to save and use their money for maintaining preferred lifestyle including travelling and small luxury like eating out. (Entrepreneur.com 2017)

The age range of millennials is usually a typical time for purchasing a first home but millennial homeownership in the US is at record low. Michelle Meyer, a US economist wrote that "Life events such as getting married or having children are typical triggers to buying a home," Meyer said. "The longer this age group lives with parents or independently, the more homeownership will be delayed." (businessinsider.com 2017)

Historically homeownership has been an effective way of creating wealth especially for low- and moderate-income families because that has been the way for them to force themselves towards household saving. Barely anyone had questioned it until the subprime crisis took place during the recession in 2008-2010 when subprime mortgages hurt the low income families the most but was also greatly harmful for entire communities. Until that crisis the home prices had been increasing over time but it wasn't the case anymore as home prices fell significantly. In the wake of that recession a central policy questioned if there are other benefits in homeownership than just creating wealth for families as that wasn't as sure as it had used to be before the crisis. In their book, *A Place Called Home: The Social Dimensions of Homeownership*, Manturuk, Lindblad and Quercia uncovered three individual benefits of homeownership other than just wealth creation. First, homeownership basically has a reducing effect of physical health problems but not if the homeownership causes financial stress for owners. Second, homeowners reported to feel more satisfied with their financial lives than those who ended up renting. Third, homeownership is linked with positive mental health due to the factor of sense of control. They also discovered some other effects of homeownership compared to those who rent an apartment. Homeowners are more likely to vote in the local elections than renters, they socialize and create more groups with their neighbours than renters, homeowners tend to have more social resources and more neighbourhood-based social resources than renters, homeowners are also more willing to fix neighbourhood problems and are associated with higher sense of community than renters. Ultimately this kind of grouping and cooperation with neighbours is known to reduce violence and criminality in neighbourhoods. They also found that better mental, physical and overall health depends on the equity in the home. These benefits no longer apply when the home equity is negative or significantly low. Taken as a whole, there are other benefits such as social benefits from homeownership than just wealth creation. (Manturuk, et al., 2017)

1.2. Economical factors of homeownership

A quarter century ago a famous American investor Peter Lynch wrote that a house is a good investment that almost everyone manages to make. In the past that has certainly been the truth in most cases but today the situation is a bit different. Especially the housing crisis in 2008 showed us that a housing investment carries some risks as every other investment and homeownership is not possible for everyone. For some people homeownership is also not as appealing than it may have been in the past. Some households end up renting because it offers more flexibility and in some cases offers more financial sense. The decision making behind renting or buying depends on many variables related to finance and psychology. The high cost of home purchasing is still the main reason for ending up renting. (Earnest.com)

The Federal National Mortgage Association conducted a survey in the United States in 2014 to assess their attitudes toward owning and renting a home, home purchase and rental prices, homeownership distress, household finances, and overall confidence in the economy. Since the housing crisis in 2008 the number of renter households has increased and the number of owner households have decreased in the US as potential first time homebuyers are facing rising credit standards and drop in affordability. There are several constraints from purchasing an apartment for younger renters even when the majority are willing to purchase. Down payment and bad credit score are considered the major constraints from getting a mortgage and the majority report having insufficient assets to cover transaction costs on a starter home. However young adults consider homeownership as their future plan and about half of them plan to buy a home next time they move. After all the most of young households prefer owning they are staying renters longer than they wish due to insufficient financial capability. Housing education and alternative paths towards owning such as lease-to-own arrangement type of solutions could help young households to fulfill their objectives related to housing more desirable. (Fanniemae.com 2014)

A study from HelloWallet in 2014 found that more than half of current homeowners would have been in a better financial shape if they would have invested the extra money and rented their home. This proves that purchasing a home is not always the best solution for everyone and it shouldn't be considered as a blind goal. Aron Szapiro, the consumer finance expert of HelloWallet also stated that "The typical median-income prospective home buyer today could generate over 50 percent more wealth over the next 10 years by renting and investing instead of buying a new home." (Hellowallet.com 2014)

