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## Article — Manuscript Version (Preprint) Digital Financial Literacy and Financial Well-Being

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### Appendix

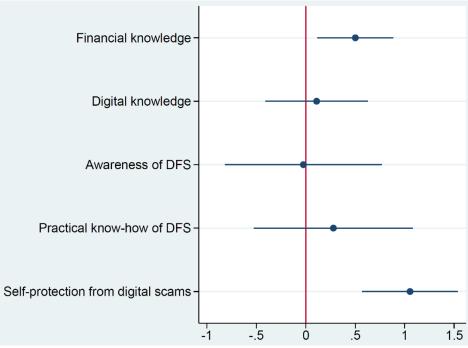


Figure A1. Coefficient estimates for subdimensions of digital financial literacy

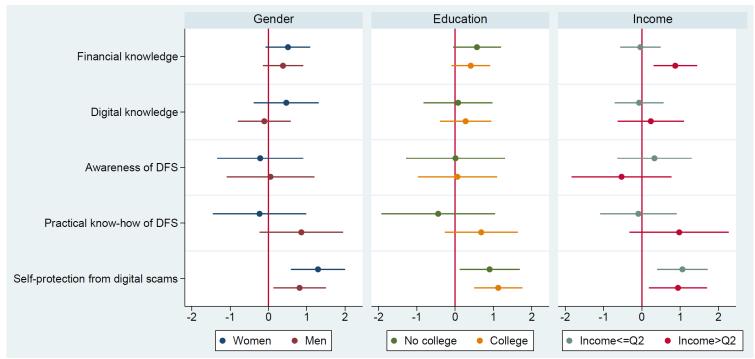


Figure A2. Subsample analysis by gender, education, and income

Table A1. CFPB financial well-being scale

0=not at all,
1=very little,
2=somewhat,
3=very well,
4=completely
0=never,
1=rarely,
2=sometimes,
3=often,
4=always

Notes: Response fielded on 5-point Likert scale. \*Items reverse coded.

Table A2. Questionnaires regarding digital financial literacy and financial knowledge
Digital knowledge*
I know how to turn on and off digital devices such as mobile phone, computer, and tablet
I know how to charge digital devices such as mobile phone, computer, and tablet
I know how to set up self-verification via text, messenger, or biometrics
I know how to unlock digital devices via biometrics function (e.g., fingerprint, facial recognition)
I know how to get WIFI access for digital devices
I know how to download and install application in computer or mobile phones
I know how to update application in mobile phones
I know how to create user account and manage it (e.g., change or reset password)
I know how to log into the website
I know how to change/manage privacy settings of the user account
Awareness of DFS*
I'm aware that banking services are offered online or via mobile phone
I'm aware that investment equities can be traded online or via mobile phone
I'm aware that I can borrow money online or via mobile phone
I'm aware that payments can be made online or via mobile phone
I understand the purpose and usage of online/mobile banking services
I understand the purpose and usage of online/mobile stock trading
I understand the purpose and usage of online/mobile lending services
I understand the purpose and usage of online/mobile payment services
Practical know-how of DFS*
I know how to open an account on DFS application or platform
I know how to set up self-verification for DFS (e.g., text, messenger, or biometrics)
I know how to navigate DFS application or platform
I know how to initiate and complete necessary financial services (e.g, remittances, stock trading, utility pay
ment, borrowing application) via DFS application or platform
I know how to make payment using mobile payment services
I know how to cancel a transaction or order when an error orccurs in DFS application or platform
I know how to contact customer service via DFS application or platform
Self-protection from digital scams*
I know how to avoid unnecessary fees for online/mobile financial transactions
I have the ability to screen out deceptive saving schemes or borrowing services online or via mobile applic
ation
I pay attention to keeping password for DFS safely
I change login and transaction credentials for DFS regularly
I know how to act when login/transaction credentials for DFS are leaked out
I tend to pass by an URL sent by an unknown financial institution
I regularly run malware detection program on computer or mobile phone
I have the ability to detect and avoid voice phishing
Financial knowledge
Imagine that you are given a gift of \#1,000,000. If this amount of money will be deposited in an year, a
nd the inflation rate remains at 3%, how much would you be able to buy with the money you receive in
one year, as compared with receiving the same amount right now? (response: more than today; exactly the
same; less than today; depends on the type of thing I want to buy; DK; RA)
You lend \#100,000 to a friend one evening and he gives you \#100,000 back the next day. How much i
nterest has he paid on this loan? (response: ( ) won; DK; RA)
Imagine that someone puts $\#1,000,000$ into a <no fee,="" free="" tax=""> savings account with a guaranteed interes</no>
t rate of 2% per year. They don't make any further payments into this account and they don't withdraw a
ny money. How much would be in the account at the end of the first year, once the interest payment is
made? (response: ( ) won; DK; RA)
and how much would be in the account at the end of five years [remembering there are no fees or tax de
ductions]? (response: more than $\#1,100,000$ ; $\#1,100,000$ ; less than $\#1,100,000$ ; can't tell with the given i
nformation; DK; RA)
Investment with high returns comes with a relatively high risk (response; ves: no: $DK$ , $RA$ )
Investment with high returns comes with a relatively high risk (response: yes; no; DK; RA) High inflation means the cost of living rises rapidly (response: yes; no; DK; RA)
High inflation means the cost of living rises rapidly (response: yes; no; DK; RA)
High inflation means the cost of living rises rapidly (response: yes; no; DK; RA) In general, buying multiple stocks can help reduce exposure to investment risk (less chance of losing all th
High inflation means the cost of living rises rapidly (response: yes; no; DK; RA)

