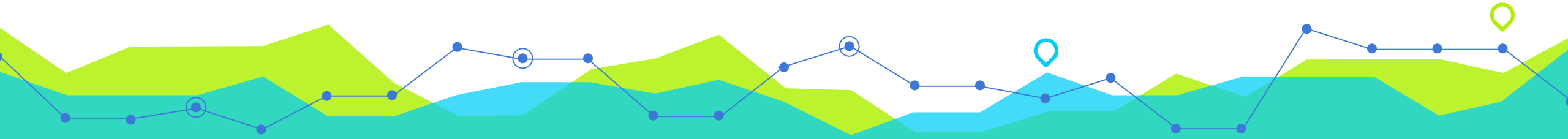
Department of Social Work and Social Administration
The University of Hong Kong
香港大學社會工作及社會行政學系

An investigation of financial capability profiles in later life



Yu-Chih Chen, PhD, MSW
Department of Social Work and Social Administration, The University of Hong Kong
Sicong Sun, MSW
Brown School, Washington University in St. Louis

Financial Capability and Asset Building: Achievements, Challenges, and Next Steps (2020—2025) Convening
September 24, 2020, St. Louis, MO

Outline

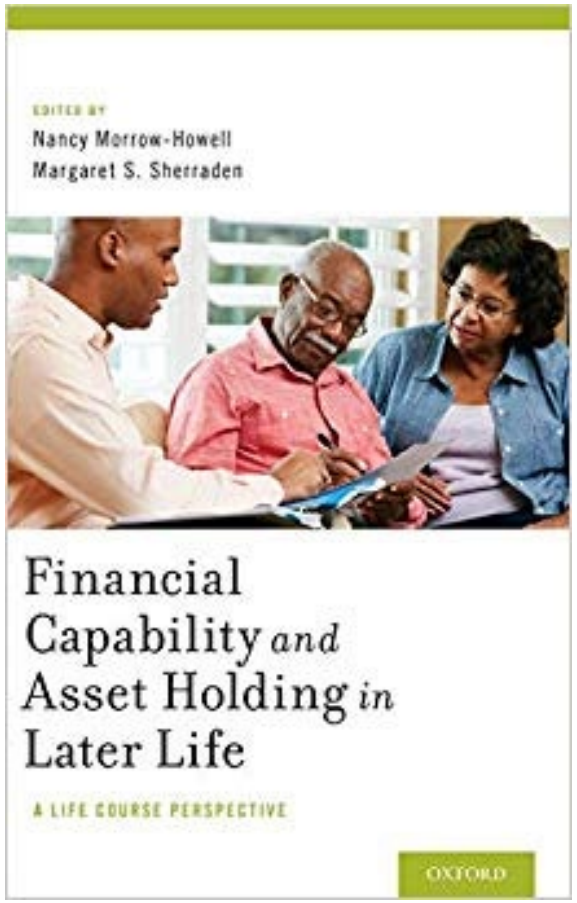
- Background and theories
- Research aims and conceptual model
- Methods
- Results
- Conclusions and Implication

Background

- Financial capability (FC) is a key antecedent to economic well-being in later life
- Individuals with higher FC are more likely to have positive financial behaviour, which in turn, have better economic well-being

