Gender and financial identity as predictors of the saving behavior of emerging adults

Terhi-Anna Wilska, University of Jyväskylä [1]

Jussi Nyrhinen, University of Jyväskylä[2]

Introduction

In emerging adulthood (ages 18-29 years), people are expected to become financially independent and responsible for their own economy. To succeed, this process requires financial management skills that normally develop during adolescence and emerging adulthood. Previous research has found several factors that affect financial management skills in adolescence and emerging adulthood, such as financial education at school, financial socialization and parental influence in the family (Moreno-Herrero et al., 2018), confidence in financial skills (Arellano et al. 2018), gender and personality (Garrison and Gutter 2010, Fan et al. 2022), learning skills and metacognition (Silinskas et al. 2021), and financial identity status (Barber et al. 2011; Shim et al. 2013).

Financial literacy and financial management skills consist of multiple practices related to financial resources. However, the most essential skills for emerging adults in particular are saving money and avoiding debt, making sound decisions for investments, and being aware of financial products of banks and financial institutions (e.g., Lea et al. 1995). The objective of this paper is to explore how emerging adults' saving and investing behavior relates to gender and financial identity in Finland.

Previous studies have found that financial identity status and identity profiles of emerging adults relate to the level of their financial skills (e.g., Shim et al. 2013; Serido et al. 2022). There is also a large body of research on gender and financial behavior. Most studies have revealed that men have better financial literacy than women and men are also more active in the financial market (e.g., Capelle-Blancard and Reberioux, 2021; Lusardi et al. 2010). However, less is known about how gender is related to money management, and particularly how gender is related to saving behavior in emerging adulthood. The OECD:s PISA 2018 study provide mixed results on the relation of gender to general financial literacy in adolescents. In many countries, boys score higher for financial literacy, but in some countries, the gender difference is not significant (OECD 2020). Among emerging adults, there is evidence that young males' financial literacy and money management skills are better than those of young females (Fisher and Yao, 2017; Lusardi et al. 2010). However, the evidence is fragmented and mostly based on cross-sectional student questionnaires in economically and culturally very different countries.

Literature review

Gender and saving behavior

Some studies have found that parents have different strategies of financial socialization for their sons and daughters. It has been shown that boys get more financial advice from their parents, and they get the advice also earlier than girls (Garrison & Gutter, 2010). According to some studies, boys also start saving their pocket money earlier than girls (Agnew et al. 2018). However, girls follow the parents' financial advice for longer than boys (Shim et al. 2013; Serido et al. 2022). Although research suggests that women have generally lower financial literacy level than men (e.g., Lusardi et al. 2010), studies show mixed results related to gender differences in wise money management such as budgeting, putting

[1] Terhi-Anna Wilska (terhi-anna.wilska@jyu.fi) , Professor, Dept. of Social Sciences and Philosophy, University of Jyväskylä, Finland

[2] Jussi Nyrhinen (jussi.nyrhinen@jyu.fi), Postdoctoral Researcher, Dept. of Social Sciences and Philosophy, University of Jyväskylä, Finland

money aside and planning for the future, such as retirement and home saving. Many studies suggest that women are more careful in their financial decisions and avoid risks (Fisher and Yao 2017). However, there are also studies that report men being wiser in cash management, credit, and financial planning (Bernaola et al., 2021; Singh et al., 2019). In regard to investing money, most studies reveal clear gender differences: men are more tolerant to financial risks and therefore invest more in stocks, such as funds, for instance. On the other hand, while taking more risks men also gain more from investing and thus accumulate their wealth more effectively than women (e.g., Bernaola et al., 2021; Furnham and Grover, 2020).

Financial identity and saving behavior

The concept of financial identity (Barber et al. 2011; Shim et al. 2013; Serido et al. 2022) has been developed from Marcia's (1966) theory of four identity statuses in young adulthood (achieved, diffused, foreclosed, and moratorium). When applied to the domain of financial issues, 'achieved' identity status refers to the person who is committed to a certain way of managing finances after having explored different alternatives. 'Diffused' status refers to the person who is not interested or concerned about financial management. 'Foreclosed' status refers to the person who has adopted one strategy of financial management, such the practices of parents or family, without considering other options. 'Moratorium' status refers to the person who has actively explored many strategies of financial management but has not yet committed to any of them (Barber et al. 2011; Shim et al. 2013; Serido et al. 2022). The identity statuses were connected to financial identity profiles: Pathfinders who were actively engaged to strategies of financial management, drifters who did not commit to any financial management strategy, and followers who relied on their parents' financial management styles. The studies confirm that achieved financial identity is a predictor of wise financial behavior such as investing for the future, or at least saving in bank account.

