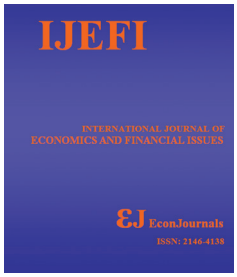

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Housing Loans: What about Personality Traits?

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ABSTRACT

To investigate the role of personality traits (16PF model) on psychological attitudes about mortgage behaviour, 263 participants were asked their preferences and perceptions about housing loans. Results showed that: Extraversion positively predicted the preference for housing loans with adjustable rates, but also the tendency to change this preference; anxiety negatively predicted the preference for having housing loans, preferring fixed-rate mortgages, and the perception of high risks and low levels of predictability; tough-mindedness was positively associated with a preference for fixed-rate mortgage (maintaining this preference over time), and with the perception over adjustable-rate mortgages of low risks and low predictability; independence negatively predicted the preference for adjustable-rate mortgages. These findings fit with a growing body of evidence suggesting that individual differences influence perceptions and preferences about mortgages.

Keywords: Personality, Mortgage, Risk Perception, Preferences
JEL Classifications: E44, G23

1. INTRODUCTION

The influence of individual differences on decision-making has been highlighted for many topics in psychological literature, such as gain and losses contexts, risk-taking and risk preferences, and evaluation of probabilities (Butler and Mathews, 1987; Lauriola et al., 2014). However, in the behavioral finance literature, a few studies have modeled the mortgage market behaviors based upon dispositional factors which would make a divergence between individuals (Wang et al., 2008; Gambetti and Giusberti, 2014). This research fills a void in the literature evaluating the impact of personality traits on consumer behaviour, with a special focus on housing loan preferences and risk and predictability perceptions.

1.1. Mortgage Loans

Mortgages are loans that are specifically tied to real estate property, that is owned by the borrower in exchange for money that is paid in instalments over time. Mortgage loans typically are long-term contracts that require periodic payments in order to cover interest and capital sum. The complexity of mortgage products increased in the last 20 years helping the consumption and investment needs of borrowers. Recent studies showed that many consumers often make choices which they regret after the decision and/or take on debt that they have little or no capacity to repay (Essene and Apgar, 2007).

The financial marketplace offers many types of mortgage loans, which are differentiated by two principal factors: The amount of principal and interest payments over the life of the mortgage, and the duration of the mortgage loan. The combination of these characteristics allows a large variety of distinct mortgage products. Actually the fixed-rate mortgage loan (i.e., the amount of interest and principal payments and the duration of the contract are constant over the term of the mortgage) is the dominant contract in the United States, and the popularity of the adjustable rate mortgage (i.e., the amount or the duration of the mortgage are periodically reset) is substantially smaller (U.S. Census Bureau, 2011). In contrast, in the United Kingdom and Europe, the adjustable rate mortgage loan is the dominant contract (Chambers et al., 2009).

1.2. Personality and Borrowing Behaviour

Decisions about mortgages underlie various individual variables: Previous studies showed that age (until 65 years old), income, and consumption of housing services are positively associated with the amount of the housing loans (Chambers et al., 2009).

Moreover, the decision makers' preferences about risk-taking could also influence the decision to take out a mortgage and/or the choice of the specific kind of mortgage loan because of the several risks associated, such as the interest rate volatility, the risk of needing the invested funds for another purpose during the course of a long-term loan, and the uncertainty about the cash flows to the lender due to the prepayment option granted to the homeowner. The literature distinguished between stimulating risk taking, connected with more experiential and action-oriented personality features such as sensation-seeking and impulsivity (Eysenck and Eysenck 1978; Wong and Carducci, 1991), need for arousal (Figner et al., 2009), low self-control trait (Freeman and Muraven, 2010), and trait anger (Gambetti and Giusberti, 2009), and instrumental risk taking, associated with more rational and goal oriented personality characteristics, such as need for cognition (Zaleskiewicz, 2001), internal locus of control (Wang et al., 2008) and perfectionism (Brand and Altstötter-Gleich, 2008). In contrast, risk aversion is associated with negative attitudes and narrow attention that cause overestimation of risks and may lead to the loss of profitable financial opportunities (Lo et al., 2005). It is the case of trait anxiety, worry, and social anxiety that predict risk-avoidance in behavioral risk-taking tasks (Maner et al., 2007).