 Table A2. Questionnaires regarding digital financial literacy and financial knowledge

Table A3. Associations between digital financial literacy and financial well-being, N=1615										
	OLS	IV 2SLS								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Financial knowledge	0.730***					0.501**				
	(0.184)					(0.196)				
Digital knowledge		0.873***				0.109				
		(0.173)				(0.265)				
Awareness of DFS			0.976***			-0.025				
			(0.199)			(0.404)				
Practical know-how of				1.084***		0.279				
DFS				(0.195)		(0.409)				
Self-protection from				· · · ·	1.306***	1.054***				
digital scams					(0.208)	(0.247)				
Digital financial literacy							1.330***	3.542**		
2							(0.193)	(1.700)		
Age	0.026	0.051**	0.051**	0.058**	0.046*	0.051**	0.051**	0.089**		
C	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.038)		
Female	1.381***	1.258***	1.268***	1.243***	1.440***	1.476***	1.401***	1.621***		
	(0.383)	(0.382)	(0.381)	(0.381)	(0.381)	(0.382)	(0.379)	(0.436)		
Vocational college	-0.039	-0.031	-0.094	-0.016	-0.045	-0.165	-0.199	-0.719		
graduate	(0.655)	(0.659)	(0.658)	(0.659)	(0.655)	(0.653)	(0.656)	(0.814)		
4-year college	2.179***	2.283***	2.199***	2.250***	2.135***	1.930***	1.939***	1.062		
graduate	(0.522)	(0.526)	(0.525)	(0.525)	(0.523)	(0.526)	(0.525)	(0.893)		
Post graduate degree	3.565***	3.480***	3.403***	3.454***	3.393***	3.118***	3.107***	1.810		
6 6	(0.776)	(0.768)	(0.770)	(0.769)	(0.772)	(0.776)	(0.774)	(1.283)		
Single	0.647	0.603	0.540	0.547	0.665	0.599	0.541	0.298		
8	(0.533)	(0.530)	(0.529)	(0.528)	(0.526)	(0.526)	(0.527)	(0.567)		
Separated, divorced,	0.021	-0.171	-0.126	-0.119	0.128	-0.059	-0.218	-0.830		
widowed	(0.894)	(0.891)	(0.886)	(0.883)	(0.871)	(0.872)	(0.872)	(0.983)		
Household size	-0.431**	-0.457**	-0.418**	-0.407**	-0.404**	-0.415**	-0.432**	-0.448**		
	(0.178)	(0.177)	(0.176)	(0.176)	(0.176)	(0.177)	(0.177)	(0.185)		
Household income	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.001		
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)		
Financial assets	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***		
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)		
Any risky equity	2.074***	2.183***	1.800***	1.999***	2.122***	1.932***	1.806***	1.006		
	(0.488)	(0.480)	(0.491)	(0.482)	(0.472)	(0.494)	(0.484)	(0.765)		
Poverty status	0.462	0.507	0.595	0.546	0.593	1.144	1.208	3.528		
	(1.362)	(1.379)	(1.396)	(1.371)	(1.361)	(1.424)	(1.423)	(2.503)		
Long-term rental	-0.153	-0.173	-0.119	-0.109	-0.036	0.002	-0.050	0.226		
8	(0.508)	(0.507)	(0.509)	(0.506)	(0.504)	(0.504)	(0.504)	(0.552)		
Short-term rental	-1.696***	-1.748***	-1.655***	-1.639***	-1.586***	-1.591***	-1.649***	-1.554***		
	(0.508)	(0.506)	(0.504)	(0.504)	(0.500)	(0.502)	(0.503)	(0.528)		
Urban	-0.328	-0.334	-0.391	-0.395	-0.432	-0.537	-0.516	-1.041*		
	(0.434)	(0.433)	(0.433)	(0.432)	(0.432)	(0.431)	(0.431)	(0.591)		
Kleibergen-Paap LM	(	(	(	(	(	(	(	22.52		
statistic <sup>a</sup>										
Cragg-Donald Wald F								11.52		
statistic <sup>b</sup>										