Research questions

In this paper, we focus on emerging adults aged 18-29, and explore if they save money on bank accounts, invest in stocks or funds, save to a home savings account, save in some other way, or do not save at all. We aim to find out if gender and financial identity predict the propensity to save, modes of saving, or abstention of saving, when age, education and income are controlled for.

The specified research questions are:

RQ1: Are there gender differences in the saving behavior of emerging adults?

RQ2: How is financial identity related to the saving behavior of emerging adults?

Data analysis and results

The research exploits survey data that were collected from an online web panel in Finland. The sample represents the young adult population (18–29-year-olds) of Finland with stratified sampling based on quotas of age groups of 18–22, 23–25, and 26–29 years, gender, and region. Panel members were contacted in random order in December 2-11, 2020, by a marketing research company. In total, 1,000 answers were gathered. Table 1 shows the sample characteristics. The whole panel (N=350,000) were volunteers who respond to surveys according to their interests. The panelists received a nominal reward, and their identities were kept confidential.

TABLE 1

Sample Characteristics

		Sample	Population (2019)
Gender	male	52 %	51 %
	female	49 %	49 %
Age	18–20	27 %	23 %
	21–23	21 %	24 %
	24–26	29 %	26 %
	26–29	23 %	27 %
Living area	city	85 %	83 %
	countryside/rural area	15 %	17 %
Highest education	comprehensive education or incomplete	13 %	15 %
	upper secondary education	59 %	64 %
	polytechnic or bachelor's degree	21 %	16 %
	master's degree or postgraduate degree	7 %	5 %
Disposable annual income	Median	12000 €	11730 €

Scales and Measures

The items measuring the dimension of financial identity were drawn from the 12-item Financial Identity Scale by Barber, Card, Serido, & Shim (2011). Respondents answered the statements using the Likert-type scale: answers ranged from 1 (strongly disagree) to 6 (strongly agree). The primary methods of saving were measured as dummy variables: 1) making saving deposits on my bank accounts, 2) saving by investing (stocks, funds, etc.), 3) saving to home savers' account (e.g., home saver's bonus), 4) saving with other methods and 5) I do not save. When explaining the factors with gender (n=1,000) and the stage of financial identity, respondent's age (n=1,000), monthly personal disposable income (n=896), and educational background (n=996) were set as control variables. Gender was a dummy variable (male=0). The regression model adopts age (in years) and monthly personal spending power (incl. Income after taxes, and/or welfare or parental support or other regular source of support, not loans) as its continuous variables (see Table 2). Educational level was measured with a semantical differential variable that has values on a scale ranging from low to high (1 = Comprehensive school/partial completion of comprehensive school, 2 =Vocational school, 3 = High school diploma or high school graduate, 4 = Post-secondary undergraduate, 5 = Graduate-level degree.

Exploratory Factor Analysis

We conducted exploratory factor analysis for 12 items from financial identity scale. The factors were extracted with principal axis factoring with Promax rotation, which allows factors to be correlated. First, we excluded items that had weak loadings (<0.5) on the factors. The items representing 'moratorium' were left out from the final model for this reason, because they did not form a consistent factor. Consequently, the fixed number of factors was set as 3 in the final model. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.76, which was above the threshold value of 0.6 and Bartlett's Test of Sphericity indicated that the correlation matrix of the variables in our dataset diverges significantly from the identity matrix ($p < 0.001$). Eigenvalues for three factors ranged between 0.94 and 2.73. Also, communalities for all factors were sufficient and ranged between 0.253 and, 0.588. The model explained 24,53 % of variance for Diffusion, 16,25 % of variance for Achievement, and 4.04 % of variance for Foreclosure. In total the variance explained 44.8 % of variance of the examined constructs. Cronbach's alpha values for all factors were between 0.68 and 0.69 and therefore indicated an acceptable level of reliability.