Sherraden, 2013; Lusardi & Mitchell, 2014

Life course perspective



Time / period
- Life stage
- Age

Linked lives/ human agency
- Dependence
- Multilevel relationships
- Choices

Life events
- Experiences
- Transitions

Financial capability

Changes
- Dynamics
- Profiles
- Trajectory

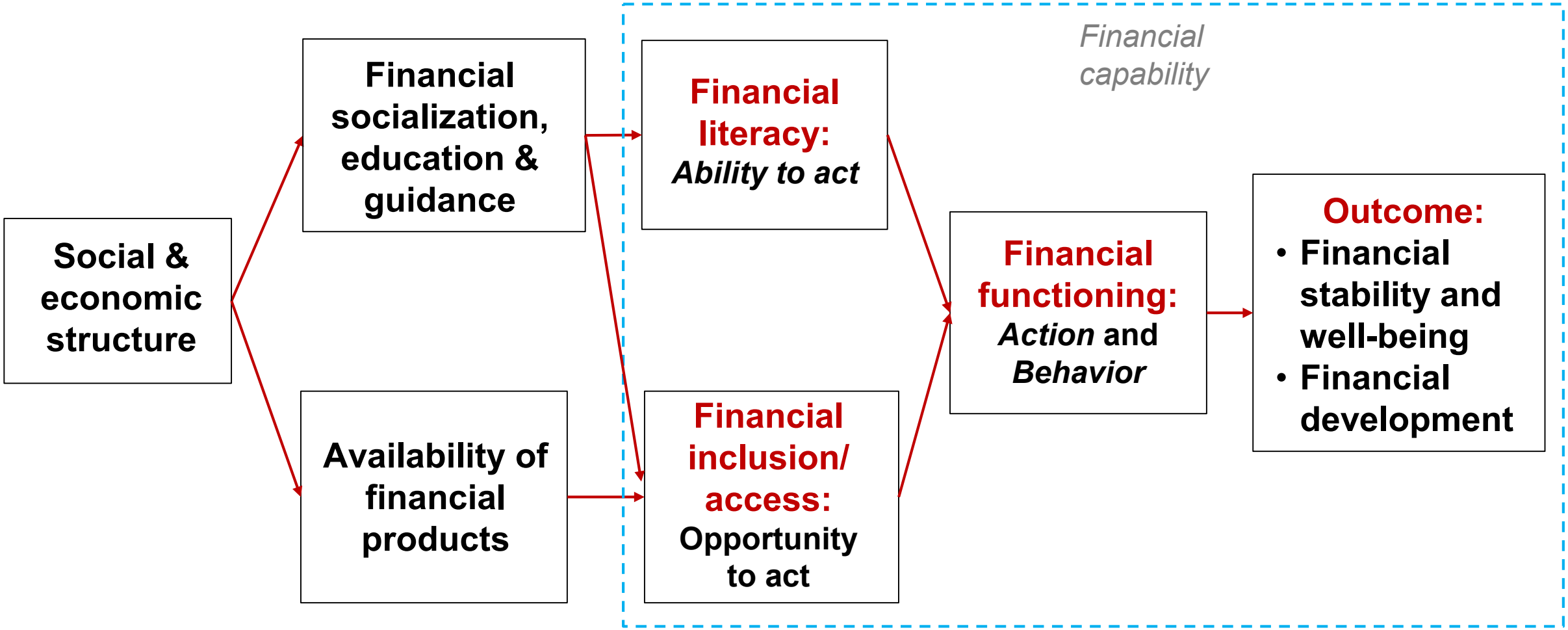
Development
- Advantages
- Disadvantages

Diversity
- Gender
- Race
- Cohort

Morow-Howell & Sherraden (2015)

Financial capability framework

Sherraden, 2013; Birkenmaier & Huang, 2013

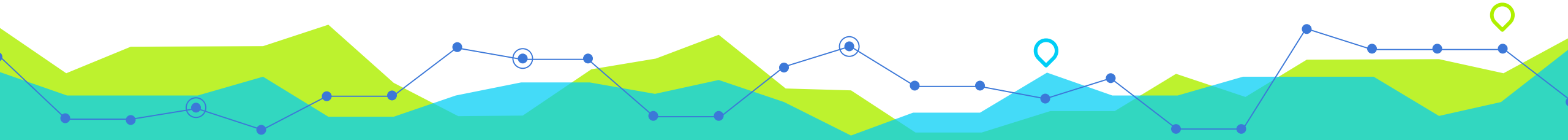


Life course + financial capability = Differential patterns

Financial literacy

Financial access

Financial functioning

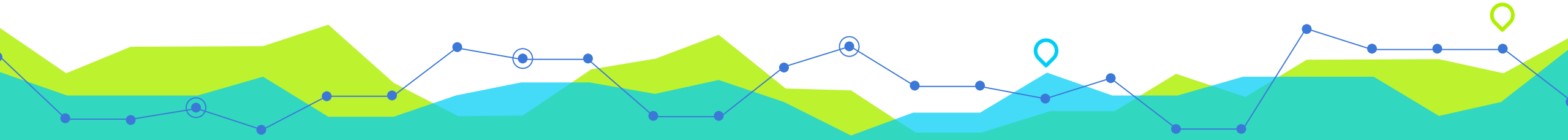


Research aims and Conceptual model

Research aims

- Identify the heterogeneity of financial capability in later life—patterns of financial capability

