

Online Appendix to Noncognitive Abilities and
Financial Distress:
Evidence from a Representative Household Panel

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This online document includes a detailed description of the database and variables and additional robustness tests and results. The structure of the document is the following. Section A provides a description of the LISS panel, Section B reproduces the main tests of the paper using noncognitive abilities and control variables at different lags and/or without imputation, Section C includes a detailed description of the variables used in the paper, Section D tests whether certain facets of noncognitive abilities are driving our results, Section E presents results on financial advice, and Section F reports *all* the coefficients for several tables that are presented in shortened form in the paper.

Section A. The LISS panel

The Longitudinal Internet Studies for the Social Sciences (LISS) panel is a representative sample of Dutch individuals who participate in monthly Internet surveys. The panel is based on a random sample of households drawn from the population register by Statistics Netherlands. Households that could not otherwise participate are provided with a computer and an Internet connection. Several surveys are fielded in the household panel (almost) every year and cover a large variety of domains, including work, asset holdings, education, income, housing, and noncognitive abilities. Table A1 reports in which years each variable is available. More information about the LISS panel can be found at www.lissdata.nl.

To generate our data set, we combine several of these surveys. The main surveys on noncognitive abilities, income, wealth, education, and work are either fielded (almost) every year or every other year. This implies that we have relatively few missing observations for these variables. By contrast, to generate some of the control variables for preferences and behavioral traits, we need to use surveys that have been fielded only once or twice. These are custom-made surveys explicitly designed by us or by other researchers and can be on a variety of topics.

We deal with missing control variables using two alternative imputation methods. First, we use backward/forward imputation, i.e., we fill gaps in the variable of interest by carrying backward

and/or forward in time the values that are available *for the same individual*. In particular, we replace a missing observation with the most recent non-missing value from the past, to mitigate reverse causality concerns. We only replace missing observations with values from years after that of the missing observation if no prior values for the same individual are available. For instance, if we have a missing value for *Trust* in 2010 we replace it with the value for the same individual in 2011 only if we do not have the value for 2008 or 2009. Column N_2 in Table VIII reports the number of observations that are available when we use backward/forward imputation. Second, if a person never reports a value for a particular variable, we fill in the gaps using group median imputation, relying on the available data for individuals in the same demographic group. Groups are based on gender, education, and income categories. Column N_3 in Table VIII of the Appendix reports the number of observations that are available when we use backward/forward imputation and group median imputation. Data for noncognitive abilities and dependent variables are never imputed.

In our LISS panel data set, we have a substantial number of missing observations for preferences and behavioral traits. By carrying backward and forward in time the available values for each individual, we are implicitly assuming that preferences and behavioral traits are rather stable over time. We can, to some extent, test this assumption by estimating the serial correlation for a number of preferences and behavioral traits that are available (almost) every year. One of these variables is *Trust*. The serial correlation of *Trust* for the same individual over time varies between 0.67 and 0.76. This suggests that the trait is quite stable over time. After backward/forward imputation, we still impute around 40% of the preferences and behavioral traits by using medians from individuals in the same demographic group.

We show in Table A2 that our results are robust to using different methods to deal with missing observations. As a reference, in Column (1) we present the results using our baseline imputation method. In Column (2), we only use the subset of observations for which we do not use group median imputation. Note that the number of observations drops sizeably from Columns (1) to (2). This is due to a number of preferences and behavioral traits which we only have for a small number

of individuals, such as ambiguity aversion (we only have it for 1,885 people). We cannot run the analysis in Table ?? on a sample that does not rely on backward/forward imputation at all, as we do not have a single year in which all variables are available (for instance, the ambiguity aversion module is only available in 2010, whereas the numeracy module is available only in 2008). Overall, the economic magnitude of the effect of a one standard deviation increase in emotional stability or conscientiousness remains similar. In Columns (3) and (4), we show that our results remain similar also when we do not use missing data dummies, and we rely on multiple imputation.¹

Our approach in dealing with missing observations is similar to the methods used in other household surveys, such as the RAND American Life Panel (ALP), the Understanding America Study (UAS), the Survey of Consumer Finances (SCF), and the Health and Retirement Study (HRS). Most comparable to the LISS panel are the ALP and UAS, as these panels allow researchers to field their own custom-designed survey. Researchers then combine the survey modules from different years to generate their unique database. For instance, wealth data from 2010 may be combined with income data from 2007.² Hence, for researchers using the ALP or UAS, it is standard practice to combine data obtained from different years to generate a cross-sectional data set. This implies that most observations are implicitly obtained by carrying backward or forward in time the available values for the same individual.

The Survey of Consumer Finances (SCF) sponsored by the Federal Reserve Board is a repeated cross-section fielded on *different individuals* each period. As a result, backward and forward imputation for the *same* person is not possible. However, imputation within wave is common practice. For instance, in the SCF, total income has a non-response rate of 15% and the different items of financial wealth have non-response rates ranging from 10% to 25%. As a result, the missing observations are commonly imputed on the basis of other observable characteristics of the household and of other households that did fill in the income and financial wealth information. In particular,

¹The multiple imputation method takes into account the uncertainty about the missing data by creating several plausibly imputed data sets and appropriately combining the results obtained from each of them (Cameron and Trivedi (2005)).

²Balloch, Nicolae, and Philip (2015) combine a financial literacy module from 2009, with income data from 2009 and 2010, and wealth information collected between 2009 and 2013. Similar procedures are also used by most researchers using the RAND ALP (e.g., Dimmock, Kouwenberg, Mitchell, and Peijnenburg (2016)).

the SCF uses multiple imputation, which we also use as a robustness test ([Kennickell \(2000\)](#)). Another commonly used data set is the HRS panel, which uses both cross-wave and cross-sectional information to impute missing observations ([Hurd, Meijer, Moldoff, and Rohwedder \(2016\)](#)).

Table A1: Years survey variables are available

This table reports the availability of each variable over time. *Indicates that only individuals who did not answer in the previous year are asked.

Variable	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<i>Noncognitive ability measures</i>										
Noncognitive ability: emotional stability	x	x	x*	x	x*	x	x	x*		x
Noncognitive ability: conscientiousness	x	x	x*	x	x*	x	x	x*		x
<i>Outcome variables</i>										
Financial distress: consumer delinquency	x	x	x	x	x	x	x	x	x	x
Arrears rent/mortgage 3 months or more	x	x	x	x	x	x	x	x	x	x
Arrears utility 3 months or more	x	x	x	x	x	x	x	x	x	x
Debt collector at door	x	x	x	x	x	x	x	x	x	x
Not able to pay €500					x	x	x	x	x	x
Bad credit score										x
Financial wealth buffer	x		x		x		x		x	x
Saving	x	x	x	x	x	x	x	x	x	x
Unsecured debt			x							x
Mortgage-to-income ratio	x	x	x	x	x	x	x	x	x	x
Income	x	x	x	x	x	x	x	x	x	x
% Negative income shock		x	x	x	x	x	x	x	x	x
Unemployed	x	x	x	x	x	x	x	x	x	x
On disability	x	x	x	x	x	x	x	x	x	x
Health status	x	x	x	x	x	x	x	x	x	x
Overview financial situation			x							x
Impulsive buying			x							x
Stick to plan										x
Automatic payments										x
Cost of effort										x
Quantity of effort		x		x		x				
<i>Control variables</i>										
Age	x	x	x	x	x	x	x	x	x	x
Male	x	x	x	x	x	x	x	x	x	x
Married	x	x	x	x	x	x	x	x	x	x
Children	x	x	x	x	x	x	x	x	x	x
No high school	x	x	x	x	x	x	x	x	x	x
High school	x	x	x	x	x	x	x	x	x	x
College	x	x	x	x	x	x	x	x	x	x
Home ownership	x	x	x	x	x	x	x	x	x	x
Rural	x	x	x	x	x	x	x	x	x	x
Openness	x	x	x*	x	x*	x	x	x*		x
Extraversion	x	x	x*	x	x*	x	x	x*		x
Agreeableness	x	x	x*	x	x*	x	x	x*		x
Trust	x	x	x	x	x	x	x	x		x
Numeracy	x									
Financial literacy				x			x			
Risk aversion		x	x			x				
Risk aversion, self-assessed			x			x				x
Ambiguity aversion			x							
Optimism	x	x	x	x	x	x	x	x	x	
<i>Instrument</i>										
Childhood trauma				x	x					