In general, personality influences risk taking or risk aversion through risk perceptions or risk tolerance of people and these risk reflections form the financial behavior (Mayfield et al., 2008; Lubis et al., 2015). Specifically, introversion, independence and emotional stability were found robust predictors of saving and borrowing behaviour. Specifically, introverted people are more inclined to save, avoiding loans, than extraverted, because they are prone to spend short time with other people, incurring in less extra expenditures (Nyhus and Webley, 2001). Moreover, they are pessimistic about life and events and they are prone to be guided by rationality and principles, and, consequently they take less financial risks than extraverts (Sadi et al., 2011). Autonomous people are usually sceptical and curious, they consider more information and make more calculative decisions than highly accommodating individuals (Chitra and Sreedevi, 2011) and, ultimately, they are prone to favour saving and to avoid debt in order to maintain their independence (Nyhus and Webley, 2001). Finally, emotionally stable people are more able to save money and to avoid asking for loans than the emotionally unstable who are prone to give in to short term desires engaging in impulsive and excessive buying (Hoch and Loewenstein, 1991). Recent studies showed that these financial behaviours rise because emotionally stable individuals feel anxious and scared of failure when making financial risky decisions and, for this reason, they are prone to avoid risky choices (Young et al., 2012). These data seem opposing with previous research showing a positive relationship between trait anxiety and risk avoidance (Maner et al., 2007). These contrasting data can be explained with the different models considered for measuring personality traits. In particular, neuroticism (versus emotive stability) in the big five model is a higher-order personality trait that refers to a broad overall of different traits, such as anxiety, fear, moodiness, worry, envy, frustration, jealousy, and loneliness (Costa and McCrae, 1992). Individuals who score high on neuroticism are likely to experience different kind of negative feelings as anxiety, anger, guilt and depressive mood. These dispositional emotions can have different effects on decision-making: For example, in financial domain, anxiety is positively related with risk-avoidance, whereas anger negatively (Gambetti and Giusberti, 2014). For this reason the big five model may not be the most useful for model to assess whether and how specific personality traits influence financial decisions.

In conclusion, there has been low attention paid to the role that personality factors may play in preferences and perceptions about a specific kind of loan, that is housing loan. This is somewhat surprising because, for example, some personality characteristics, such as emotional stability and self-control (versus impulsivity and anxiety) were found to be very important to make informed choices in order to shop for mortgage (Hurd and Swallen, 1997).

1.3. The Present Study

The current study explores the relationship between personality and home mortgage perceptions and preferences. Personality was evaluated by the 16PF factor model (Cattell et al., 1993), that is a well-validated and useful taxonomy (Hofer and Eber, 2002) and it incorporates five personality traits: Extraversion, anxiety, tough-mindedness, independence and self-control. Indeed, these personality traits might have some influence on the preference to buy housing loans: Extraversion for spending attitudes, low anxiety for high level of self-confidence in their ability for financial control in uncertain future, tough-mindedness for ability to making decisions in objective and practical manner, independence and self-control for capability to plan their life controlling their impulses. Moreover, personality of home buyers may also be important to predict the preference for a particular type of loan. Specifically, anxious individuals and people with high tough-mindedness could prefer a fixed-rate mortgage loan, because the former do not tolerate uncertainty (Ellsworth et al., 2003) and the latter are resistant to change (Cattell et al., 1993). Moreover, people with high scores on self-control also might prefer fixed-rate hosing loan because they are concerned about following accepted rules, evince self-discipline and, consequently, prefer practical and safe choices (Cattell and Schuerger, 2003). On the other hand, extraverted and independent individuals, who are prone to take risks (Sadi et al., 2001) and to make favourable and convenient choices (Chitra and Sreedevi, 2011) respectively, might prefer adjustable-rate mortgages that represent the more advantageous but also the more risky kind of housing loans.