- Explore how patterns of financial capability related to life course factors and economic well-being at old age



Methods

Data and sample

Sources: 2015 National Financial Capability Study (N=27,564)

Sample selection: Age 55 and older

Final sample size: *n*= 9,888

Measures of financial capability

Financial literacy

- ***3 subjective items*** *(e.g., Good at deal with day to day financial matters, Good at math and calculation; Self-rated financial knowledge)*
- ***6 objective items*** *(e.g., interest rates, inflation, mortgage payment, risks between stocks and mutual funds, relationships between interest rates and bonds)*

Financial inclusion/access

- ***5 binary financial ownerships*** *(e.g., checking, saving, investment, credit cards, & retirement plans)*

Financial functioning/behavior

- ***2 items of positive financial behavior*** *(e.g., saving for rainy days, set long-term financial goals*

Measures of economic well-being

Economic well-being (Friedline & West, 2016)

- ***Financial satisfaction*** *(10-point; 1 = not at all satisfied, 10 = extremely satisfied)*
- ***Carrying too much debt*** *(7-point; 1 = strongly disagree; 7 = strongly agree)*
- ***Ability to acquire $2,000 emergency fund*** *(binary; yes/no)*
- ***Difficulties in making ends meet*** *(binary; yes/no)*
- ***Use of alternative financial services*** *(payday lenders, auto title loans, rent-to-own stores, pawn shops) (binary; yes/no)*

Control variables

Sociodemographic variables

- **Gender** (1 = *male*; 0 = *female*)
- **Race** (1 = *non-white*; 0 = *white*)
- **Age** (1 = *65+*; 0 = *55-64*)
- **Education** (1 = *< HS*; 2 = *some college*; 3 = *college*)
- **Marital status** (1 = *married*)
- Numbers of **dependent children**
- **Working status** (1 = *self-employed*; 2 = *employed*; 3 = *not employed*; 4 = *retired*)

Financial contextual variables

- Whether **received financial education** at school/work (1 = *yes*)
- Whether having **financial guidance** by parents/guardians (1 = *yes*)
- **Homeownership** (1 = *own a house*)
- **Household income** (8 categories)

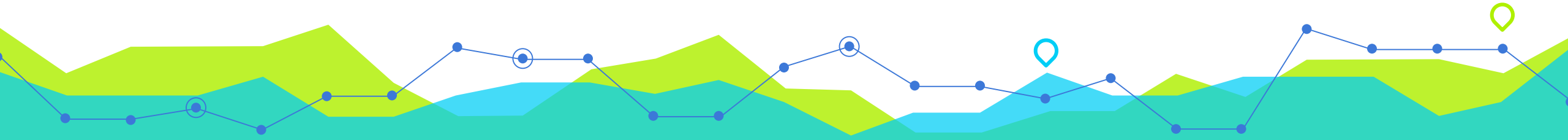
Analytical methods

Factor mixture models *(for identifying the patterns of financial capability)*

- Factor analysis
- Mixture model

Regression models

- Multinomial logistic regression *(demographics → financial capability patterns)*
- Linear and logistic regression *(financial capability → patterns economic well-being)*