Table A2: Alternative methods of dealing with missing observations

This table shows marginal effect estimates from probit regressions. The dependent variable is equal to one if the respondent is in financial distress, measured as being delinquent on mortgage payments, rent payments, utility bills, or other bills. Column (1) uses our standard approach for dealing with missing observations: backward/forward imputation and median group imputation if backward/forward imputation is not possible. Column (2) uses only backward/forward imputation. Column (3) does not include missing data dummies. Column (4) uses multiple imputation. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies (except in Column (3)), and year dummies. The controls are suppressed for brevity. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Baseline	No group median imputation	No missing data dummies	Multiple imputation
	(1)	(2)	(3)	(4)
Emotional stability	-0.0070*** (0.0011)	-0.0052*** (0.0019)	-0.0072*** (0.0012)	-0.0081*** 0.0012
Conscientiousness	-0.0094*** (0.0011)	-0.0060** (0.0027)	-0.0107*** (0.0012)	-0.0109*** (0.0012)
Controls and constant	yes	yes	yes	yes
Time fixed effects	yes	yes	yes	yes
Observations	47,678	7,914	47,678	47,678
Pseudo R-squared	0.173	0.182	0.158	0.053

Table A3: Characteristics associated with noncognitive abilities

These characteristics are from [Goldberg \(1992\)](#) and [McAdams \(2013\)](#).

Characteristics of high scorers	Characteristics of low scorers
<u>Emotional stability</u>	
Relaxed, stress resistant, calm, non-impulsive, imperturbable.	Nervous, volatile, impulsive, envious.
<u>Conscientiousness</u>	
Organized, dependable, practical, achievement striving, thorough, self-controlled.	Disorganized, careless, frivolous, wasteful, unreliable, impractical.

Section B. Additional Robustness Tests

In Table A4, we perform robustness tests for Table ?? in the paper. In particular, we control extensively for past income (shocks) by regressing financial distress on noncognitive abilities in year $t - x$ (with $x = 2, \dots, 5$), standard control variables in year $t - 1$, and income measures in years from $t - 1$ to $t - x - 1$. We do not impute any of the income measures. However, the other

baseline controls are imputed in case of missing observations (else the resulting sample would be too small). In Table A4, we see that the coefficients are statistically significant. Comparing the coefficients in Column (4) to those in Column (1), we find a seemingly weaker economic effect. However, this is caused by the different samples used. In particular, due to specific lag structure in Column (4), we end up using only financial distress data from 2013-2017. For our sample of households, the baseline financial distress rate during that period was only 2.5%.

Furthermore, we find that our results remain analogous for alternative transformations of our measures. Columns (1) to (3) in Table A5 show the results using rank transformations, above-median dummies, and dummies for the 10th and 90th percentiles, respectively. These findings confirm the robustness of our results and rule out potential concerns about the influence of outliers.

In Table A6, we perform robustness tests for Table IX. Similar to the analyses in Table A4, we regress severe financial distress on noncognitive abilities in year $t - 3$, standard control variables in year $t - 1$, and income measures in years $t - 1$ and $t - 2$. Results are robust to using different lags (these results are unreported). Furthermore, we regress each channel variable on lagged noncognitive abilities in Table A7. The results are similar to Table II in the paper. In Table A8 we show the relation between noncognitive abilities and alternative measures of unemployment and being on disability.

In Tables A9, A10, and A11, we perform robustness tests for the Fainlie-Blinder-Oacaca decompositions in Table III. In Table A9, the decomposition is based on separate groups for emotional stability and separate groups for conscientiousness. In Tables A10 and A11, we mitigate reverse causality concerns and show that the finding of the relative smaller importance of the income channel with respect to the other two channels is robust.

Table A4: The influence of noncognitive abilities at several lags on financial distress controlling for lagged income variables

This table shows marginal effect estimates from probit regressions. The dependent variable is equal to one if the respondent is in financial distress, measured as being delinquent on mortgage payments, rent payments, utility bills, or other bills. Noncognitive abilities are not averaged over time. The income variables are not imputed (neither by backward/forward imputation nor by group median imputation). In Column (1), the independent variables are noncognitive abilities at time $t-2$, baseline controls are at time $t-1$, and income controls are at time $t-1$. In Column (2), the independent variables are noncognitive abilities at time $t-3$, baseline controls are at time $t-1$, and income controls are at time $t-1$ and $t-2$. In Column (3), the independent variables are noncognitive abilities at time $t-4$, baseline controls are at time $t-1$, and income controls are from time $t-1$ to $t-3$. In Column (4), the independent variables are noncognitive abilities at time $t-5$, baseline controls are at time $t-1$, and income controls are from time $t-1$ to $t-4$. All the models include a constant term. The baseline controls are risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, log of net income, percentage drop in income, unemployed, disabled, health status, missing data dummies, and year dummies. The controls are suppressed for brevity. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Emotional stability $_{t-2}$	-0.0038*** (0.0012)			
Conscientiousness $_{t-2}$	-0.0068*** (0.0012)			
Emotional stability $_{t-3}$		-0.0033*** (0.0009)		
Conscientiousness $_{t-3}$		-0.0042*** (0.0010)		
Emotional stability $_{t-4}$			-0.0028** (0.0012)	
Conscientiousness $_{t-4}$			-0.0032** (0.0013)	
Emotional stability $_{t-5}$				-0.0032*** (0.0011)
Conscientiousness $_{t-5}$				-0.0040*** (0.0013)
Controls and constant	yes	yes	yes	yes
Time fixed effects	yes	yes	yes	yes
Observations	16,360	14,249	9,832	6,882
Pseudo R-squared	0.185	0.205	0.183	0.217

