

Can financial capability explain state variation in emergency savings? Disentangling the individual and contextual contributions

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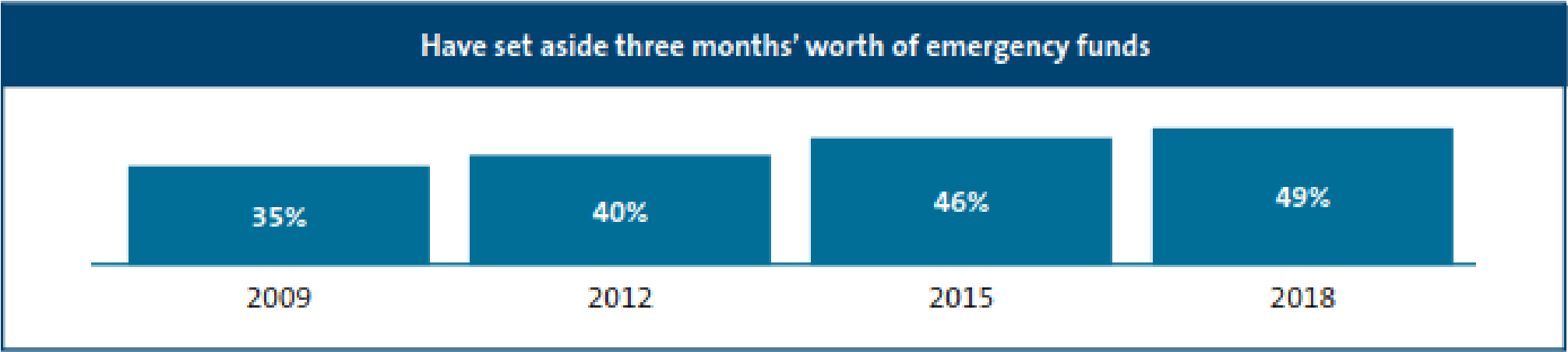
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FCAB: Achievements, Challenges, and Next Steps (2020-2025)

Emergency savings

- Half of Americans experienced a financial shock in the prior year (Pew Charitable Trusts, 2017).
- An ability to cover these unexpected costs is a critical part of overall financial wellbeing.
- A standard recommendation is that households should save sufficient assets to cover three months of expenses such as housing, food, and transportation (FINRA Investor Education Foundation, 2019).

The majority of Americans lack emergency savings



Source: NFCS 2018 Report

Financial capability and emergency savings

- Despard et al's (2020) :

individuals need to understand the importance of saving for emergencies (**financial knowledge [objective and subjective]**), have budgeting and financial planning skills to ensure income can exceed expenses at least periodically to enable deposits (**financial skills**), and easy access to affordable savings accounts to enable asset accumulation [**financial access**] (p. 3/16).

1. Objective knowledge: 2.4% (B & R, 2014); 1.7 to 2.7% (Despard et al 2020)
2. Subjective knowledge: 8% (Babiarz & Robb, 2014); 6.6 to 8.1% (Despard et al 2020)
3. Skills / confidence: 2.7 to 5.1% (Despard et al 2020)
4. Access: 25 to 29% (Despart et al 2020)

→ Comparisons across studies not exact because models structured differently

Financial capability and emergency savings

There are now several studies of individual characteristics that predict financial outcomes.

To move forward the field needs a better understanding of how context interacts with individual traits.

- How much does context matter in shaping financial well-being?

→ States matter. (Berger et al., 2018; Bruch et al., 2018)

Savings and asset accumulation can be explained by institutional arrangements defined as “explicit connections, rules, incentives, and subsidies” (Barr & Sherraden, 2005; Beverly & Sherraden, 1999; Sherraden, 1991) Assumption: state level institutions can promote or inhibit savings.

→ Can the financial capability framework explain state variation in emergency savings?

Assuming states matter, and to advance understanding of contextual determinants we ask:

1. How much state-to-state variation is there in emergency savings?
 - a. How much does financial capability matter in explaining emergency savings?
 - b. To what extent can financial knowledge, subjective knowledge, financial confidence, and account access explain variation in states' levels of emergency savings?

Method

- National Financial Capability Study (NFCS) pooled cross-sectional data across years 2009, 2012, 2015, and 2018
- Excluded young adults less than 25 years of age and adults 65 and over. Analytical sample of working age adults ($N= 77,284$)
- $N= 200$ state-years. On average $n=1465$ per state/year.
- Dependent variable = emergency saving. “Have you set aside emergency or rainy day funds that would cover your expenses for 3 months, in case of sickness, job loss, economic downturn, or other emergencies?”