It is commonly told to people facing housing decision that they will be throwing money away if they decide to rent as a long term solution. This means that taking a mortgage will build a wealth

over time by building home equity. However, it is not as simple as that as that equity greatly depends on the market value of a home. If the market value is constantly decreasing, one will destroy wealth as the home today is not worth what it was worth yesterday. In other words, If the market value of the home decreases, the equity will also decrease but vice versa If the market value of the home increases, the equity will also increase. Basically this means that one should only purchase a home if it's market value is increasing. When it comes to mortgage, one should not purchase a home if he/she plan to move away soon because the mortgage payment works such that in the first years the monthly mortgage payment primarily go towards interest-not towards building equity. When years go by the share of monthly payments going towards paying down the principle which is equity, increases and the share of interest decreases. When buying a home one also shouldn't forget all the transaction costs related to purchase. (Shea 2017)

1.3. Reasons to rent

Camilo Maldonado wrote an article to Forbes in 2018 naming reasons why renting a home may beat buying. Usually an argument saying it makes no sense to rent and pay to a landlord instead of building equity for yourself. Many people seem to forget that the financial side is not the only consideration in this matter. The first point from Maldonado says that "The true cost of homeownership is higher than many anticipate." Paying rent is not a waste of money as many people seem to think as you are getting something in return, a home for yourself and your family. When it comes to homeownership there are multiple additional costs such as interest payments, taxes and other fees not to mention repairs, updates and utility fees. How many of us will even think about the investment opportunity cost of your money tied up in your home. Second, Maldonado reminds that against the common belief renting might be the less expensive choice also over the long term. Second, Maldonado reminds that the time frame should be noticed as usually the longer one is going to stay in the current home the better is the choice of buying. If the planned period of staying in the place is lets say, 4 years, the one will more probably end up losing after necessary transaction/closing fees incurred than with longer stay. The profit/loss will also depend on the increase or decrease of the market price of a home. Maldonado also reminds about the mortgage system which tend to pay more interests in the beginning and less principle making the short term homeownership less attractive choice. The only way to find out whether it's better to rent or buy is to compare total costs of each choice but predicting true costs might be difficult. Third, Maldonado mentions that if you can accurately predict the costs of ownership and renting

you will actually be able to calculate the cheaper option quite reliably but that is only the financial side of the choice. (Maldonado 2018)

Julie Aiello wrote a blog post in 2018 naming reasons why renting especially in urban areas is so popular these days. First benefit for renting over buying is the absence of down payment and the fact that it can even take years for some to save for down payment. A renter only just need to pay the security deposit, typically one month's rent, and they will usually get it back when they move out while homeowners may never receive any profit from their purchase. Second, she mentions the lower expenses when renting. "Property taxes can cost anywhere from \$900 to more than \$8,000 annually, and utilities and maintenance are completely up to the homeowner to pay. New appliances, indoor and outdoor renovations, and general upkeep all have a price, and it's the homeowner's responsibility to pay for them. Mortgages, or loans, can have extremely high interest rates, and homeowners are often stuck paying off their mortgages for upwards of 15 years." Third reason according to her is flexibility. These days tend to value flexibility as they might be moving for a new job and selling home after home when moving causes challenges. Renting saves a large amount of time when relocating and moving is usually expensive as well. Renting is also more flexible in case of unexpected life events such as death in the family and makes adaptation for changes in income. Fourth reason is the freedom to choose also other investments than just a home. Renting allows people to seek for additional investments such as stocks or small businesses while owners are usually tied up in one single large purchase. (Aiello 2018)

1.4. Reasons to buy

According to the study about financial fitness in Canada in 2018 shows that typically homeowners demonstrate greater financial discipline and that their short- and long-term confidence in their financial outlook is better than outlook of renters. Renters are also more concerned about making ends meet and renters are also less likely to pay off their full credit card balance each month which tells about better financial situation of homeowners. Homeowners were also more likely to report that they were able to pay all their bills each month and even save some money while renters were more likely report that their savings did not grow. It seems that homeownership forces household to save which can be considered a positive effect for their personal financial situation. Overall, home owners were far more likely to report that their financial situation is good or great than renters, 60% vs 38%. (Macdonald 2018)