Table A5: Alternative definitions of the independent variables

This table shows marginal effect estimates from probit regressions. The dependent variable is equal to one if the respondent is in financial distress, measured as being delinquent on mortgage payments, rent payments, utility bills, or other bills. Column (1) includes as main independent variables an indicator that is equal to one if the respondent scores above the median on emotional stability and an indicator that is equal to one if the respondent scores above the median on conscientiousness. Column (2) includes as main independent variables rank transformations of emotional stability and conscientiousness. Column (3) includes as main independent variables our baseline emotional stability and conscientiousness measures, as well as an indicator if the respondent is below the 10th percentile of the variable and an indicator if the respondent is above the 90th percentile of the variable. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies. The controls are suppressed for brevity. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)
Above-median emotional stability	-0.0121*** (0.0022)		
Above-median conscientiousness	-0.0156*** (0.0023)		
Emotional stability rank		-0.0246*** (0.0039)	
Conscientiousness rank		-0.0324*** (0.0040)	
Emotional stability			-0.0070*** (0.0016)
Conscientiousness			-0.0098*** (0.0016)
Emotional stability bottom 10%			0.0009 (0.0041)
Conscientiousness bottom 10%			-0.0012 (0.0039)
Emotional stability top 10%			0.0021 (0.0050)
Conscientiousness top 10%			0.0008 (0.0050)
Controls and constant	yes	yes	yes
Time fixed effects	yes	yes	yes
Observations	47,678	47,678	47,678
Pseudo R-squared	0.163	0.172	0.173

Table A6: The influence of lagged noncognitive abilities on severe financial distress controlling for lagged income variables

This table shows the results of probit regressions (Columns (1), (2), (3), and (5)) and an ordered probit regression (Column (4)). Noncognitive abilities are not averaged over time. The income variables are not imputed (neither by backward/forward imputation nor by group median imputation). The independent variables are noncognitive abilities at time $t-3$, baseline controls are at time $t-1$, and income controls are at time $t-1$ and $t-2$. In Column (1), the dependent variable is equal to one if the respondent has been in arrears for three months or more on rent or mortgage payments. In Column (2), the dependent variable is equal to one if the respondent has been in arrears for three months or more on utility payments. In Column (3), the dependent variable is equal to one if the respondent has had a debt collector at the door in the last month. In Column (4), the dependent variable is an ordinal variable ranging from one to seven that measures the degree to which the respondent would be unable to pay an unexpected expense of 500 euros. In Column (5), the dependent variable is equal to one if the respondent has a bad credit score in the Dutch Individual Credit Registry. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, log of net income, percentage drop in income, unemployed, disabled, health status, missing data dummies, and year dummies when indicated. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Arrears rent/mortgage 3 months or more	Arrears utility 3 months or more	Debt collector at the door	Not able to pay €500	Bad credit score
	(1)	(2)	(3)	(4)	(5)
Emotional stability $_{t-3}$	-0.0002 (0.0003)	-0.0002 (0.0002)	-0.0001 (0.0001)	-0.0045*** (0.0013)	0.0016 (0.0036)
Conscientiousness $_{t-3}$	-0.0007** (0.0003)	-0.0007*** (0.0002)	-0.0003** (0.0001)	-0.0064*** (0.0014)	-0.0093*** (0.0035)
Controls and constant	yes	yes	yes	yes	yes
Time fixed effects	yes	yes	yes	yes	no
Observations	13,782	14,249	14,321	11,696	3,126
Pseudo R-squared	0.177	0.236	0.246	0.0907	0.0741

Table A7: The influence of lagged noncognitive abilities on financial choices, income (shocks), and financial insight

Panel A shows the results of OLS regressions (Columns (1) and (4)), and probit regressions (Columns (2) and (3)). Noncognitive abilities are not averaged and lagged by one year. In Column (1), the dependent variable is the log of financial wealth. In Column (2), the dependent variable is equal to one if the respondent consumes less than her income. In Column (3), the dependent variable is equal to one if the respondent has one or more of the following: a loan from a family member, debit card debt, credit card debt, a personal loan, a student loan, or some other unsecured loan. In Column (4), the dependent variable is the ratio of mortgage debt to income (this analysis is run on home owners only). Panel B shows the results of OLS regressions (Columns (1) and (2)), probit regressions (Columns (3) and (4)), and an ordered probit regression (Column (5)). In Column (1), the dependent variable is the log of net income. In Column (2), the dependent variable is the percentage decrease in income. In Column (3), the dependent variable equals one if the respondent is unemployed. In Column (4), the dependent variable equals one if the respondent is on disability. In Column (5), the dependent variable is self-reported health status. Panel C shows the results of ordered probit regressions (Columns (1) to (3)), and a probit regression (Column (4)). In Column (1), the dependent variable measures to what degree the respondent has an overview of her current financial situation. In Column (2), the dependent variable measures to what degree the respondent is inclined to buy impulsively. In Column (3), the dependent variable measures to what degree the respondent finds it easy to stick to a spending plan. In Column (4), the dependent variable is equal to one if the respondent uses automatic payments for bills. In Columns (3) and (4) of Panel C, noncognitive abilities are lagged by three years instead of one year due to data availability. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies when indicated. The controls are suppressed for brevity. The table reports marginal effects. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Financial choices

	Financial wealth buffer (1)	Saving (2)	Unsecured debt (3)	Mortgage-to-income ratio (4)
Lagged emotional stability	0.0198 (0.0456)	0.0342*** (0.0050)	-0.0150* (0.0089)	-0.2180* (0.1167)
Lagged conscientiousness	0.1903*** (0.0450)	0.0334*** (0.0050)	-0.0292*** (0.0088)	-0.2137** (0.1071)
Controls and constant	yes	yes	yes	yes
Time fixed effects	yes	yes	no	yes
Observations	9,975	22,102	3,931	5,563
R-squared	0.2116	0.0515	0.0838	0.2573

Panel B: Income (shocks)

	Income (1)	% Negative income shock (2)	Unemployed (3)	On disability (4)	Health status (5)
Lagged emotional stability	0.0519*** (0.0200)	-0.0012*** (0.0004)	-0.0046*** (0.0010)	-0.0114*** (0.0012)	0.0183*** (0.0011)
Lagged conscientiousness	0.0533*** (0.0191)	-0.0010*** (0.0004)	-0.0031*** (0.0010)	-0.0034*** (0.0011)	0.0040*** (0.0008)
Controls and constant	yes	yes	yes	yes	yes
Time fixed effects	yes	yes	yes	yes	yes
Observations	29,268	26,575	30,685	30,711	24,521
R-squared	0.2219	0.0091	0.0840	0.179	0.0835

Table A7: Noncognitive abilities and financial choices, income (shocks), and financial insight - Continued

Panel C: Financial insight

	Overview financial situation	Impulsive buying	Stick to plan	Automatic payments
	(1)	(2)	(3)	(4)
Lagged emotional stability	0.0353*** (0.0085)	-0.0019*** (0.0004)	0.0395*** (0.0068)	0.0055 (0.0073)
Lagged conscientiousness	0.1291*** (0.0083)	-0.0039*** (0.0007)	0.0716*** (0.0066)	0.0117 (0.0073)
Controls and constant	yes	yes	yes	yes
Time fixed effects	no	no	no	no
Observations	3,931	3,933	4,283	4,283
R-squared	0.0757	0.0750	0.0461	0.0117