The personality traits may also affect the tendency to change (or not) preference for a specific kind of housing loan (fixed or adjustable rate mortgage). This is an important aspect to consider because it provides information on the stability (or not) of the mortgage preference. Previous studies showed that extraverted (extraversion) and open to change people (with low tough-mindedness and high independence traits) are prone to changing preference in different fields (Nicholson et al., 2005). Moreover, people with higher scores on neuroticism (anxiety) and conscientiousness (self-control) were consistent in safe decisions in financial domain (Soane and Chmiel, 2005). Thus, we hypothesized that extraversion and Independence predict changing preference about housing mortgages, whereas anxiety, tough-mindedness and self-control predict a stability in mortgage preferences.

In addition, we sought to evaluate the individual perceptions about housing loans such as risk perception and predictability. The first refers to the likelihood of risk paying high interests. The second factor measures the sense of control regarding the possibility to forecast the variation in time of the total cost. Previous studies already showed that trait anxiety was associated with high perception of risks about mortgages and low perception of housing loan predictability (Gambetti and Giusberti, 2014). However others personality traits, such as extraversion, tough-mindedness, independence and self-control, have not been associated with these specific housing loan perceptions in previous investigations, but it is possible that there is an association given that.

Extraversion and low self-control predicted low weight attribution to possible negative consequences and low risk perception in different fields (Mayfield et al., 2008; Jia et al., 2015). Moreover, openness to experience (low tough-mindedness and high independence) positively correlated with high levels of risk acceptance in the financial field (Fenton-O'Creevy et al., 2004). On the basis of this body of research, we expected that extraversion and independence would activate low risk perception and high predictability of housing loans, whereas anxiety, tough-mindedness and self-control would activate a perception of high risks and low predictability of housing loans.

2. METHOD

2.1. Sample

463 individuals (47.4% men) were recruited for the study at work (i.e., offices, shops, stores, university and banks). The average age of the sample was 48.3 years (standard deviation = 8.5), ranging from 29 to 65 years. All participants provided informed consent prior to the study and their participation was voluntary.

Demographic variables concerned education (10.6% primary school, 49% secondary/high school, 40.4% bachelor's or graduate degree), and household income (18.3% <10,000 euros, 30.8% 10,000-20,000 euros, 38.4% 20,000-40,000 euros, 12.5% >40,000 euros). Participants were also asked to provide information about their experience in economics: 44.9% of the sample was inexperienced, 55.1% studied financial topics or worked in the field of economics.

2.2. Personality Traits

Personality traits were measured using the 16PF-5 (Cattell et al., 1993), that is a self-report questionnaire in which the sixteen primary traits converged to make up the five bipolar global factors. Specifically, extraversion (versus introversion) represents tendencies for moving toward social interaction: A consistently high pattern indicates a person who is warm (A), animated (F), boldly outgoing (H), self-disclosing (N) and group oriented (Q2). High levels of anxiety (versus low anxiety) were typical of people who are often reactive (C), suspicious of others (L), worried (O), and tense (Q4). Tough-mindedness (versus receptivity) describes different aspects of reserve: High pattern typifies a person who is somewhat disinterested in people (A), has a factual and unsentimental approach of life (I), is practical and concrete in focus (M) and is set in his/her ways (Q1). Independence (versus accommodation) refers to assertiveness and ability to influence others (E), determination (H), open to change (Q1) and suspicious (L). Finally, the self-control (versus lack of restraint) is defined by self-discipline and inhibition of impulses and desires (Q3), rigidity of thought (G), practicality (M) and lack of spontaneity (F).

Cronbach's alpha coefficients were 0.86 for extraversion, 0.79 for anxiety, 0.81 for tough-mindedness, 0.83 for independence and 0.80 for self-control in the present sample.

2.3. Housing Loan Questionnaire

The questionnaire was adapted by Gambetti and Giusberti (2014) and investigated the participants' housing loan preferences and perceptions. It is composed by 5 questions: 2 questions (A and B) concerned housing loan preferences, 1 question is about changing of preferences (C) and other 2 questions (D and E) concerned the risk perception and the participants' predictability toward housing loans respectively. Specifically, question A "have you ever raised a housing loan for buying an home?" had a dichotomous answer (0 = no, 1 = yes), and question B "what kind of housing loan did you chose?" or if participants never have a mortgage "what kind of mortgage do you prefer?" targeted two kinds of housing loan: Fixed-rate mortgage and adjustable-rate mortgage. These two kind of housing loans were also presented for question C (only for participants which have or had a mortgage) "if you have to decide now, what kind of mortgage do you chose?."