FCAB variables (consistent with Despard et al 2020)

1. Financial knowledge – objective. Total correct on five items.
2. Financial knowledge – subjective. 1 to 7 scale “how would you assess your overall financial knowledge?”
3. Confidence skills. 1 to 7 scale. “I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses.”
4. Financial access. Self reported ownership of “savings account, money market account, or CDs”.

Control variables

Individual level:

- Age, income, employment, gender, minority, insurance coverage, home ownership, number of children

State level

- Unemployment rate (BLS, 2020), government ideology index (Berry et al 1998; Fording 2012), welfare generosity index (Fox et al 2019)

Analysis

1. Emergency savings rate by state using linear model controlling for year.
2. Multi-level models, with random intercepts for states

Level 1 = individuals i

Level 2 = states j

$$y_{ij} = \beta_0 + \mu_j + \varepsilon_{ij} \quad [1.1]$$

$$y_{ij} = \beta_0 + \beta_1[x_{ij}] + \mu_j + \varepsilon_{ij} \quad [1.2]$$

Analysis – the hybrid approach (Allison 2009)

- For each of the four FCAB variables we decompose the variable into two components.
 1. Between state contribution, i.e., Level 2 contribution (β_2)
 2. Within state contribution, i.e., Level 1 contribution (β_1)

$$y_{ij} = \beta_0 + \beta_1(x_{ij} - \bar{x}_j) + \beta_2\bar{x}_j + \mu_j + \varepsilon_{ij} \quad [1.3]$$

The correlation between (β_1) and (β_2) = 0.

The between-within method allows us to test the random effects assumption that the within and between differences are not systematic.