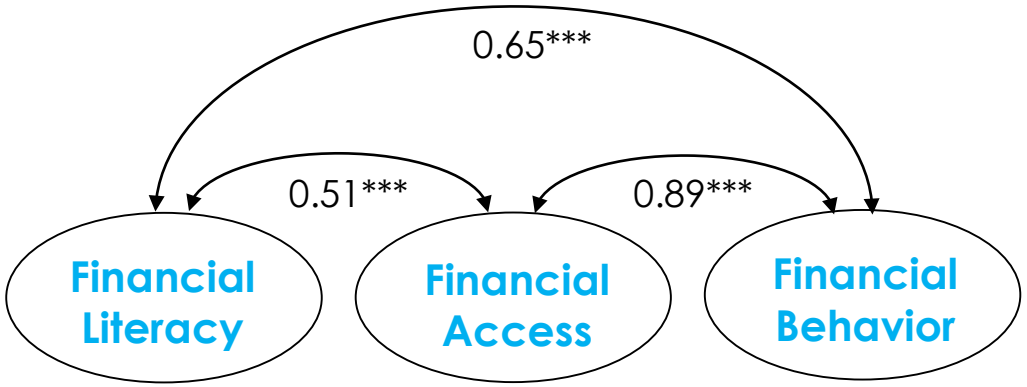


Results

Factor analysis

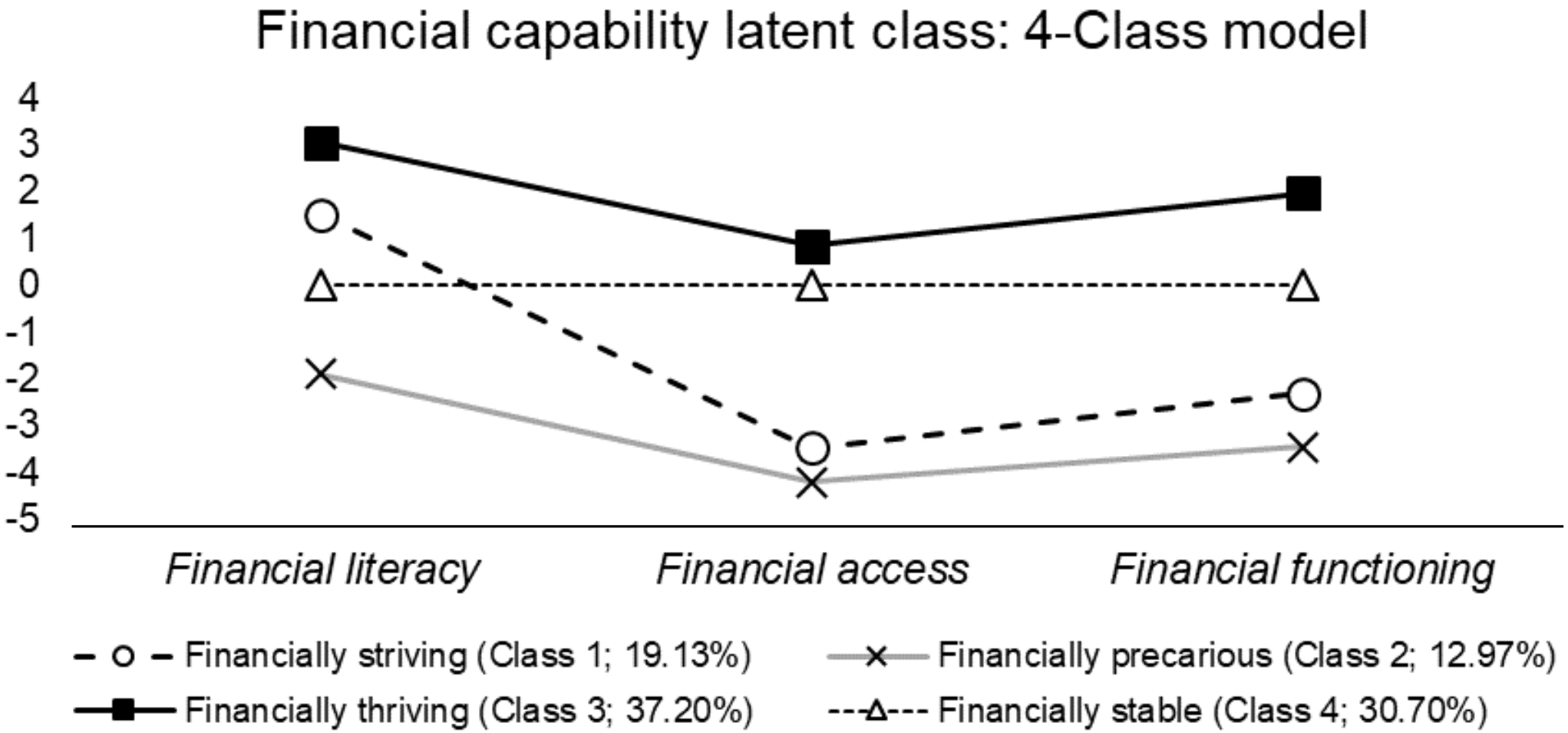
The model has reasonable fit

- χ^2 = 2652.06***
- RMSEA = 0.080 (0.078, 0.083)
- CFI = 0.94
- TLI = 0.92