Table A8: Persistence of unemployment and disability

This table shows the results of Tobit regressions (Columns (1) and (3)), and OLS regressions (Columns (2) and (4)). In Column (1), the dependent variable is the percentage of years to date a person has been unemployed while in the sample. In Column (2), the dependent variable is the number of consecutive years a person has been unemployed while in the sample, conditional on being currently unemployed. In Column (3), the dependent variable is the percentage of years to date a person has been on disability while in the sample. In Column (4), the dependent variable is the number of consecutive years a person has been on disability while in the sample, conditional on being currently on disability. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies when indicated. We control for the number of years the person has answered the unemployment survey question in Column (2) and the number of years the person has answered the disability survey question in Column (4). The controls are suppressed for brevity. The table reports marginal effects. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Fraction of years unemployed	Years unemployed	Fraction of years on disability	Years on disability
	(1)	(2)	(3)	(4)
Emotional stability	-0.1162*** (0.0263)	-0.0835 (0.0620)	-0.9746*** (0.1020)	-0.0833 (0.0574)
Conscientiousness	-0.0781*** (0.0260)	-0.1059* (0.0542)	-0.3231*** (0.0903)	-0.1776*** (0.0657)
Controls and constant	yes	yes	yes	yes
Time fixed effects	yes	yes	yes	yes
Observations	76,945	2,237	77,001	2,959
Pseudo R-squared	0.0853	0.2772	0.151	0.6122

Table A9: Relative importance of the channels for emotional stability and conscientiousness separately

This table reports results of Fairlie-Blinder-Oaxaca decompositions. This analysis measures how much of the difference in the propensity to be in financial distress between a group of individuals with high noncognitive abilities and a group of individuals with low noncognitive abilities is explained by differences in (1) financial choices, (2) income (shocks), and (3) financial insight. In Columns (1) and (2), the low-ability group consists of individuals that are in the lowest quintile of emotional stability and the high-ability group consists of individuals that are in the highest quintile of emotional stability. In Columns (3) and (4), the low-ability group consists of individuals that are in the lowest quintile of conscientiousness and the high-ability group consists of individuals that are in the highest quintile of conscientiousness. The financial choice variables are *Financial wealth buffer*, *Saving*, *Unsecured debt*, and *Mortgage-to-income ratio*. The income shock variables are *Income*, *% Negative income shock*, *Unemployed*, *On disability*, and *Health status*. The financial insight variables are *Overview financial situation*, *Impulsive buying*, *Stick to plan*, and *Automatic payments*. Some of these variables are only available in one (*Stick to plan* and *Automatic payments*) or two sample years (*Overview financial situation*, *Impulsive buying*, and *Unsecured debt*). Therefore, we fill in the missing observations by carrying backward/forward the available values, thereby ensuring that we have sufficient observations to conduct this analysis. The sample size for the decomposition presented in Columns (1) and (2) is 8,311 and the sample size for the decomposition presented in Columns (3) and (4) is 7,641. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Probability of distress by ability group				
	Coefficient			
Low emotional stability group	0.0741			
High emotional stability group	0.0163			
Difference Low - High emotional stability group	0.0578			
Low conscientiousness group	0.0776			
High conscientiousness group	0.0240			
Difference Low - High conscientiousness group	0.0536			
Panel B: Fairlie-Blinder-Oaxaca decompositions				
	Emotional stability		Conscientiousness	
	Coefficient	%	Coefficient	%
	(1)	(2)	(3)	(4)
Contributions from differences in:				
Financial choices	0.0173***	29.9	0.0170***	31.7
Financial wealth buffer	0.0081***	14.1	0.0057***	10.6
Saving	0.0030***	5.2	0.0017***	3.2
Unsecured debt	0.0048***	8.3	0.0068***	12.6
Mortgage-to-income ratio	0.0009	1.5	0.0024***	4.4
Income shocks	0.0185***	32.0	0.0053***	9.9
Income	0.0013	2.2	-0.0001	-0.1
% Negative income shock	0.0000	-0.1	0.0000	0.0
Unemployed	0.0026***	4.5	0.0013***	2.5
On disability	0.0060***	10.3	0.0013*	2.5
Health status	0.0090***	15.6	0.0029***	5.5
Financial insight	0.0133***	23.0	0.0174***	32.4
Overview finances	0.0019	3.3	0.0031	5.9
Impulsive buying	0.0124***	21.5	0.0109***	20.3
Automatic payments	0.0016***	2.7	0.0009***	1.7
Stick to plan	-0.0023	-4.0	0.0028	5.2
Total contribution of channels	0.0491***	85.0	0.0397***	74.1

Table A10: Relative importance of the channels using lagged noncognitive abilities

This table reports results of a Fairlie-Blinder-Oaxaca decomposition. This analysis measures how much of the difference in the propensity to be in financial distress between a group of individuals with high noncognitive abilities and a group of individuals with low noncognitive abilities is explained by differences in (1) financial choices, (2) income (shocks), and (3) financial insight. The lagged low-ability group consists of individuals that are in the lowest tercile of both emotional stability and conscientiousness one year before. The lagged high-ability group consists of individuals that are in the highest tercile of both emotional stability and conscientiousness one year before. The financial choice variables are *Financial wealth buffer*, *Saving*, *Unsecured debt*, and *Mortgage-to-income ratio*. The income (shock) variables are *Income*, *% Negative income shock*, *Unemployed*, *On disability*, and *Health status*. The financial insight variables are *Overview finances*, *Impulsive buying*, *Stick to plan*, and *Automatic payments*. Several of these variables are only available in one (*Stick to plan* and *Automatic payments*) or two sample years (*Overview finances*, *Impulsive buying*, and *Unsecured debt*). Therefore, we fill in missing observations by carrying backward/forward the available values, thereby ensuring that we have sufficient observations to conduct this analysis. The income variables are not carried backward and forward in this analysis. The sample size in this analysis is 2,963. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Probability of distress by ability group		
	Coefficient	
Low noncognitive abilities group lagged 1 year	0.0863	
High noncognitive abilities group lagged 1 year	0.0173	
Difference Low - High ability group lagged 1 year	0.0690	
Panel B: Fairlie-Blinder-Oaxaca decomposition		
	Coefficient	%
Contributions from differences in:		
<i>Financial choices</i>	<i>0.0254***</i>	<i>36.8</i>
Financial wealth buffer	0.0090***	13.1
Saving	0.0035***	5.1
Unsecured debt	0.0091***	13.2
Mortgage-to-income ratio	0.0031**	4.5
<i>Income (shocks)</i>	<i>0.0138***</i>	<i>20.0</i>
Income	0.0007	1.0
% Negative income shock	-0.0002	-0.3
Unemployed	0.0031**	4.4
On disability	0.0031	4.4
Health status	0.0076*	11.0
<i>Financial insight</i>	<i>0.0218***</i>	<i>31.6</i>
Overview financial situation	0.0006	0.9
Impulsive buying	0.0128***	18.6
Automatic payments	0.0011	1.6
Stick to plan	0.0077*	11.1
<i>Total contribution of channels</i>	<i>0.0610***</i>	<i>88.4</i>

Table A11: Relative importance of the channels using lagged noncognitive abilities and lagged channel variables