Participants were asked, for each kind of housing loan, to rate again on 10-point scales their risk perception and their belief about predictability even if they had never taken a housing loan (question D "how much do you perceive the housing loan to be risky?;" question E "how much do you believe the total cost of the housing loan to be predictable?)."

2.4. Procedure

Participants completed the 16PF-5 questionnaire in a counterbalanced manner, that is, either before or after completing the housing loan questionnaire. They were encouraged to answer as honestly as possible, told that there were no right or wrong answers, and assured that their answers would remain confidential.

3. RESULTS

3.1. Data Analysis and Descriptives

In order to measure the changing of preferences about mortgages, we compared the responses on question C of the housing loan questionnaire with the responses on question B, attributing the score 0 if participants did not change response and the score 1 if they did.

A hierarchical multiple linear regression analysis was performed on each score of the housing loan questionnaire, considering as independent variables in step one, demographic variables (i.e., age, gender, education, and household income) and experience in economics, and in step two personality traits (i.e., extraversion, anxiety, tough-mindedness, independence and self-control). Multicollinearity diagnostics suggested adequate independence of all predictors (all tolerance levels <0.80; Tabachnick and

Fidell, 2007). Moreover, on questions A and B of the housing loan questionnaire, five different regression analyses were performed considering as independent variables the primary scales of each 16PF-5 global factor and controlling for demographics.

Descriptives and inter-correlations are reported in Table 1.

3.2. Housing Loan Preferences

45% of the sample had a housing loan, 55% had never take out a housing loan.

The results of the regression analysis showed that the preference for housing loans was predicted by age in step one, and both extraversion (positively) and anxiety (negatively) in step two. Table 2 summarizes the regression coefficients from this analysis.

The five regression analyses of the primary scales of each global factors on question A scores, controlling for demographics, showed that social boldness (a primary factor of extraversion and independence) positively predicted preference for mortgage, whereas vigilance (a primary factor of anxiety) negatively predicted this preference. Moreover, the regression analyses also showed that warm, practical (primary factors of tough-mindedness), spontaneous and expedient (primary factors of self-control) people preferred to buy mortgages.

A preference for a fixed-rate mortgage was expressed by 48.9% of the sample; the adjustable-rate mortgage was chosen by 46.6%; 4.6% did not answer question B. The results of the regression analyses are shown in Table 2 for the 16PF global factors and in Table 3 for the primary factors and reveal that fixed-rate mortgage was positively associated with gender (1 = M, 2 = F), experience, anxiety (apprehension) and tough-mindedness (reserved, practical and traditional people) whereas negatively with extraversion (liveliness).

Adjustable-rate mortgage was negatively associated with gender, anxiety (self-assured people), tough-mindedness (warm, unsentimental, practical and open to change people) and independence (shy and vigilant people) and positively with income and extraversion (warmth). Moreover, the regression analyses of primary factors also showed that rule-consciousness (primary factor of self-control) negatively predicted the preference for adjustable-rate mortgage.

3.3. Changing of Preferences

22.9% of the sample changed preferences about mortgage, and 22.9% maintained the same choice; 54.2% did not answer question C.

The results of the regression analysis showed that changing choice about housing loan was predicted by gender in step one, and by both extraversion (positively) and tough-mindedness (negatively)

Table 1: Means, standard deviations and inter-correlations of the principal measures

Principal measures	Means (SD)	Inter-correlations									
		1	2	3	4	5	6	7	8	9	10
1. Housing loan decision	0.43 (0.49)	1									
2. Fixed-rate mortgage	0.43 (0.49)	0.02	1								
3. Adjustable-rate mortgage	0.48 (0.50)	0.01	−0.84**	1							
4. Changing preference	0.50 (0.50)	−0.11	−0.13	0.10	1						
5. Predictability	5.62 (2.02)	0.04	−0.13	0.06	−0.11	1					
6. Risks	4.61 (1.70)	0.18**	−0.02	0.02	0.08	0.14	1				
7. Extraversion	4.15 (2.03)	0.18**	−0.16*	0.16*	0.30**	0.16	0.16*	1			
8. Anxiety	5.46 (1.98)	−0.16*	0.33**	−0.25**	0.19*	−0.16*	0.16*	−0.04	1		
9. Tough-mindedness	6.19 (1.94)	−0.16*	0.39**	−0.24**	−0.22**	−0.15*	−0.09	−0.26**	−0.06	1	
10. Independence	4.97 (1.80)	0.11	−0.11	−0.15	0.26**	0.17*	0.04	0.20**	0.13	−0.45**	1
11. Self-control	6.33 (1.80)	−0.06	−0.03	−0.05	−0.16*	0.07	0.03	−0.19*	−0.04	0.40**	−0.25**