Table A3. Associations between digital financial literacy and financial well-being, N=1615

*Notes*: OLS, ordinary least squares; IV, instrumental variable; 2SLS, two-stage least squares; DFS, digital financial services. Robust standard errors in parentheses. Regressions control for province fixed effects. <sup>a</sup>Kleibergen-Paap LM statistic for underidentification test. <sup>b</sup>Cragg-Donald Wald F statistic for weak identification test. \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.10.

	Women		Less than	College	HH income	HH income
		Men	college	graduate	$\leq$ median	> median
	(1)	(2)	(3)	(4)	(5)	(6)
Financial knowledge	0.511*	0.380	0.569*	0.407	-0.039	0.872***
8	(0.295)	(0.267)	(0.317)	(0.255)	(0.267)	(0.289)
Digital knowledge	0.466	-0.107	0.077	0.273	-0.072	0.234
0 0	(0.430)	(0.351)	(0.457)	(0.341)	(0.323)	(0.440)
Awareness of DFS	-0.214	0.053	0.010	0.058	0.328	-0.531
	(0.571)	(0.581)	(0.658)	(0.525)	(0.492)	(0.662)
Practical know-how of	-0.232	0.859 <sup>(</sup>	-0.443	0.680	-0.091	0.975 <sup>´</sup>
DFS	(0.619)	(0.552)	(0.754)	(0.484)	(0.508)	(0.659)
Self-protection from	1.295***	0.813**	0.900**	1.124***	1.058***	0.944**
digital scams	(0.359)	(0.347)	(0.398)	(0.318)	(0.334)	(0.386)
Age	0.072**	0.032	0.004	0.072**	0.046	0.070*
C	(0.036)	(0.033)	(0.040)	(0.031)	(0.032)	(0.038)
Female		. ,	0.279	1.852***	1.112**	1.987***
			(0.665)	(0.468)	(0.532)	(0.545)
Vocational college	-1.060	1.224			0.106	-0.213
graduate	(0.943)	(0.905)			(0.820)	(1.064)
4-year college	2.314***	2.039***			2.208***	1.116
graduate	(0.759)	(0.756)			(0.696)	(0.819)
Post graduate degree	3.823***	2.929***			3.418***	2.244**
	(1.237)	(1.000)			(1.136)	(1.102)
Single	1.376*	0.092	1.547*	0.286	-0.846	-0.141
-	(0.772)	(0.728)	(0.886)	(0.662)	(0.619)	(0.829)
Separated, divorced,	1.348	-1.332	1.318	-0.836	0.195	-0.239
widowed	(1.176)	(1.313)	(1.271)	(1.195)	(1.007)	(1.717)
Household size	-0.600**	-0.278	-0.292	-0.528**		
	(0.254)	(0.250)	(0.304)	(0.223)		
Household income	0.000	0.002*	0.001	0.000	0.030*	-0.000
	(0.000)	(0.001)	(0.001)	(0.001)	(0.016)	(0.001)
Financial assets	0.001	0.003***	0.001**	0.002**	0.001**	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
Any risky equity	2.654***	1.321*	1.736**	2.151***	2.513***	0.973
	(0.695)	(0.696)	(0.805)	(0.640)	(0.635)	(0.757)
Poverty status	-0.432	2.646**	0.247	1.741	2.359	
	(2.392)	(1.215)	(1.805)	(2.054)	(1.482)	
Long-term rental	-0.081	0.099	-0.059	-0.119	-0.447	0.873
	(0.687)	(0.707)	(0.991)	(0.593)	(0.666)	(0.700)
Short-term rental	-1.684**	-1.299*	-1.586**	-1.532**	-1.792***	0.460
	(0.731)	(0.714)	(0.799)	(0.650)	(0.628)	(0.880)
Urban	-0.665	-0.385	-1.405*	-0.114	-1.059*	0.056
	(0.652)	(0.568)	(0.783)	(0.524)	(0.589)	(0.618)
N	788	827	572	1043	808	807

 Table A4. Subsample analyses, N=1615

*Notes*: DFS, digital financial services; N, number of observations. Robust standard errors in parentheses. Regressions control for province fixed effects. \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.10.