TABLE 2

Exploratory factor analysis results

***Costruct*/Items (1 = strongly disagree, 6 = strongly agree)**	**M**	**St.D.**	**FL**	**h^2**	**E**	**% VAR**	**α**
Diffusion					2.73	34.53	.69
I haven't really considered whether I am more of a saver or a spender. Finances just don't interest me much.	2.52	1.16	.73	.30			
I don't think about money much. I just kind of take it as it comes.	2.67	1.20	.73	.40			
I haven't really thought much about a money management style. I'm not too concerned about credit ratings or paying bills.			.50	.30			
Achievement					2.00	16.25	.69
I've spent time thinking about financial goals, credit cards, and spending habits, and I've decided on a money management method that will work best for me.	3.11	1.15	.76	.62			
I have tried different ways to manage my personal finances and now I have a clear idea of what makes sense for me.	3.07	1.09	.64	.61			
Based on past experiences, I've chosen the type of money management style I want for now.	3.18	1.02	.57	.52			
Foreclosure					.94	4.04	.68
I make decisions about credit cards and bank accounts only if my parents would approve.	2.08	1.25	.73	.51			
I've never really questioned my views about saving and spending. If it's right for my parents, it must be right for me.	2.39	1.15	.71	.59			
My parents know what's best for me in terms of how I should take care of my finances.	2.81	1.17	.53	.35			

Notes: M=Mean, St.D. = Standard Deviation, FL = Factor Loading, h^2 = Communality, E = Eigen Value, % VAR = Percentage of Variance, α = Cronbach's alpha

Ordinary Least Squares Regression Results

First, we tested multicollinearity between the studied constructs. In the model, the intercorrelations between variables were not strong enough to compromise the model's reliability (VIF<5.0). The highest correlation was between Income and Foreclosure (VIF = 3.347). Then, we applied Ordinary Least Square Regression Analysis (OLS) to explore which socio-demographic determinants and dimensions of financial identity predicted the primary methods of saving. The results of OLS are presented in Table 3.

TABLE 3

Socio-demographic variables explaining the primary methods of saving measured by regression analysis

Predictor	Bank account	Investing	Home savings account	Other	Do not save
	β	*β*	*β*	*β*	*β*
Gender	0.12(3.37)**	-0.20(-6.47)***	ns	ns	ns
Diffusion	ns	ns	ns	ns	ns
Achievement	ns	0.16(3.73)***	ns	ns	-0.16(-3.72)***
Foreclosure	ns	ns	ns	ns	ns
Age	ns	ns	ns	ns	0.14(3.98)***
Education	0.08(2.08)*	0.11(3.12)***	0.14(3.80)***	-0.15(-4.00)***	-0.22(-6.04)***
Income	-0.08(-2.31)*	0.08(2.58)***	ns	ns	ns
F(ANOVA)	3.55**	14.30***	2.94**	5.38***	13.91***
R^2	0.02	0.10	0.02	0.04	0.10

Notes: Sig. = p <0.001***, p <0.01**, p <0.05*, ns = not significant (t-values), R^2 = Explanatory share, Gender (0 = male), Age (in year), Education = highest level of education, Income = monthly personal spending power

The model accounted 10 % of variance for each Investing and “Do not save”, 4 % for other methods of saving, and 2 % for each house financing and saving on a bank account. Our results illustrate that gender explains saving on bank accounts and saving by investing. Women typically saved more on a bank account, while men were more likely to invest on stocks, funds etc. Gender did not explain abstention from saving, home saving or saving with other methods. These forms of saving were better explained by control variables. From stages of financial identity, achievement explained investing and not saving. Those who were committed to achievement identity status, were typically investing in stocks, funds etc., while those who were less committed to achievement status were less likely to save at all.

As for the control variables, respondents with higher education typically preferred investing and depositing to the home savings account as the primary methods of saving. Higher education also explained saving on a bank account while other methods of saving and not saving was more common for the less educated. Those with higher income preferred investing and they were less likely to use bank account as their primary method of saving. Age was not a significant predictor for the methods of saving. However, older respondents were less likely to save money compared to young respondents.

Discussion and implications

In this paper, we explored if there were gender differences in the saving behavior of emerging adults in Finland. We also explored if the stage of financial identity which is developing in emerging adulthood (e.g., Shim et al. 2013) predicted the saving behavior. Our results revealed that gender was related to saving on a bank account and investing. Young women were more likely to save on a bank account whereas young males more typically invested in stocks or funds. Gender was not significant for predicting other forms of saving or not saving at all. This result was not surprising as it corresponds with previous research according to which males are more risk tolerant in financial issues than females (e.g., Bernaola et al., 2021; Furnham and Grover, 2020; Singh et el. 2019). Regarding financial identity, only achievement stage was related to saving behavior, positively to investing and negatively not saving at all. This result was also to be expected, as investing decisions usually demand a clear and considered money management style (see Shim et al. 2022). It is also obvious that the lack of money management skills may result to inability to save (Lea et al. 1995; Lusardi 2010).