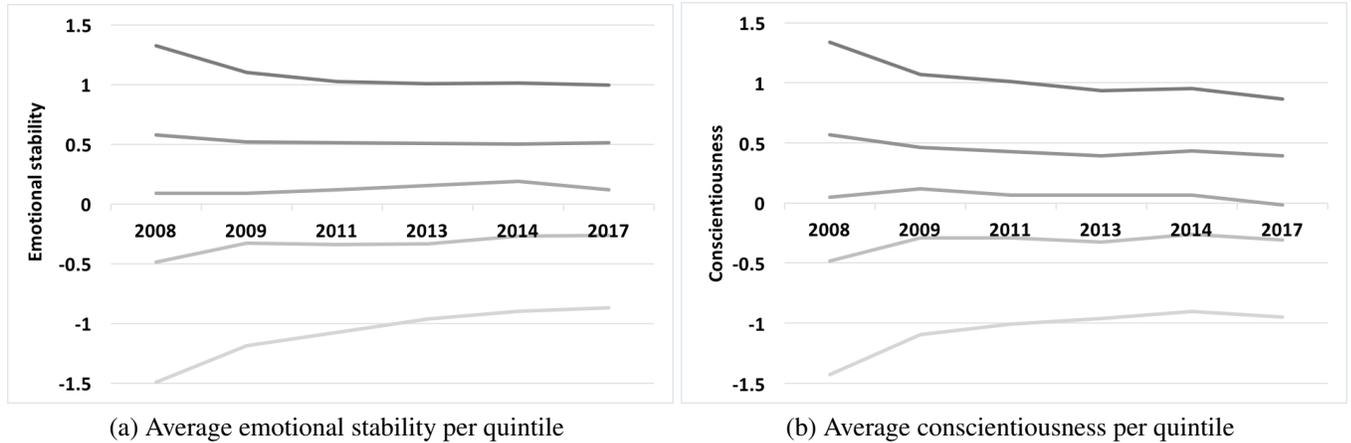
This table reports results of a Fairlie-Blinder-Oaxaca decomposition. This analysis measures how much of the difference in the propensity to be in financial distress between a group of individuals with high noncognitive abilities and a group of individuals with low noncognitive abilities is explained by differences in (1) financial choices, (2) income (shocks), and (3) financial insight. Noncognitive abilities are lagged by two years and the channel variables are lagged by one year. The lagged high-ability group consists of individuals that were above the median for both emotional stability and conscientiousness two years before. The lagged low-ability group consists of individuals that were below the median for both emotional stability and conscientiousness two years before. We do not fill in missing observations by carrying backward/forward the available values. Hence, effectively, this decomposition uses data on financial distress from 2011, channel variables from 2010, and noncognitive abilities from 2009. The financial choice variables are *Financial wealth buffer* and *Unsecured debt*. The income (shock) variables are *On disability* and *Unemployed*. The financial insight variables are *Overview financial situation* and *Impulsive buying*. The sample size in this analysis is 1,277. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Probability of distress by ability group		
	Coefficient	
Low noncognitive abilities group lagged 2 years	0.0581	
High noncognitive abilities group lagged 2 years	0.0083	
Difference Low - High ability group lagged 2 years	0.0498	

Panel B: Fairlie-Blinder-Oaxaca decomposition		
	Coefficient	%
Contributions from differences in:		
<i>Financial choices lagged 1 year</i>	0.0104***	20.9
Financial wealth buffer lagged 1 year	0.0063**	12.6
Unsecured debt lagged 1 year	0.0040**	8.1
<i>Income (shocks) lagged 1 year</i>	0.0034	6.9
Unemployed lagged 1 year	-0.0003	-0.6
On disability lagged 1 year	0.0038	7.6
<i>Financial insight lagged 1 year</i>	0.0144***	28.9
Overview financial situation lagged 1 year	0.0068*	13.7
Impulsive buying lagged 1 year	0.0077**	15.5
<i>Total contribution of channels lagged 1 year</i>	0.0282***	56.7

Figure A1: Persistence of noncognitive abilities

Average noncognitive abilities of respondents over time per quintile of noncognitive ability in 2008. We track the same respondents over time, thereby only retaining those that answer the survey each year.



Section C. Detailed variable descriptions

Risk aversion

The respondent is presented with the choice between a lottery and a sure amount. The lottery gives a 50% chance of winning and 50% chance of losing. The three modules present people with differing amounts; however, in all three modules, respondents are presented with a lottery that has as an expected value equal to the sure amount. Our measure of risk aversion equals one if the respondent chooses the sure amount.

Ambiguity aversion

We use the method of [Dimmock, Kouwenberg, and Wakker \(2015\)](#) to obtain a measure for ambiguity aversion. The respondents are asked to choose between a risky box and an ambiguous box. Both boxes contain 100 balls that can be either purple or yellow. The respondent selects one of the two boxes or indicates indifference between the two boxes. A ball is then randomly drawn from that box. The respondent wins €15 if that ball is purple and zero if the ball is yellow. For the risky box, the number of purple balls is explicitly stated (50), as well as the number of yellow balls (50).

For the ambiguous box, the number of purple balls is not given and the respondent only knows it is between zero and 100. A respondent who prefers the risky box over the ambiguous box is ambiguity averse, that is, prefers known probabilities to unknown probabilities. Using this answer, we create the variable for ambiguity aversion, an indicator equal to one if the respondent chooses the risky box and equal to zero if the respondent chooses the ambiguous box or is indifferent.

Numeracy

The method we use to obtain our numeracy measure is similar to the approach in the Health and Retirement Study and the English Longitudinal Study of Ageing. A total of 10 questions are asked about random numbers and probabilities regarding disease risk. Our measure of numeracy is the total number of correct answers. The 10 questions are the following.

1. Imagine that we roll a fair, six-sided die 1,000 times. Out of 1,000 rolls, how many times do you think the die would come up even?
2. In the Big Bucks Lottery, the chances of winning a \$10 prize are 1%. What is your best guess about how many people would win a \$10 prize if 1,000 people each buy a single ticket from Big Bucks?
3. In the Acma Publishing Sweepstakes, the chance of winning a car is 1 in 1,000. What percent of tickets of Acma Publishing Sweepstakes win a car?
4. Which of the following numbers represents the biggest risk of getting a disease?
Answer A) 1 in 100; answer B) 1 in 1000; answer C) 1 in 10.
5. Which of the following represents the biggest risk of getting a disease?
Answer A) 1%; answer B) 10%; answer C) 5%
6. If the chance of getting a disease is 10%, how many people would be expected to get the disease? ... out of 100

7. If the chance of getting a disease is 10%, how many people would be expected to get the disease? ... out of 1000
8. If the chance of getting a disease is 20 out of 100, this would be the same as having a x% chance of getting the disease. Fill in x?
9. The chance of getting a viral infection is 0.0005. Out of 10,000 people, about how many of them are expected to get infected?
10. What do you think is the chance that you will still be alive in 10 years? What do you think is the chance that you will still be alive in 20 years? (Correct answer if the respondent indicates that the probability of being alive in 10 years is higher or equal to the probability of being alive in 20 years.)

Financial literacy

The wording of the questions is almost identical in the two modules and is used in dozens of studies (e.g., [van Rooij, Lusardi, and Alessie \(2011\)](#)). The measure is equal to the sum of correct answers.

The three questions are the following.

1. Suppose you have 100 euros in a savings account and the interest is 2% per year. How much do you think you will have on the savings account after five years, assuming that you leave all your money on this savings account: More than 102 euros, exactly 102 euros, less than 102 euros?
2. Suppose that the interest on your savings account is 1% per year and that inflation amounts to 2% per year. After 1 year, would you be able to buy more, exactly the same, or less than you could today with the money on that account?
3. A share in a company usually offers a more certain return than an investment fund that only invests in shares. (True/False)

Optimism

This variable is based on the optimism measure of [Puri and Robinson \(2007\)](#). We use the following four survey questions to construct our optimism variable.