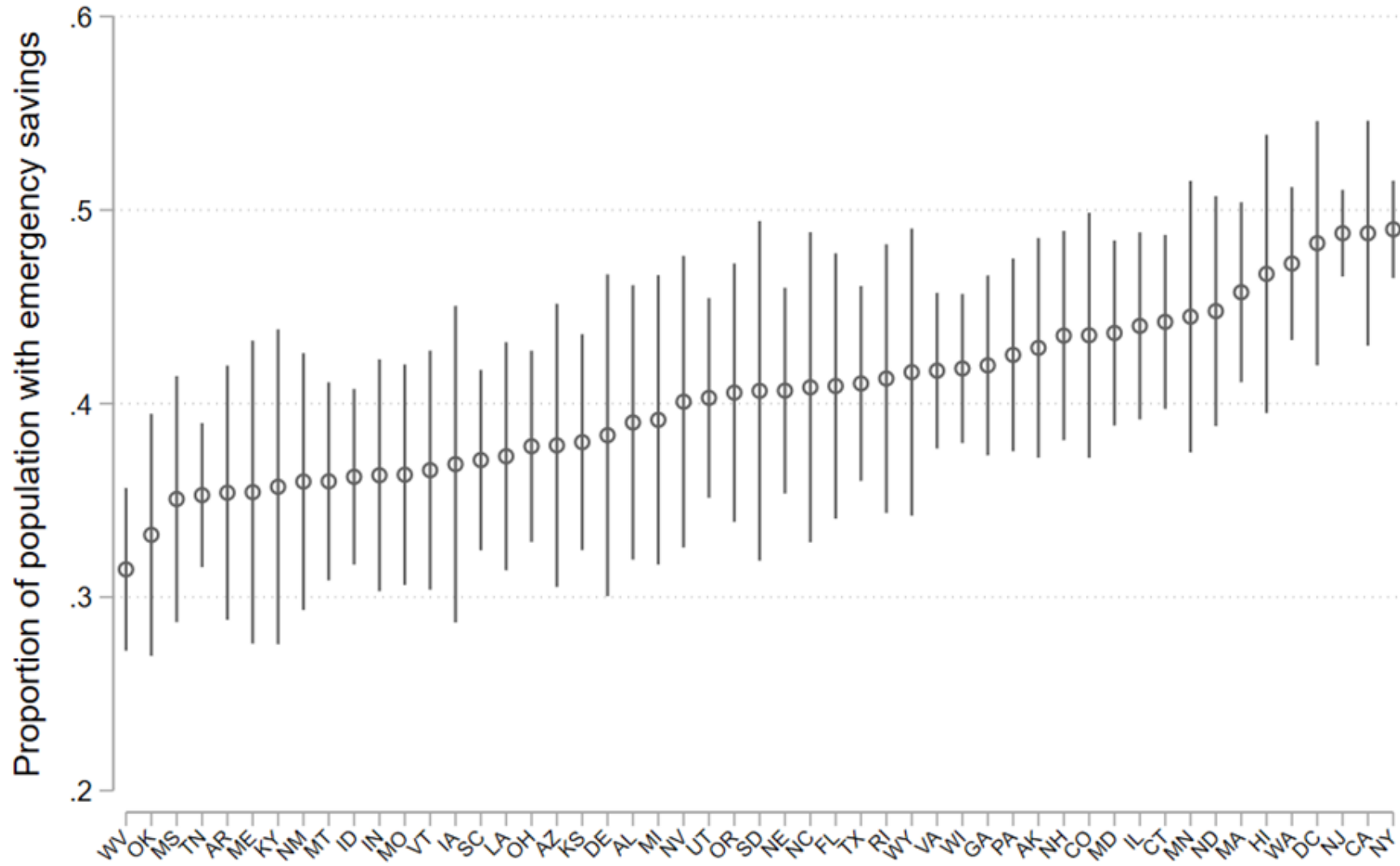
Table 1 Description of Sample

Panel A: Individual level

Age	M/%	SE	Minimum	Maximum
25-34	25.79	.03	18.90 (ME 2009)	39.31 (DC 2015)
35-44	23.05	.02	17.33 (WY 2012)	28.76 (VA 2009)
45-54	26.16	.03	17.37 (DC 2015)	31.71 (ME 2009)
55-64	24.99	.02	18.01 (UT 2009)	30.69 (ME 2018)
Household income				
\$50,000 or less	48.85	.08	29.22 (DC 2018)	71.29 (MT 2009)
\$50,001 - \$99,999	34.72	.04	23.94 (MT 2018)	46.94 (WY 2009)
\$100,000 or more	17.42	.06	4.79 (MT 2009)	32.48 (MD 2018)
Female	50.15	.45	44.66 (AK 2015)	54.01 (DE 2018)
Minority	28.44	.04	3.72 (ME 2012)	79.02 (HI 2018)
Nonmarried	42.35	.27	27.67 (UT 2015)	70.24 (DC 2009)
Households w/o children	54.63	.10	40.87 (UT2009)	71.83 (DC 2018)
Employed full time	55.99	.06	40.62 (AL 2012)	78.83 (DC 2018)
Insurance coverage	81.85	.08	62.99 (NV 2012)	96.76 (MA 2015)
Home ownership	60.72	.06	35.68 (DC 2009)	74.14 (MN 2009)

Panel B: State level variables

	M/%	SE	Minimum	Maximum
Unemployment	6.17	2.37	2.50 (HI 2018)	13.70 (MI)
Government ideology	43.08	17.22	17.51 (AZ 2012)	73.62 (MA 2009)
Welfare generosity index	.57	.14	.16 (IA 2018)	1.0 (OR 2018)



Note. Results from linear probability predicting emergency savings by state, weighted by state population

Table 2.
Multilevel probit models predicting emergency savings

	Null	M1	M2	M3	M4	M5	Total
Financial knowledge within			.028*** (.001)				
Financial knowledge between			-.028*** (.026)				
Financial knowledge total							.010*** (.001)
Subjective knowledge within				.077*** (.001)			
Subjective knowledge between				.219*** (.061)			
Subjective knowledge total							.066*** (.001)
Financial confidence within					.053*** (.001)		.029*** (.001)
Financial confidence between					.066 (.079)		-.024 (.085)
Financial access within						.254*** (.004)	.224*** (.004)
Financial access between						.203** (.064)	.218** (.069)
State residual (sd)	.110*** (.012)	.075*** (.009)	.075*** (.010)	.072*** (.009)	.077*** (.010)	.075*** (.010)	.077*** (.010)
Control year		X	X	X	X	X	X
Individual level controls		X	X	X	X	X	X
State level controls		X	X	X	X	X	X
AIC	101254	87132	84972	80993	82623	80988	76304
BIC	101272	87298	85183	81204	82835	81199	76552