Risks and predictability variables were the mean scores of the two kind of interest rate mortgages. *P<0.05, **P<0.01. SD: Standard deviation

Table 2: Logistic regressions of A and B questions on 16PF-5 global factors for each global factor

Predictor variables	Question A (housing loan)			Question B (fixed-rate)			Question B (adjustable-rate)		
	B (S.E.)	Wald	R^2	B (S.E.)	Wald	R^2	B (S.E.)	Wald	R^2
Step 1			0.05; χ^2_5 =12.42*			0.08; χ^2_5 = 9.72*			0.10; χ^2_5 =12.38*
Age	0.03 (.01)	8.29**		0.25 (0.03)	0.67		−0.04 (0.03)	2.27	
Gender	0.24 (0.16)	2.16		0.97 (0.32)	9.08**		−1.13 (0.32)	12.32**	
Education	−0.17 (0.24)	0.05		0.34 (0.43)	0.65		−0.39 (0.39)	1.00	
Income	0.03 (0.11)	0.06		−0.37 (0.22)	2.84		0.59 (0.22)	6.97**	
Experience	−0.02 (0.10)	0.04		0.39 (0.19)	4.13*		−0.23 (0.18)	1.67	
Step 2			0.11; χ^2_5 =17.94**			0.32; χ^2_5 =36.48**			0.26; χ^2_5 =22.54**
Extraversion	0.19 (0.07)	6.61**		−0.37 (0.14)	6.56**		0.40 (0.13)	8.43**	
Anxiety	−0.14 (0.07)	3.48*		0.31 (0.12)	3.79*		−0.31 (0.11)	3.94*	
Tough-mindedness	−0.11 (0.08)	1.86		0.88 (0.19)	20.58**		−0.60 (0.16)	13.18**	
Independence	0.13 (0.08)	2.40		0.11 (0.17)	0.39		−0.38 (0.18)	4.56*	
Self-control	0.04 (0.08)	0.30		−0.21 (0.17)	1.45		−0.10 (0.15)	0.47	

*P<0.05, **P<0.01. SE: Standard error

Table 3: Regressions of A, B and C questions on 16PF-5 primary scales for each global factor (controlling for demographics)