- All the standardized factor loadings for each latent construct were > 0.5



Financial capability patterns

(based on factor mixture model)



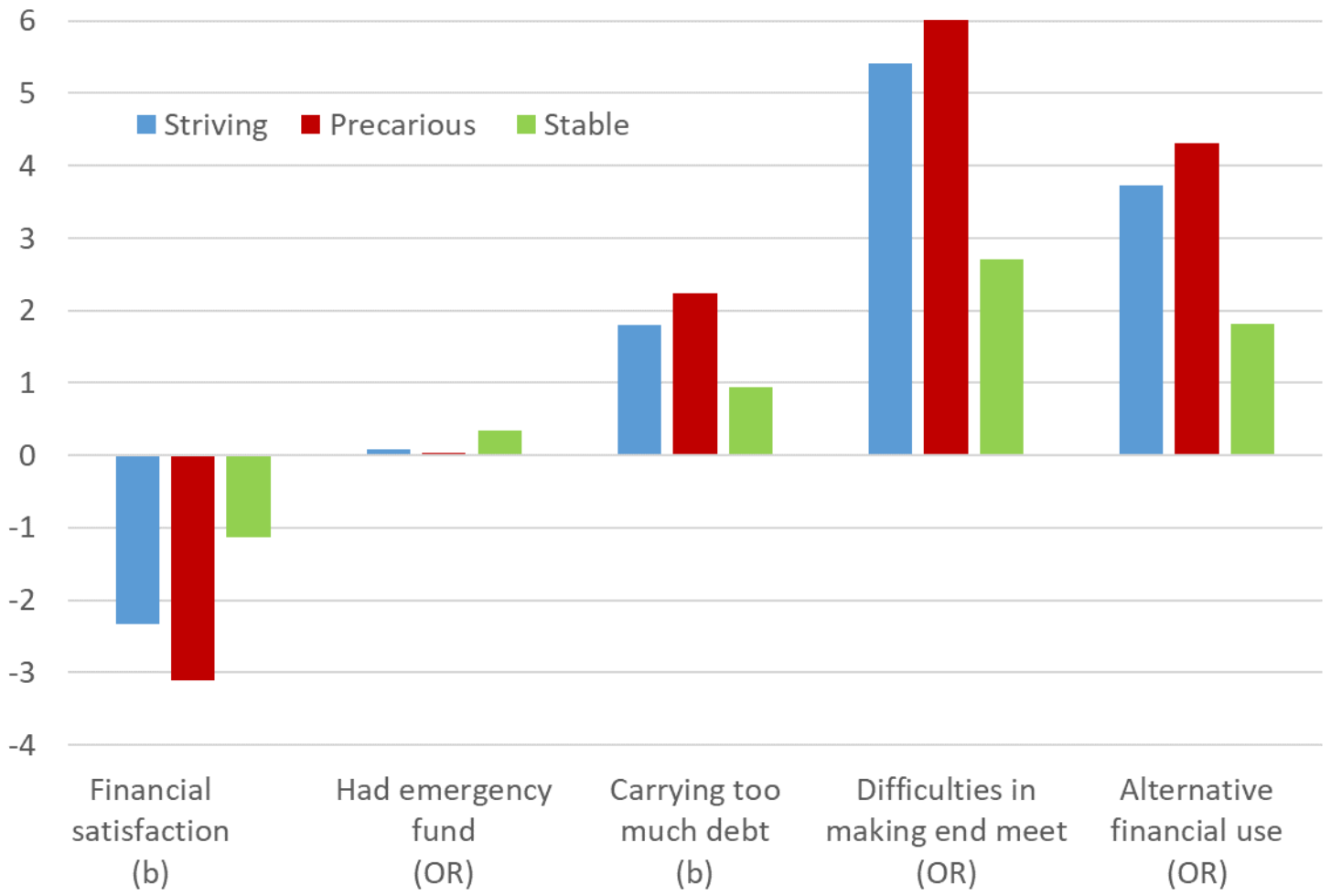
Factors of Financial Capability Patterns