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Despard 2020 ranges

.017 to .027

.066 to .081

.027 to .051

.25 to .29

Takeaways

1. FCAB variables as operationalized add little to explaining variation across states.

- Is FCAB a primarily individual level framework?
 - Community-level demographics such as racial/ethnic composition, poverty, and unemployment were found to be less important than individual-level variables for explaining account ownership (Friedline et al., 2019)
 - CFPB financial wellbeing scale, a recent study found that average financial well-being score for all adults was mostly similar across states with only a few states with scores that were statistically different from other states (Consumer Financial Protection Bureau, 2019)
- Additional theory and empirical testing required to advance knowledge of how context shapes individual outcomes

Takeaways

2. Of the FCAB variables, financial access matters most

- Living in context / state with greater financial access has an independent and positive relationship to emergency savings.
 - Not so for other variables – financial knowledge objective, financial knowledge subjective, and financial confidence
- Study provides further evidence that state-level policies to increase account access may have widespread and benefits on individuals.

Takeaways and Limitations

3. We find statistical rationale for modeling the nested nature of FCAB data. Prior studies on this subject (Babiarz & Robb, 2014; Despard et al., 2020; Friedline et al., 2019) have not accounted for the state clustering of these variables. The lack of clustering is important because it is likely to result in biased standard errors and misinterpretation of statistical significance testing (considered Type 1 error, Robson & Pevalin, 2015).

Limitations: measurement of household income in NFCS. Other state-level variables play a role.

Thank you

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<https://health.oregonstate.edu/research/group/poverty>

Appendix

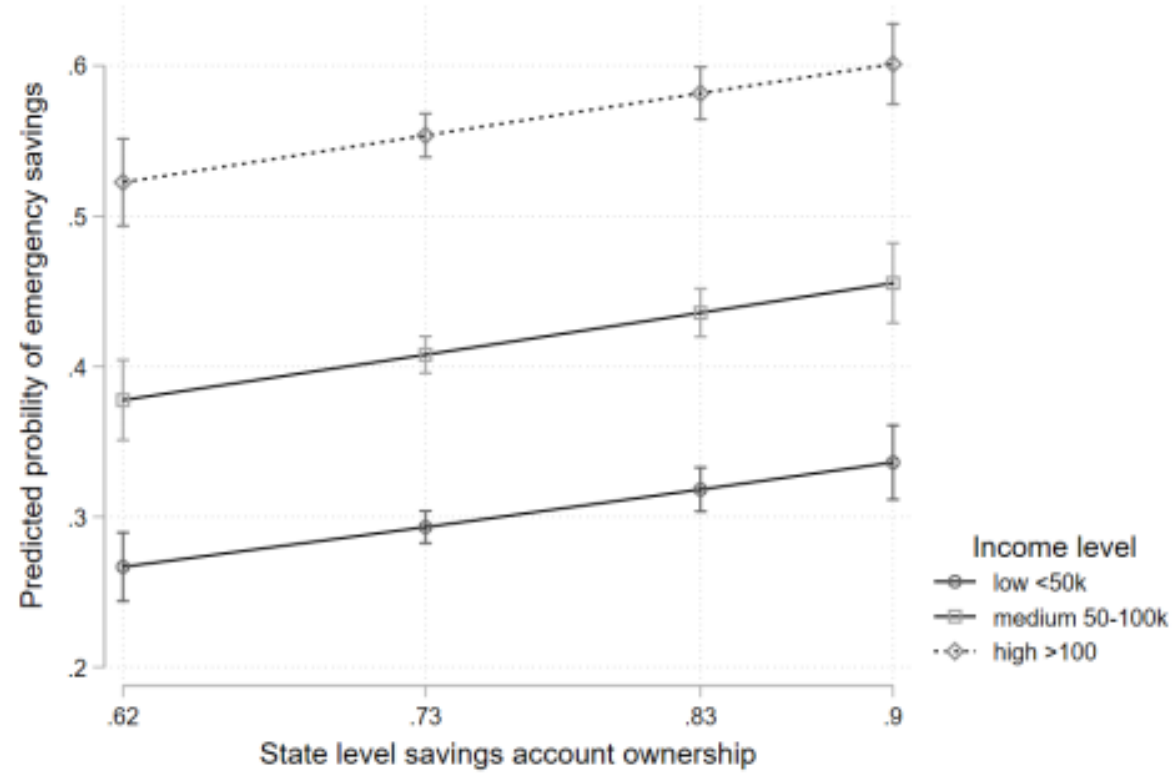


Figure 2. Predicted emergency savings across levels of account ownership by state