Asked to respondents $age > 15$ and $age \leq 70$: How would you rate your chance of living to be 80 years old or older? Please rate your chance on a scale from 0 to 10, where 0 means “no chance at all” and 10 means “absolutely certain.”

Asked to respondents $age > 70$ and $age \leq 75$: How would you rate your chance of living to be 85 years old or older? Please rate your chance on a scale from 0 to 10, where 0 means “no chance at all” and 10 means “absolutely certain.”

Asked to respondents $age > 75$ and $age \leq 80$: How would you rate your chance of living to be 90 years old or older? Please rate your chance on a scale from 0 to 10, where 0 means “no chance at all” and 10 means “absolutely certain.”

Asked to respondents $age > 80$ and $age \leq 84$: How would you rate your chance of living to be 95 years old or older? Please rate your chance on a scale from 0 to 10, where 0 means “no chance at all” and 10 means “absolutely certain.”

The indicator variable for optimism equals one if a respondent answers nine or ten and equals zero otherwise. For respondents above the age of 84 we impute optimism using the group median, where group is based on gender, education, and income categories.

Section D. Facets of noncognitive abilities

The Big Five framework defines personality traits at the highest, most comprehensive level. Subsequent research in psychology has further disentangled each personality trait into narrower aspects of personality called “facets.” In this section, we attempt to identify whether certain facets drive the relation between noncognitive abilities and financial distress, financial choices, income, and financial insight. We rely on the [Costa and McCrae \(1992\)](#) inventory to measure the facets. In particular, we map our questions onto three facets of emotional stability and three facets of conscientiousness (see Table VI). In the following, we consider only those facets that we can construct on the basis of the questions available in the LISS panel.³ Importantly, facets associated with the same noncognitive ability are highly correlated. To avoid multicollinearity issues, we include in our regressions one facet per ability at the time (all facets belonging to the other personality traits are included as controls). For brevity, we report all coefficients in the same column even though they are obtained from different regressions.

We find that most facets are economically significant in explaining financial distress (Table A12, Panel A), financial choices (Panel B), income variables (Panel C), and financial insight variables (Panel D). Notably, there is no discernible pattern that emerges in terms of certain facets being significantly more important than others. In fact, facets associated with the same overarching trait appear to be highly correlated among each other. Overall, the fact that all facets of conscientiousness and emotional stability have a similar association with proxies of financial distress, financial choices, income, and financial insight, supports our choice of conducting the main analysis on the highest-level traits rather than on the lower-level facets.

³The specific mapping of the survey questions to their lower-level facets is reported here: <https://ipip.ori.org/newNEOFacetsKey.htm>

Table A12: Facets of noncognitive abilities and financial distress, financial choices, income (shocks), and financial insight

We include one facet per ability at the time in our regressions due to multicollinearity issues. All facets belonging to the other personality traits are included as controls. Hence, each entry is from a separate regression. Panel A shows the result of a probit regression (Column (1)). In Column (1), the dependent variable is equal to one if the respondent is in financial distress, measured as being delinquent on mortgage payments, rent payments, utility bills, or other bills. Panel B shows the results of OLS regressions (Columns (1) and (4)), and probit regressions (Columns (2) and (3)). In Column (1), the dependent variable is the log of financial wealth. In Column (2), the dependent variable is equal to one if the respondent consumes less than income. In Column (3), the dependent variable is equal to one if the respondent has one or more of the following: a loan from a family member, debit card debt, credit card debt, a personal loan, a student loan, or some other unsecured loan. In Column (4), the dependent variable is the ratio of mortgage debt to income (this analyses is run on home owners only). Panel C shows the results of OLS regressions (Columns (1) and (2)), probit regressions (Columns (3) and (4)), and an ordered probit regression (Column (5)). In Column (1), the dependent variable is the log of net income. In Column (2), the dependent variable is the percentage decrease in income (if any). In Column (3), the dependent variable equals one if the respondent is unemployed. In Column (4), the dependent variable equals one if the respondent is on disability. In Column (5), the dependent variable is self-reported health status. Panel D shows the results of ordered probit regressions (Columns (1) to (3)), and a probit regression (Column (4)). In Column (1), the dependent variable measures to what degree the respondent has an overview of her current financial situation. In Column (2), the dependent variable measures to what degree the respondent is inclined to buy impulsively. In Column (3), the dependent variable measures to what degree the respondent finds it easy to stick to a spending plan. In Column (4), the dependent variable is equal to one if the respondents uses automatic payments for bills. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies. The controls are suppressed for brevity. The table reports marginal effects. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

<i>Panel A: Financial distress</i>		<i>Panel B: Financial choices</i>			
	Financial distress	Financial wealth buffer	Saving	Unsecured debt	Mortgage to income ratio
	(1)	(1)	(2)	(3)	(4)
<i>Emotional stability</i>					
Non-anxious	-0.0057***	0.0237	0.0295***	-0.0161***	-0.1598
Non-depressed	-0.0071***	0.0745**	0.0418***	-0.0193***	-0.2613**
Non-angry	-0.0040***	-0.0196	0.0193***	-0.0167***	-0.2023*
<i>Conscientiousness</i>					
Self-disciplined	-0.0067***	0.0965***	0.0282***	-0.0404***	-0.1240
Orderly	-0.0067***	0.1214***	0.0260***	-0.0259***	0.0104
Dutiful	-0.0084***	0.3107***	0.0309***	-0.0126**	-0.1534

<i>Panel C: Income (shocks)</i>					
	Income	% Negative income shock	Unemployed	On disability	Health status
	(1)	(2)	(3)	(4)	(5)
<i>Emotional stability</i>					
Non-anxious	0.0572***	-0.0011***	-0.0042***	-0.0107***	0.2931***
Non-depressed	0.0725***	-0.0014***	-0.0042***	-0.0103***	0.3059***
Non-angry	0.0232	-0.0009***	-0.0028***	-0.0091***	0.2161***
<i>Conscientiousness</i>					
Self-disciplined	0.0619***	-0.0007***	-0.0022**	-0.0044***	0.0705***
Orderly	-0.0269	-0.0001	-0.0011	-0.0007	0.0449***
Dutiful	0.1352***	-0.0006*	-0.0047***	-0.0005	0.0412***

Table A12: Facets of noncognitive abilities and financial distress, financial choices, income (shocks), and financial insight - Continued

Panel D: Financial insight

	Financial overview	Impulsive buying	Stick to plan	Automatic payments
	(1)	(2)	(3)	(4)
<i>Emotional stability</i>				
Non-anxious	0.0983***	-0.1277***	0.0221	0.1138***
Non-depressed	0.0764***	-0.1580***	0.0532***	0.1145***
Non-angry	0.0762***	-0.1452***	0.0057	0.1108***
<i>Conscientiousness</i>				
Self-disciplined	0.2153***	-0.1597***	0.0115	0.2029***
Orderly	0.2665***	-0.2449***	0.0177	0.2130***
Dutiful	0.2010***	-0.1863***	0.1117***	0.1776***

Section E. Financial advice

In this section, we test whether people with low noncognitive abilities are more likely to ask for financial advice, thereby trying in part to overcome the effect of low abilities. On the one hand, individuals with low noncognitive abilities could find it difficult and effortful to collect information. Hence, they might be more likely to seek another person’s expertise. Related to this conjecture, [Gennaioli, Schleifer, and Vishny \(2015\)](#) suggest that many investors are too nervous and anxious to make investment decisions on their own. This generates a demand for “money doctors,” allowing portfolio managers to charge high fees. This service seems to be particularly valuable for people who are emotionally less stable, as they are more inclined to nervousness and anxiety. On the other hand, low-skilled individuals may find it more costly in terms of effort to seek financial guidance. We test whether individuals who score lower on noncognitive abilities are more likely to ask for advice when entering into a financial contract (e.g., bank account, mortgage, savings account, or insurance).