A study conducted by Merrill Lynch in 2015 found that the average home equity in the US of homeowners under the age of 35 was \$53,700 while over the age of 65 it had increased to \$212,800. This shows that during time homeownership certainly helps people building equity as their homes usually represent a substantial part of their overall net worth. According to study conducted by Laurent Barras and Sebastien Betermier (2016) using data from the Panel Study of Income Dynamics (PSID) which is a national survey of U.S. households, 67% of average American's total wealth consists of housing. One of the focus group participants commented "When I was younger, I always worried about that monthly mortgage payment. Now that I am retired, I have the peace of mind of knowing I own my home free and clear." This indicates that homeownership provides peace of mind through that equity build by owning a home. (Merrill Lynch 2015)

Even if the prices of homes do not increase automatically, the real prices have increased in almost everywhere in developed countries during last 30 years. Between 1978 and 2008 the average increase in household prices in U.S. was 1,1% and in Great-Britain 4,1%. When it comes to Northern Countries the numbers were 1,7% in Denmark, 2,1% in Finland, 2,5% in Norway and 1,2% in Sweden. The major factors causing such an increase in prices are urbanization, population growth and growth in income. The housing prices have increased mostly in areas where the population density is high and the area for new building is limited. Even if the long-term growth of prices is positive the prices move up in cycles and there are quite a large differences between different counties and areas during time. (Schauman 2012) Long-term increases in prices means that the wealth of homeowner households have increased historically which is a benefit of homeownership against renting.

A 2001 study found that homeownership has a positive effect on child outcomes at school. Children living in owned homes had 7% higher achievements in maths and 6% better achievements in reading than children living in rented homes. Children living in owned homes also had 4% lower results in behavioural problems than children living in rented homes. Better cognitive abilities and fewer behavioural problems tend to lead to higher educational attainments and larger future earnings. (Haurin et al. 2001)

1.5 What investors really want?

According to the study about financial fitness in Canada in 2018 shows that typically homeowners demonstrate greater financial discipline and that their short- and long-term confidence in their financial outlook is better than outlook of renters. Renters are also more concerned about making ends meet and renters are also less likely to pay off their full credit card balance each month which tells about better financial situation of homeowners. Homeowners were also more likely to report that they were able to pay all their bills each month and even save some money while renters were more likely report that their savings did not grow. It seems that homeownership forces household to save which can be considered a positive effect for their personal financial situation. Overall, home owners were far more likely to report that their financial situation is good or great than renters, 60% vs 38%. (Macdonald 2018)

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2. METHODOLOGY

2.1. Research data collection

Data for the regression analysis was collected from the survey which was held in April 2019. The survey received 121 answers which sets its limitations to the quality of the research. The survey contained 9 questions:

The explanation to the survey questions will be below. Questions 1, 2 and 3 measure preference between renting and buying which is the dependent variable in the study. Questions 4, 5, and 6 are control variables and questions 7, 8 and 9 measure the preference between utilitarian benefits, expressive benefits and emotional benefits, which is the explanatory variable. More explanation will be found below.

1. I am planning to buy a home within next 5 years/I am already a homeowner

Completely disagree 1 2 3 4 5 6 7 8 9 10 Completely agree

2. If you were moving to a new home would you buy it or rent it if your financial situation would allow either choice?

I would totally rent 1 2 3 4 5 6 7 8 9 10 I would totally buy

3. People should buy a home as soon as it is possible to them

Completely disagree 1 2 3 4 5 6 7 8 9 10 Completely agree

4. How old are you?

_____ (open question)

5. Are you married?

(yes or no)

6. On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in.

1 2 3 4 5 6 7 8 9 10

Questions 7, 8 and 9 each consists of 3 parts, a, b and c.

Question 7. When it comes to your wristwatch

a.) The most important features for you are functionality and reliability

completely disagree 1 2 3 4 5 6 7 8 9 10 completely agree

b.) The most important feature for you is style and the expression it gives to others about me

completely disagree 1 2 3 4 5 6 7 8 9 10 completely agree

c.) The most important feature for you is the way it makes you feel

completely disagree 1 2 3 4 5 6 7 8 9 10 completely agree

Question 8. Regarding to investments the most important for you is

a.) Large profits

completely disagree 1 2 3 4 5 6 7 8 9 10 completely agree

b.) Social responsibility (for example, not investing in tobacco business or favouring environmental friendly investments)

completely completely
disagree 1 2 3 4 5 6 7 8 9 10 agree

c.) peace of mind because of finances true to your values

completely completely
disagree 1 2 3 4 5 6 7 8 9 10 agree

Question 9. Regarding to returning empty bottle to the vending machine

a.) The most important thing for you is the pant you get from the bottles

completely completely
disagree 1 2 3 4 5 6 7 8 9 10 agree

b.) The most important thing for you is to show others that you are responsible

completely completely
disagree 1 2 3 4 5 6 7 8 9 10 agree

c.) The most important thing for you is the good feeling you get when you take the responsibility

completely completely
disagree 1 2 3 4 5 6 7 8 9 10 agree

(Questions 7 and 8 modified from presentation from Meir Statman about utilitarian benefits, expressional benefits and emotional benefits)