Predictor variables	Question A (housing loan)			Question B (fixed-rate)			Question B (adjustable-rate)		
	B (S.E.)	Wald	R^2	B (S.E.)	Wald	R^2	B (S.E.)	Wald	R^2
Introversion/extraversion			0.11; χ^2_5 =23.95**			0.06; χ^2_5 =9.54*			0.04; χ^2_5 =7.29
Reserved/warm (A)	0.03 (0.09)	0.11		−0.15 (0.09)	3.08		0.21 (0.11)	3.84*	
Serious/lively (F)	0.05 (0.07)	0.39		−0.14 (0.07)	3.39*		0.01 (0.09)	0.01	
Shy/bold (H)	0.18 (0.08)	5.13*		−0.03 (0.08)	0.17		−0.03 (0.10)	0.10	
Private/forthright (N)	0.19 (0.07)	1.79		0.08 (0.07)	1.07		−0.05 (0.09)	0.28	
Self-reliant/ group-oriented (Q2)	0.07 (0.08)	0.70		0.07 (0.08)	0.92		0.12 (0.09)	1.64	
Low/high anxiety			0.07; χ^2_4 =13.35*			0.17; χ^2_4 =22.67**			0.17; χ^2_4 =21.93**
Emotionally-stable/ reactive (C)	−0.07 (0.08)	0.87		0.13 (0.16)	0.70		−0.23 (0.15)	2.24	
Trusting/vigilant (L)	−0.18 (0.06)	5.02*		0.01 (0.06)	0.04		0.10 (0.08)	1.66	
Self-assured/ apprensive (O)	0.04 (0.07)	0.36		0.25 (0.11)	4.54**		−0.35 (0.12)	9.01**	
Relaxed/tense (Q4)	0.04 (0.07)	0.36		0.02 (0.07)	0.07		0.09 (0.09)	0.90	
Receptivity/ tough-mindedness			0.08; χ^2_4 =16.92*			0.17; χ^2_4 =34.92**			0.24; χ^2_4 =27.65**
Warm/reserved (A)	−0.16 (0.07)	5.30*		0.25 (0.07)	10.99**		−0.29 (0.11)	9.26**	
Sensitive/ unsentimental (I)	−0.07 (0.07)	0.97		−0.06 (0.07)	0.70		0.46 (0.11)	17.55**	
Abstracted/practical (M)	0.18 (0.08)	4.75*		0.45 (0.09)	22.11**		0.53 (0.13)	17.43**	
Open-to-change/ traditional (Q1)	−0.10 (0.07)	2.41		0.25 (0.07)	10.56**		−0.21 (0.09)	5.05*	
Accomodation/independence			0.09; χ^2_4 =20.04**			0.05; χ^2_4 =9.13*			0.19; χ^2_4 =18.53**
Deferential/dominant (E)	−0.07 (0.07)	1.19		0.09 (0.07)	2.06		−0.02 (0.10)	0.02	
Shy/bold (H)	0.29 (0.07)	14.86**		0.07 (0.07)	1.09		−0.41 (0.11)	12.78**	
Trusting/vigilant (L)	−0.03 (0.06)	0.26		−0.07 (0.06)	1.32		−0.17 (0.08)	4.68*	
Traditional/ open-to-change (Q1)	0.05 (0.06)	0.68		−0.17 (0.07)	6.12*		0.12 (0.11)	1.28	
Lack of restraint/self-control			0.08; χ^2_4 =16.94**			0.11; χ^2_4 =20.98**			0.12; χ^2_4 =20.31**
Lively/serious (F)	−0.15 (0.07)	5.17*		0.14 (0.07)	4.19*		−0.06 (0.08)	0.48	
Expedient/ rule-conscious (G)	−0.17 (0.08)	4.37*		0.14 (0.09)	2.69		−0.27 (0.11)	6.78**	
Abstracted/ practical (M)	0.28 (0.09)	9.25**		0.22 (0.09)	5.21*		0.55 (0.13)	16.94**	
Tolerates disorder/ perfectionistic (Q3)	−0.02 (0.06)	0.07		0.09 (0.07)	1.99		0.01 (0.08)	0.03	

*P<0.05, **P<0.01. SE: Standard error

Table 4: Logistic regression of changing preferences

Predictor variables	B (S.E.)	Wald	χ^2	R^2
Step 1			16.86*	0.13
Age	−0.05 (0.03)	2.88		
Gender	−0.47 (0.26)	3.15*		
Education	−0.24 (0.38)	0.42		
Income	−0.04 (0.18)	0.04		
Experience	−0.16 (0.17)	0.89		
Step 2			14.70*	0.23
Extraversion	0.30 (0.12)	6.28*		
Anxiety	0.06 (0.11)	0.26		
Tough-mindedness	−0.20 (0.14)	3.00*		
Independence	0.10 (0.15)	0.44		
Self-control	−0.10 (0.15)	0.51		

*P<0.05. SE: Standard error

in step two. Table 4 summarizes the regression coefficients from this analysis.

3.4. Risk Perception

The results of the regressions of question D scores are shown in Table 5 and reveal that the risk perception (for fixed-rate and adjustable-rate mortgages) was positively associated with anxiety, and negatively with tough-mindedness (only for adjustable-rate mortgage).

3.5. Housing Loan Predictability

The results of the regressions of question E scores are shown in Table 6 and reveal that the perception of predictability was negatively associated with anxiety (for the two kind of mortgages) and tough-mindedness (for adjustable-rate mortgage).