The results are reported in Table A13. Consistent with [Gennaioli, Schleifer, and Vishny \(2015\)](#), we find that less emotionally stable individuals are more likely to seek financial advice. Interestingly, this does not seem to help them sufficiently, since they are more likely to end up in distress regardless (see Section ??). Overall, this evidence adds to a growing literature on the (lack of)

value of financial advice (e.g., [Linnainmaa, Melzer, and Previtro \(2016\)](#); [Jenkinson, Jones, and Martinez \(2016\)](#)).

Table A13: Noncognitive abilities and financial advice

This table shows the marginal effect estimates from a probit regression. The dependent variable is equal to one if the respondent seeks advice when deciding which financial product to purchase. The model includes a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, health status, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, and missing data dummies. The controls are suppressed for brevity. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Financial advice
Noncognitive ability: emotional stability	-0.0356*** (0.0083)
Noncognitive ability: conscientiousness	-0.0057 (0.0081)
Controls and constant	yes
Observations	5,240
Pseudo R-squared	0.0961

Section F. Full tables

In the following, we report the main tables including all the coefficients estimated for the control variables (which are suppressed for brevity in the paper).

Table A14: Noncognitive abilities and financial choices

This table shows the results of OLS regressions (Columns (1) and (4)) and probit regressions (Columns (2) and (3)). In Column (1), the dependent variable is the log of financial wealth. In Column (2), the dependent variable is equal to one if the respondent consumes less than income. In Column (3), the dependent variable is equal to one if the respondent has one of the following: a loan from a family member, debit card debt, credit card debt, a personal loan, a student loan, or some other unsecured loan. In Column (4), the dependent variable is the ratio of mortgage debt to income (this analyses is run on home owners only). All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies. The table reports marginal effects. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Financial wealth buffer	Saving	Unsecured debt	Mortgage-to-income ratio
	(1)	(2)	(3)	(4)
Noncognitive ability: emotional stability	0.0469 (0.0379)	0.0380*** (0.0047)	-0.0203*** (0.0059)	-0.2499** (0.1111)
Noncognitive ability: conscientiousness	0.2237*** (0.0367)	0.0405*** (0.0047)	-0.0366*** (0.0058)	-0.1387 (0.0991)
Financial literacy	0.6736*** (0.0559)	0.0431*** (0.0066)	0.0083 (0.0080)	-0.0569 (0.1510)
Numeracy	0.2825*** (0.0232)	0.0142*** (0.0026)	0.0070** (0.0032)	-0.0246 (0.0591)
High school	0.4609*** (0.1404)	0.0305* (0.0179)	0.0238 (0.0220)	0.5215 (0.3987)
College	0.9440*** (0.1430)	0.0695*** (0.0174)	0.0444** (0.0221)	-0.1844 (0.3900)
Risk aversion	0.2047** (0.0936)	-0.0032 (0.0112)	0.0123 (0.0146)	-0.2842 (0.2444)
Risk aversion self-assessed	-0.0130 (0.0179)	0.0014 (0.0021)	-0.0123*** (0.0024)	-0.0875** (0.0440)
Trust	0.1212*** (0.0176)	0.0149*** (0.0019)	0.0023 (0.0026)	-0.0822** (0.0400)
Optimism	-0.3516*** (0.1114)	-0.0092 (0.0119)	0.0103 (0.0165)	0.1024 (0.2336)
Ambiguity aversion	-0.0331 (0.0856)	-0.0084 (0.0108)	0.0185 (0.0138)	0.1857 (0.2292)
Agreeableness	0.0612 (0.0418)	-0.0155*** (0.0051)	0.0051 (0.0063)	0.1257 (0.0977)
Extraversion	-0.0756** (0.0378)	0.0033 (0.0048)	-0.0143** (0.0061)	-0.1447 (0.1135)
Openness	-0.1161*** (0.0401)	-0.0088* (0.0050)	0.0281*** (0.0062)	0.2577** (0.1067)
Male	-0.2980*** (0.0622)	-0.0170** (0.0085)	0.0306*** (0.0116)	-3.1217*** (0.2201)
Children	-0.5362*** (0.0927)	-0.1045*** (0.0103)	0.0168 (0.0127)	0.7127*** (0.2115)
Age	-0.0257** (0.0112)	-0.0045*** (0.0015)	0.0067*** (0.0019)	-0.0540 (0.0398)
Age squared	0.0005*** (0.0001)	0.0000** (0.0000)	-0.0001*** (0.0000)	-0.0003 (0.0004)
Partner	0.4069*** (0.0886)	0.0543*** (0.0102)	-0.0203 (0.0130)	2.5763*** (0.1843)
Home ownership	1.2830*** (0.1058)	0.1203*** (0.0108)	-0.0593*** (0.0138)	
Rural	0.0569* (0.0321)	-0.0009 (0.0038)	-0.0237*** (0.0044)	0.0712 (0.0720)
Time fixed effects	yes	yes	yes	yes
Observations	24,306	47,918	10,695	12,014
R-squared	0.2183	0.0563	0.111	0.2442

Table A15: Noncognitive abilities and income (shocks)