2.2. Background of survey questions

Questions 1, 2 and 3 measure the preference to homeownership on a scale of 1 to 10 and an average of them will be used on the regression analysis as a dependent variable. 1 means preference towards renting and 10 means preference towards owning. The preference in this research is expressed by term “housing.”

Question 4 measures age as homeownership rates are greatly dependable on age. Naturally younger people who are studying or about to start their careers are not financially in the position allowing to buy a home while it becomes an option for those with a stable income and sufficient savings for down payment.

Question 5 asks whether the respondent is married or not. Marriage is expected to be an incentive to buy a home. U.S. married household home ownership rate in 2015 was 78,2% while not-married household home ownership rate was just 43,4%. (Pollock 2015)

Question 6 measures income. It is clear that homeownership requires some savings for down payment and a stable income for mortgage and as mentioned above, inability to pay down payment may be one of the constraints of homeownership. According to (Bourassa 2000) “Controlling for the endogeneity of income and wealth has a substantial impact on the tenure choice.” Sometimes those constraints in income can be eliminated via housing allowances. “Swedish housing allowance system is doing a fairly good job in supporting low-income households to obtain and maintain their homeownership.” (Chen and Ost 2005)

Questions 7, 8 and 9 measure the preferences between utilitarian benefits, expressional benefits and emotional benefits on a scale from 1 to 10. An average of each will be used in the regression analysis. The preference in these benefits is measured from the viewpoint of investing and in life overall.

To conclude, the survey questions 4, 5 and 6 include factors that are known to affect decision between buying and renting somehow based on previous literature and research.

2.3. Controls and measures of values

Regarding quantitative researches, which this research also is, it is typical to describe the data used in the research using descriptive analysis. Below, in table 1 is the explanation of controls and measures of values used in this research. In table 2 are the descriptive statistics about survey results.

Table 1. Controls and measures of values

Variable	Question in the survey	Explanation of the variable
Housing	1, 2, 3	1-10, higher level means higher preference to homeownership while lower level means higher preference to renting
age	4	continuous
marriage status	5	binary, 0-not married, 1-married
income	6	1-10, higher level means higher income
Preference towards different benefits:		
UTILITARIAN	7	1-10, higher level means higher preference
EXPRESSIONAL	8	1-10, higher level means higher preference
EMOTIONAL	9	1-10, higher level means higher preference

(source: compiled by the author.)

Table 2. Descriptive statistics

Variable	Mean	St. Dev.	Min	Max	N
Housing	4,77	2,31	2,00	10,00	121
Age	26,70	10,74	18,00	61,00	121
Marriage	0,31	0,46	0,00	1,00	121
Income	4,43	1,90	1,00	8,00	121
UTILITARIAN	5,23	1,75	1,00	8,00	121
EXPRESSIONAL	5,40	1,30	2,00	7,00	121
EMOTIONAL	5,00	1,40	2,00	8,00	121

(source: Compiled by the author.)

When analysing the survey results, we can see that the standard deviations usually are quite small and mean values of basically all of the variables are close to 5, which is in the middle of 1 and 10.