Table 5: Hierarchical multiple linear regressions of risk perception about different kinds of housing loan

Predictor variables	β	t	F	Adjusted R^2
a. Dependent variable:				
Fixed-rate mortgage				
Step 1			2.50*	0.05
Age	−0.01	−0.15		
Gender	−0.20	−2.61*		
Education	−0.02	−0.03		
Income	0.09	1.19		
Experience	0.15	2.27*		
Step 2			2.05*	0.09
Extraversion	0.11	1.53		
Anxiety	0.15	1.73*		
Tough-mindedness	0.07	0.84		
Independence	−0.10	−1.35		
Self-control	0.03	0.44		
b. Dependent variable:				
Adjustable-rate mortgage				
Step 1			3.55**	0.07
Age	0.03	0.41		
Gender	−0.15	−1.97*		
Education	0.05	0.65		
Income	−0.03	−0.34		
Experience	−0.17	−2.68**		
Step 2			2.64**	0.11
Extraversion	0.04	0.63		
Anxiety	0.15	1.95*		
Tough-mindedness	−0.16	−2.12*		
Independence	0.01	0.08		
Self-control	0.07	1.01		

*P<0.05, **P<0.001

Table 6: Hierarchical multiple linear regressions of predictability about different kinds of housing loan

Predictor variables	β	t	F	Adjusted R^2
a. Dependent variable:				
Fixed-rate mortgage				
Step 1			2.55*	0.05
Age	−0.09	−1.31		
Gender	0.03	0.38		
Education	0.11	1.56		
Income	0.02	0.21		
Experience	−0.12	1.77		
Step 2			1.85*	0.08
Extraversion	−0.04	−0.52		
Anxiety	−0.19	−2.31*		
Tough-mindedness	0.01	0.09		
Independence	0.14	1.80		
Self-control	0.08	1.17		
b. Dependent variable:				
Adjustable-rate mortgage				
Step 1			3.23**	0.05
Age	0.04	0.51		
Gender	−0.09	−1.21		
Education	0.19	2.55*		
Income	0.07	0.88		
Experience	0.06	0.88		
Step 2			2.45**	0.10
Extraversion	−0.09	−1.35		
Anxiety	−0.16	−2.62*		
Tough-mindedness	−0.15	−1.89*		
Independence	−0.01	−0.01		
Self-control	0.11	1.64		

*P<0.05, **P<0.001

4. DISCUSSION

The current study investigated the influence of personality traits in mortgage preferences and perceptions, contributing to the literature on psychological differences underlying taking out home mortgage loans, and extending the understanding of the role of individual characteristics in financial behaviour both theoretically and practically.

The present study showed that personality predicts the preference for specific type of mortgages. The marketplace offers numerous varieties within fixed-rate mortgages and adjustable-rate mortgages, but these two loan types represent the first important step when shopping for a mortgage. The present data showed that extraversion is positively associated with the choice to access a housing loan, preferring adjustable-rate mortgages. This finding could be explained by the tendency of extraverted people to be daring and uninhibited, venturing forth in a fearless manner (high social boldness) and to give more importance to current rather than future gains, even if they can take more risks in the future (Depue and Collins, 1999). Indeed the preference for an adjustable-rate mortgage may be currently (after the economic crisis of 2008 in Europe) an excellent choice for low payments in the near term. Moreover, extraverts are motivated to move toward others for emotional closeness, attachment and connection (high Warmth), spending a lot of time in social activities and travels (Nettle, 2005). In this sense, adjustable interest rates could be the best decision for this kind of people who could not plan to live in the property for which mortgage were bought long enough for the rates to rise. This study also showed that extraversion predicted changing preference about the kind of housing loan, probably choosing the most advantageous mortgage at that time.

As for anxiety, the present results showed that it predicts the preference for to not have housing loan and, in case they are forced to do, to prefer fixed-rate mortgage. The main advantage of this kind of loan is that it is easy to understand and vary little from lender to lender. Moreover the borrower is protected from sudden and potentially significant increases in monthly mortgage payments if interest rates rise. People with high anxiety are proneness to avoid risk-taking, giving a selective attentional bias towards threatening stimuli and a low sense of personal control over situations (Butler and Mathews, 1987; Maner et al., 2007). For this reason vigilant and apprehensive individuals could prefer this kind of housing loan even if, when interest rates are high, qualifying for a loan could be more difficult because the payments may be less affordable. The present results about housing loan risk and predictability perception are in accordance with such interpretation: Trait anxiety is positively associated with risk perception about the two types of mortgages, whereas the opposite happens for housing loan predictability. This is in line with previous studies showing that anxiety is related to the perception of high risks and low predictability across different kind of financial products and situations (Lowenstein and Lerner 2003; Gambetti and Giusberti, 2014).