This table shows the results of OLS regressions (Columns (1) and (2)), probit regressions (Columns (3) and (4)), and an ordered probit regression (Column (5)). In Column (1), the dependent variable is the log of net income. In Column (2), the dependent variable is the percentage decrease in income (if any). In Column (3), the dependent variable equals one if the respondent is unemployed. In Column (4), the dependent variable equals one if the respondent is on disability. In Column (5), the dependent variable is self-reported health status. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies. The table reports marginal effects. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Income	% Negative income shock	Unemployed	On disability	Health status
	(1)	(2)	(3)	(4)	(5)
Noncognitive ability: emotional stability	0.0692*** (0.0210)	-0.0015*** (0.0003)	-0.0046*** (0.0009)	-0.0113*** (0.0011)	0.0225*** (0.0011)
Noncognitive ability: conscientiousness	0.0681*** (0.0197)	-0.0006* (0.0003)	-0.0034*** (0.0009)	-0.0033*** (0.0010)	0.0051*** (0.0008)
Financial literacy	0.0321 (0.0306)	0.0009** (0.0004)	-0.0003 (0.0014)	-0.0046*** (0.0014)	0.0012 (0.0010)
Numeracy	0.0365*** (0.0116)	-0.0001 (0.0002)	-0.0029*** (0.0005)	-0.0008 (0.0005)	0.0020*** (0.0004)
High school	0.3362*** (0.0759)	0.0012 (0.0011)	0.0040 (0.0041)	-0.0046 (0.0033)	0.0075*** (0.0028)
College	1.2410*** (0.0794)	-0.0002 (0.0011)	0.0034 (0.0040)	-0.0112*** (0.0041)	0.0105*** (0.0026)
Risk aversion	-0.0676 (0.0491)	0.0011 (0.0007)	0.0068*** (0.0026)	0.0023 (0.0028)	-0.0027 (0.0017)
Risk aversion self-assessed	-0.0217** (0.0097)	-0.0002 (0.0001)	-0.0008 (0.0005)	-0.0001 (0.0005)	-0.0005 (0.0003)
Trust	0.0197** (0.0079)	-0.0003** (0.0001)	-0.0015*** (0.0004)	-0.0022*** (0.0004)	0.0039*** (0.0003)
Optimism	-0.1890*** (0.0581)	0.0011 (0.0009)	0.0012 (0.0025)	-0.0049* (0.0029)	0.0393*** (0.0025)
Ambiguity aversion	0.0747 (0.0503)	-0.0006 (0.0007)	0.0056** (0.0023)	0.0008 (0.0025)	-0.0017 (0.0017)
Agreeableness	-0.0849*** (0.0220)	0.0008** (0.0003)	0.0001 (0.0010)	0.0046*** (0.0012)	-0.0028*** (0.0009)
Extraversion	0.0801*** (0.0205)	-0.0004 (0.0003)	0.0024** (0.0009)	-0.0016 (0.0011)	0.0015* (0.0008)
Openness	0.0049 (0.0224)	0.0010*** (0.0003)	0.0014 (0.0011)	0.0022** (0.0011)	-0.0024*** (0.0008)
Male	0.8178*** (0.0383)	-0.0023*** (0.0006)	0.0047** (0.0021)	0.0056** (0.0023)	-0.0009 (0.0015)
Children	-0.3671*** (0.0405)	-0.0029*** (0.0006)	-0.0028 (0.0020)	-0.0119*** (0.0020)	0.0016 (0.0016)
Age	0.1572*** (0.0066)	-0.0001 (0.0001)	0.0049*** (0.0003)	0.0075*** (0.0005)	-0.0030*** (0.0002)
Age squared	-0.0013*** (0.0001)	-0.0000 (0.0000)	-0.0001*** (0.0000)	-0.0001*** (0.0000)	0.0000*** (0.0000)
Partner	-0.5443*** (0.0385)	0.0027*** (0.0007)	-0.0047** (0.0022)	-0.0038* (0.0022)	0.0034** (0.0015)
Home ownership	0.0049 (0.0427)	-0.0020*** (0.0007)	-0.0135*** (0.0024)	-0.0162*** (0.0029)	0.0093*** (0.0015)
Rural	-0.0628*** (0.0150)	-0.0001 (0.0002)	-0.0016** (0.0007)	-0.0010 (0.0007)	-0.0006 (0.0006)
Time fixed effects	yes	yes	yes	yes	yes
Observations	73,117	54,803	76,945	77,001	49,248
R-squared	0.2476	0.0084	0.0826	0.183	0.101

Table A16: Noncognitive abilities and financial insight

This table shows the results of ordered probit regressions (Columns (1) to (3)) and a probit regression (Column (4)). In Column (1), the dependent variable measures to what degree the respondent has an overview of her current financial situation. In Column (2), the dependent variable measures to what degree the respondent is inclined to buy impulsively. In Column (3), the dependent variable measures to what degree the respondent finds it easy to stick to a spending plan. In Column (4), the dependent variable is equal to one if the respondents use automatic payments for bills. All models include a constant term and controls for risk aversion (lottery and self-reported), ambiguity aversion, numeracy, trust, optimism, financial literacy, agreeableness, openness, extraversion, male, children living at home, age, age squared, home ownership, education, partner, residence in a rural area, missing data dummies, and year dummies when indicated. The table reports marginal effects. Standard errors are clustered by household and appear in parentheses. The superscripts *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Overview financial situation	Impulsive buying	Stick to plan	Automatic payments
	(1)	(2)	(3)	(4)
Noncognitive ability: emotional stability	0.0384*** (0.0059)	-0.0024*** (0.0003)	0.0392*** (0.0059)	0.0161** (0.0068)
Noncognitive ability: conscientiousness	0.1308*** (0.0059)	-0.0041*** (0.0005)	0.0848*** (0.0058)	0.0107 (0.0067)
Financial literacy	0.0367*** (0.0076)	-0.0012*** (0.0003)	0.0239*** (0.0080)	0.0186** (0.0091)
Numeracy	-0.0055* (0.0032)	-0.0001 (0.0001)	0.0047 (0.0035)	-0.0002 (0.0039)
High school	0.0533*** (0.0206)	-0.0002 (0.0008)	0.0400* (0.0238)	0.0598** (0.0271)
College	0.0535** (0.0212)	0.0003 (0.0008)	0.0054 (0.0234)	0.0627** (0.0267)
Risk aversion	0.0387*** (0.0140)	-0.0010* (0.0006)	0.0105 (0.0166)	0.0039 (0.0185)
Risk aversion self-assessed	-0.0059** (0.0024)	-0.0009*** (0.0001)	0.0151*** (0.0024)	0.0113*** (0.0028)
Trust	-0.0064** (0.0026)	0.0001 (0.0001)	-0.0032 (0.0028)	0.0041 (0.0030)
Optimism	0.0128 (0.0162)	-0.0003 (0.0006)	0.0186 (0.0182)	0.0484** (0.0213)
Ambiguity aversion	-0.0223* (0.0134)	-0.0003 (0.0005)	-0.0185 (0.0144)	0.0034 (0.0162)
Agreeableness	0.0087 (0.0063)	-0.0004 (0.0002)	0.0056 (0.0061)	0.0409*** (0.0072)
Extraversion	0.0054 (0.0063)	0.0009*** (0.0002)	-0.0087 (0.0064)	-0.0060 (0.0075)
Openness	0.0167*** (0.0061)	0.0010*** (0.0003)	0.0133** (0.0060)	0.0053 (0.0072)
Male	0.0239** (0.0117)	-0.0015*** (0.0004)	0.0116 (0.0116)	-0.0278** (0.0132)
Children	-0.0172 (0.0115)	0.0012** (0.0005)	-0.0176 (0.0122)	-0.0334** (0.0145)
Age	-0.0045*** (0.0017)	-0.0000 (0.0001)	0.0012 (0.0017)	0.0087*** (0.0021)
Age squared	0.0001*** (0.0000)	-0.0000*** (0.0000)	0.0000 (0.0000)	-0.0001*** (0.0000)
Partner	-0.0604*** (0.0118)	-0.0005 (0.0005)	0.0183 (0.0117)	-0.0186 (0.0142)
Home ownership	0.0178 (0.0122)	-0.0016*** (0.0006)	0.0331*** (0.0123)	-0.0237 (0.0151)
Rural	0.0054 (0.0039)	-0.0007*** (0.0002)	0.0116*** (0.0041)	-0.0053 (0.0049)
Time fixed effects	yes	yes	no	no
Observations	10,711	10,705	5,456	5,456
R-squared	0.0731	0.0941	0.0501	0.0149

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