The mean of question about housing is 4,77 meaning that somewhat surprisingly the respondents prefer slightly more renting than buying. On the other hand, the average age of respondents is 26,70 so many of them are still not in the situation where buying is timely. If living in the urban area it might not be financially possible for many to buy an apartment yet especially many of young people graduate from schools as late as around the age of 25. Regarding to marriage the mean value is 0,31, which is closer to 0 than 1 meaning that majority of the respondents are not married yet. This is understandable because many people do not marry at such a young age. Age also explains the average pretended income of respondents which is 4,43 meaning that most of respondents estimate that their income is smaller than average income in their country. It is on the line with age as most of the respondents are at the top of their careers yet. After all the sample group is quite homogenous, probably even slightly too homogenous for the best quality regression limiting the quality of the research along with the sample group of only 121 respondents. Homogeneousness might also occur due to the fact that most of the results are collected by sharing the survey with social networks of writer of this research so many of the respondents probably belong to the similar socio-economical group consisting of people just finishing their studies and earning relatively small monthly pay check. According to Thaler and Benartzi 2004, people tend to stick to the default option which may have also caused sticking to close to the middle of possible alternatives in this survey. (Thaler and Benartzi 2004; iNudgeyou.com)

2.4. Regression analysis

2.4.1 Ordinary least square method

The research method used in this research paper is ordinary least square method (OLS-regression). In the simple linear regression model, the response Y depends on the explanatory variable X according to the linear relation:

$$E(Y) = \beta_0 + \beta_1 x \tag{1}$$

In the multiple regression model, the response Y depends on multiple explanatory variables and the linear function is taken to be a linear function of these explanatory variables:

$$E(Y) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_p x_p \tag{2}$$

The regression coefficient β tells how much the value of the variable y changes, when x increases by 1. (Johnson and Wichern)

2.4.2. Quality of the model

It is important to evaluate the quality of the regression model when doing the regression analysis. The value of R-squared (R^2 in this research) tells how much of the variance is explained by the model in percent. Usually it is better to pay attention to the adjusted R-squared rather than regular R-squared as the adjusted value is corrected for the sample size and numbers of coefficients estimated. Adjusted R-square is always smaller than the R-squared. In other words, regular R-squared increases every time when a new coefficient is added to the model and can easily lead to too complex model in practice. In general, the higher the R-square is, the “better” the model is. (people.duke.edu)

When using regression analysis, it is important to evaluate the statistical significance of the results. Fisher's significance testing is one of the most common and widely used method for evaluation of the regression results. In this research paper the p-value evaluation is used. The p-value for each variable tests the null-hypothesis that the variable has no correlation with the dependent variable. P-value can be used as the indicator of the level of significance of the results. The smaller the p-value related to the result is, the smaller is the effect of coincidence and the reliable the result is. Commonly is used the $p < 0,05$ as the limiting value for significance. (dss.princeton.edu)

Other measure of statistical significance is t-value. “Thus, the t-statistic measures how many standard errors the coefficient is away from zero. Generally, any t-value greater than +2 or less than – 2 is acceptable. The higher the t-value, the greater the confidence we have in the coefficient as a predictor. Low t-values are indications of low reliability of the predictive power of that coefficient.”

3. RESULTS

Below is the table showing results of the OLS-regression models. The regression analysis was used three times in this research to find the correlations between homeownership and the three different independent variables, preference in utilitarian benefits (model 1), expressional benefits (model 2) and emotional benefits (model 3). Same control variables: age, marriage and income were used in each of the three models.

The purpose of regression model 1 was to test the hypothesis 1, according to which investors preference in utilization benefits have a positive correlation on favouring homeownership over renting. Regarding control variables age, marriage and income, there is a negative correlation between age and homeownership and also negative correlation between marriage and homeownership. Neither of these correlations are statistically significant but they were unexpected as positive correlation was expected. On the other hand, there is a strong positive correlation between income and homeownership which is statistically significant at 1%. This was expected. When it comes to independent variable, utilitarian benefits, a positive correlation was found between preference in utilitarian benefits and homeownership and it is statistically significant at 1%. This finding confirms the hypothesis 1 of this research. As the adjusted R^2 is on the level of 0,441 we can see that the model explains 44% of the variance in total.

The purpose of regression model 2 was to test the hypothesis 2, according to which investors preference in expressional benefits have a positive correlation on favouring homeownership over renting. Regarding control variables, a weak positive correlation was found between age and homeownership and a strong positive correlation between income and homeownership and a negative correlation between marriage and homeownership. The only statistically significant correlation at 1% is a correlation between income and homeownership. A negative and statistically significant at 1% correlation was found between preference in utilitarian benefits and homeownership. The result is opposite to what was expected in hypothesis 2, so the hypothesis is not supported by the results. As the adjusted R^2 is on the level of 0,433 we can see that the model explains 43% of the variance in total.