Moreover, our results showed that individuals with high tough-mindedness, who are reserved, practical and traditional, prefer fixed-rate mortgages rather than adjustable-rate ones. This

preference could be due to their inclination for predictable and familiar solutions and their caution about new ideas (Cattell et al., 1993). Indeed the fixed-rate mortgage guarantees the same payment and the same interest rate over time and, for this reason, is considered a traditional and safe financial solution, suitable for all those who want to buy or to renovate a house without surprises related to interest rate fluctuations. The present data also showed that people with high tough-mindedness perceive low risk but also a low level of predictability about adjustable-rate mortgages. In contrast to anxious people who are generally prone to overestimate risks, individuals who score high on tough-mindedness could be inclined to objectively assess the risks probably because of their tendency to approach problems in a logical, objective and practical manner, scarcely influenced by emotions (Cattell and Schuerger, 2003) but, on the other hand, they prefer to buy the more predictable housing loans as anxious ones. Indeed, this personality trait could drive them to give more weight than others to the fact that adjustable-rate mortgages are unpredictable, if interest rates are climbing or a steady, whereas fixed-rate mortgages allow to have a precise schedule of economic releases because nothing will change the rate. These specific characteristics of the two loan types probably lead high tough-mindedness people to prefer fixed-rate mortgages, without changing preference over time.

As for independence, the present study showed that, contrary to the hypotheses, this personality trait negatively predicted the preference for adjustable-rate mortgage. In the 16PF model, independence trait indicates a person who is assertive and dominant, adventurous and fearless in approaching new people and situations and open to change, whereas low scores, those at the accommodating end of the scale, tend to be cooperative, deferential and trusting (Cattell and Schuerger, 2003). Our results showed that accommodating people, who are shy and trusting, prefer adjusted-rate mortgage perceiving predictable (although in reality it is not so), probably because they are prone to accept the motives of financial consultants following their advices. Indeed, since 2008 in Europe the adjusted-rate mortgage is more advantageous than the fixed-rate one, and for this reason is the type of mortgage most recommended by financial institutions.

Finally, self-control global factor failed to make a statistically significant unique contribution, over the other 16PF global personality factors, in explaining the variance in preferences and perceptions about mortgage. It is possible that low self-control trait influences only stimulating risk-taking (Freeman and Muraven, 2010), that is the willingness to take risks in adrenaline situations, and not instrumental risk-taking as could be choosing an adjustable-rate mortgage. However, the regression model of the four primary factors, that define self-control, on mortgage preferences showed that, consistently with our hypotheses, serious and practical individuals (high self-control) prefer a fixed rate mortgage, while expedient and abstracted ones (low self-control) an adjustable-rate mortgage. This finding is in line with research showed that who are low on openness to experience and high on conscientiousness tend to take low risks in financial field (Mayfield et al., 2008).

In conclusion, the evidence presented in this study allows some preliminary generalizations about how personality might influence preferences and perceptions in financial field, defining specific personality profiles related to the preference for certain financial choices. The present findings have important theoretical and practical implications. At theoretical level, they may help to better understand how the dispositional emotions affect choices and decision-making in the economic field, emphasizing the utility of cognitive models of emotion on decision making (Lowenstein and Lerner, 2003; Peters et al., 2006). Moreover, this study highlights the utility of the 16PF-5 in financial research for several reasons: The presence of validity scales through which it is possible to identify individuals who responded in unusual or compliant manner, the presence of sixteen primary traits that are powerful in understanding and predicting the complexity of the actual behaviour (Roberts et al., 2005), and the presence of five global personality factors, similar to the Big Five model (Costa and McCrae, 1992), permitting a comparison with the existing literature about behavioral finance. On a practical level, this study may provide useful elements for financial and credit institutions, for the assessment of individual characteristics of customers, which could affect their financial decisions.

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