As for control variables, education was related to all saving behavior, income was related to saving to a bank account and investing, and age was related to not saving. It was not surprising that higher income predicted saving in a bank account and investing, because with low income it is more difficult to save. More interesting was that whereas higher education predicted saving in a bank account, saving for home, and investing, low education was connected to not saving or saving in other ways. This suggests that not only money, but financial skills may be low. Higher age was connected to not saving, which may indicate that in late 20s, when young adults typically set up families and permanent homes, there are a lot of expenses, which makes saving difficult.

According to our results, among young women, saving behavior is more traditional than among young men. As good investing decisions form a basis for higher income and wealth and thereby economic freedom, it is necessary to encourage women to take more financial risks and increase their interest in financial issues. In Finland, young women are increasingly interested in investing. A number of investor blogs and easy-to-understand guidebooks aimed at women have been published in the past years and banks report growing numbers of female investors. This development does not show in general surveys yet. To enhance this development, more financial education for girls in particular is needed in schools, homes and financial institutions. Attention should also be paid to the developmental stages of emerging adults' financial identity, in order to better guide their financial decisions.

References

Agnew, S., Maras, P., & Moon, A. (2018). Gender differences in financial socialization in the home-An exploratory study. *International Journal of Consumer Studies*, 42(3), 275–

Arellano, A., Cámara, N., & Tuesta, D. (2018). Explaining the gender gap in financial literacy: The role of non-cognitive skills. *Economic Notes: Review of Banking, Finance and Monetary Economics*, *47*(2–3), 495–518.

Barber, B. L., Card, N. A., Serido, J. &Shim, S. (2011, November). Financial identity of United States and Australian college students [Paper presentation]. National Council of Family Relations Conference, Orlando, FL.]

Bernaola, D. M. V., Willows, G. D., & West, D. (2021). The relevance of anger, anxiety, gender and race in 521 investment decisions. *Mind & Society*, 20(1), 1–21.

Capelle-Blancard, G., & Reberioux, A. (2021). *Women and Finance*. SSRN Electronic Journal.

Fan, L., Lim, H. N., & Lee, J. M. (2022). Young adults' financial advice-seeking behavior: The roles of parental financial socialization. *Family Relations*, 71(3), 1226– 1246.

Fisher, P. J., & Yao, R. (2017). Gender differences in financial risk tolerance. *Journal of Economic Psychology*, 61, 191–202.

Furnham, A., & Grover, S. (2020). A New Money Behavior Quiz. *Journal of Individual Differences,* 41(1), 592 17–29.

Garrison, S., & Gutter, M. (2010). 2010 outstanding AFCPEVR conference paper: Gender differences in financial socialization and willingness to take financial risks. *Journal of Financial Counseling and Planning*, 21(2), 60-72.

Lea, S. E. G., Webley, P., & Walker, C. M. (1995). Psychological factors in consumer debt: Money management, economic socialization, and credit use. *Journal of Economic Psychology*, 16(4), 681–701.

Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2), 358–380.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551–558.

Moreno-Herrero, D., Salas-Velasco, M., & Sánchez-Campillo, J. (2018). Factors that influence the level of financial literacy among young people: The role of parental engagement and students' experiences with money matters. *Children and Youth Services Review*, *95*, 334–351.

OECD (2020), *PISA 2018 Results (Volume IV): Are students smart about money?*, PISA, OECD Publishing, Paris.
OECD Publishing, Paris.

Serido, J., Sorgente, A., Lanz, M., & Shim, S. (2022). Becoming self-sufficient: a longitudinal person-centered analysis of financial identity and adult status during emerging adulthood. *Applied Developmental Science*, 1-16.

Shim, S., Serido, J., Bosch, L., & Tang, C. (2013). Financial identity-processing styles among young adults: A longitudinal study of socialization factors and consequences for financial capabilities. *Journal of Consumer Affairs*, 47(1), 128–152.

Silinskas, G., Ahonen, A. K., & Wilska, T. A. (2021). Financial literacy among Finnish adolescents in PISA 2018: The role of financial learning and dispositional factors. *Large-scale Assessments in Education*, *9*(1), 1–23.

Singh, E., Kapoor, E.N., & Kang, S.S. (2019). Measuring Perception Of Punjab's People In Personal Financial Planning Using Psychometric Scale. *International Journal of Scientific & Technology Research*, 8, 1926-1933

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