The purpose of regression model 3 was to test the hypothesis 3 according to which investors preference in emotional benefits have a negative correlation on favouring homeownership over renting. Regarding control variables, a weak negative correlation was found between age and homeownership and a weak positive correlation was found between marriage and homeownership. A strong positive correlation was found between income and homeownership. The correlation between income and homeownership is also the only correlation which is statistically significant at 1% regarding control variables. A negative correlation was found between preference in emotional benefits and homeownership and it is also statistically significant at 1%. This confirms the hypothesis 3 set to this research. As the adjusted R² is on the level of 0,536 we can see that the model explains 54% of the variance in total.

Table 3. OLS-regression

Dependent variable: Housing	Model 1		Model 2		Model 3	
Variable	Coefficient β	t-value	Coefficient β	t-value	Coefficient β	t-value
(Constant)	-0,171	-0,292	3,183	4,317***	4,311	6,709***
Control variables						
age	-0,017	-0,665	0,023	0,931	-0,002	-0,072
married	-0,24	-0,575	-0,508	-1,23	0,021	0,054
income	0,813	5,861***	0,782	5,616***	0,892	7,002***
Independent variables						
UTILITARIAN	0,358	0,358***				
EXPRESSIONAL			-0,435	-3,445***		
EMOTIONAL					-0,691	-6,351***
R ²	0,460		0,452		0,552	
Adjusted R ²	0,441		0,433		0,536	

*** p<0,01, ** p<0,05, * p<0,1

(source: Compiled by the author, Values calculated with excel.)

CONCLUSION

To conclude, the research question was to find out if there exists a correlation between investors preference in utilitarian benefits, expressional benefits or emotional benefits and the tenure choice, a preference between renting or buying an apartment. In the first chapter a literature review of recent research and literature was given to offer a background for this research. The situation in housing sectors has changed especially due to the financial crisis beginning in 2008 and the value of homes do not necessarily increase at the same rate than it did before the crisis. Nowadays many young households can't afford buying a home in urban areas which makes renting the only option available for many. However, there is more to it than just the financial matter. The preferences of young households have changed and an own home is not an objective for many anymore in the way it used to be. Nowadays many want to spend the money for travelling and eating out instead of buying a home and many also have a lifestyle which does not favour staying in the same place too long. In this research the plan was to concentrate more on the psychological side of this tenure choice by comparing preferences towards different benefits to preferences in housing market. In the second chapter a regression analysis was used to find correlations between those preferences. Factors: age, marriage and income, were used as control variable for regression analysis as those factors, based on previous literature, are known to affect household preferences. Regression model 1 was set to test the first hypothesis according to which investors preference in utilization benefits have a positive correlation on favouring homeownership over renting and this hypothesis was confirmed by regression model 1 showing the statistically significant positive correlation. Regression model 2 was set to test the second hypothesis according to which Investors preference in expressional benefits have a positive correlation on favouring homeownership over renting and this hypothesis didn't get support from this research. A regression model indicated a negative correlation instead of a positive one expected. Regression model 3 was set to test the third hypothesis according to which investors preference in emotional benefits have a negative correlation on favouring homeownership over renting and this hypothesis was confirmed in this research. A regression model shows a strong negative and statistically significant correlation. This was also the most interesting finding of this research as it seems that people with preference in emotional benefits seem to value other things making them feel good more than buying their home.

The major limitation of this research is the sample group which is unfortunately relative small and homogenous. More responses would have been useful to increase the reliability of the results. Also the responses should be collected from as variable group of people as possible in order to test the hypotheses with a sample group with high variances. The questions in the survey collecting data for this research had questions which were responded on a scale from one to ten and it seems that the respondents favoured answers quite in the middle of the scale. This is probably because of the fact that most of the people tend to avoid extremes when answering on a scale of one to ten and they tend to stick to the default option on the middle of the scale.

Possible future research topics are almost all topics evaluating psychological factors of homeownership as in the process of purchasing a home not only economic factors matter. Psychological factors affect more and more to the tenure choice and the preferences of especially young adults are different than in the past. More research is needed about their decision making process when it comes to homeownership. This research confirms that even more attention in the future should be paid in psychological factors of tenure choice than barely utilitarian, monetary factors as those factors appeared to affect even more on that decision than barely utilitarian factors such as money. This can be seen from correlations between preference towards homeownership and different preferences, utilitarian, expressional and utilitarian benefits. Correlations were stronger on expressional benefits and emotional benefits than correlations on utilitarian benefits.

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APPENDICES

Appendix 1. Survey questions

1. I am planning to buy a home within next 5 years/I am already a homeowner

Completely disagree 1 2 3 4 5 6 7 8 9 10 Completely agree

2. If you were moving to a new home would you buy it or rent it if your financial situation would allow either choice?

I would totally rent 1 2 3 4 5 6 7 8 9 10 I would totally buy

3. People should buy a home as soon as it is possible to them

Completely disagree 1 2 3 4 5 6 7 8 9 10 Completely agree

4. How old are you?

_____ (open question)

5. Are you married?

(yes or no)

6. On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in.

1 2 3 4 5 6 7 8 9 10

Questions 7, 8 and 9 each consists of 3 parts, a, b and c.

Question 7. When it comes to your wristwatch

a.) The most important features for you are functionality and reliability

completely completely

disagree 1 2 3 4 5 6 7 8 9 10 agree

b.) The most important feature for you is style and the expression it gives to others about me

completely completely

disagree 1 2 3 4 5 6 7 8 9 10 agree

c.) The most important feature for you is the way it makes you feel

completely completely

disagree 1 2 3 4 5 6 7 8 9 10 agree

Question 8. Regarding to investments the most important for you is

a.) Large profits

completely completely

disagree 1 2 3 4 5 6 7 8 9 10 agree

b.) Social responsibility (for example, not investing in tobacco business or favouring environmental friendly investments)

completely completely

disagree 1 2 3 4 5 6 7 8 9 10 agree

c.) peace of mind because of finances true to your values

completely completely

disagree 1 2 3 4 5 6 7 8 9 10 agree

Question 9. Regarding to returning empty bottle to the vending machine

a.) The most important thing for you is the pain you get from the bottles

completely
disagree 1 2 3 4 5 6 7 8 9 10 completely
agree

b.) The most important thing for you is to show others that you are responsible

completely
disagree 1 2 3 4 5 6 7 8 9 10 completely
agree

c.) The most important thing for you is the good feeling you get when you take the responsibility

completely
disagree 1 2 3 4 5 6 7 8 9 10 completely
agree

(Questions 7 and 8 modified from presentation from Meir Statman about utilitarian benefits, expressive benefits and emotional benefits)

Appendix 2. Regression analysis

Regression model 1.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,678194312
R Square	0,459947524
Adjusted R Square	0,441325025
Standard Error	1,725505214
Observations	121

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	294,1459449	73,53648624	24,69848545	8,38309E-15
Residual	116	345,3747162	2,977368243		
Total	120	639,5206612			

Regression model 2.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,672425244
R Square	0,452155708
Adjusted R Square	0,433264526
Standard Error	1,737908334
Observations	121

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	289,1629175	72,29072937	23,93474886	1,8927E-14
Residual	116	350,3577437	3,020325376		
Total	120	639,5206612			

Regression model 3.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,742925188
R Square	0,551937834
Adjusted R Square	
Square	0,536487415
Standard Error	1,571691962
Observations	121

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	352,9756487	88,24391217	35,72316169	1,97832E-19
Residual	116	286,5450125	2,470215625		
Total	120	639,5206612			

Regression results

Table 3. OLS-regression

Dependent variable: Housing	Model 1		Model 2		Model 3	
Variable	Coefficient β	t-value	Coefficient β	t-value	Coefficient β	t-value
(Constant)	-0,171	-0,292	3,183	4,317***	4,311	6,709***
Control variables						
age	-0,017	-0,665	0,023	0,931	-0,002	-0,072
married	-0,24	-0,575	-0,508	-1,23	0,021	0,054
income	0,813	5,861***	0,782	5,616***	0,892	7,002***
Independent variables						
UTILITARIAN	0,358	0,358***				
EXPRESSIONAL			-0,435	-3,445***		
EMOTIONAL					-0,691	-6,351***
R ²	0,460		0,452		0,552	
Adjusted R ²	0,441		0,433		0,536	

*** p<0,01, ** p<0,05, * p<0,1