Table 2.1. Multinomial Logistic Results of Associated Factors of Financial Capability Class

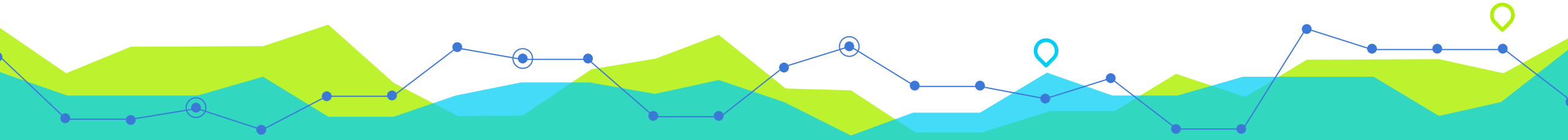
Variable	Striving (Class 1)	Precarious (Class 2)	Stable (Class 4)
	RRR	*RRR*	*RRR*
Male (*ref*: female)	0.93	0.76**	0.79***
Age 65+ (*ref*: 55-64)	0.73***	0.56***	0.93**
Non-white (*ref*: white)	1.42***	1.81***	1.30***
Married (*ref*: not married)	1.07	1.31**	0.99
Education (*ref*: < HS)			
Some college	0.74***	0.56***	0.77***
College	0.51***	0.32***	0.64***
Numbers of children	1.34***	1.30***	1.07
Work (*ref*: not employed)			
Self-employed	0.78	0.50***	0.75*
Employed	0.53***	0.52***	0.90
Retired	0.46***	0.37***	0.70**
Income	0.52***	0.45***	0.82***
Homeownership	0.29***	0.22***	0.66***
Financial education	0.75**	0.46***	0.58***
Financial guidance	0.61***	0.37***	0.71***

Note. Reference group = Thriving (Class 3). Results were based on 20 imputed data sets.

Financial capability and economic well-being



- Financial precarious group has the worst economic outcome
- Financial striving group also has poor economic outcome



Conclusion

Program and practice

- Promote a **lifelong financial capability program**:
  - Creating opportunities to achieve meaningful “financial engagement” through financial coaching and guidance (knowledge ≠ behavior)
  - Increasing financial inclusion (i.e., financial access) to strengthen financial decision-making for *all ages* (accessible, appropriate, affordable, financially attractive, & easy to use & flexible)
- Address cumulative life course risks on financial capability and well-being

Research

- The results are not causal—need more longitudinal data
- Enhance the measures of financial capability
- Examining the **mechanisms and the theoretical applicability of life course** on both financial capability and financial well-being
  - Different life course models (critical period, accumulation, social mobility, and pathway)
  - Different stage of time

Thank you!

Yu-Chih Chen, PhD, MSW
Department of Social Work and Social Administration
The University of Hong Kong yuchih@hku.hk

Appendix: model selection for FMM

Latent class enumeration for factor mixture model (FMM)

Table 1. Fit Statistics of Financial Capability Latent Class for Factor Mixture Models (FMM)

Fit statistics	2-Class	3-Class	4-Class	5-Class	6-Class	7-class
GMM						
Log Likelihood	-97825.863	-96795.006	-95768.262	-95471.141	-95225.245	-95076.689
BIC	196093.282	194068.363	192051.672	191494.227	191039.231	190778.915
SSABIC	195940.745	193903.115	191873.712	191303.556	190835.849	190562.821
Entropy	0.791	0.686	0.722	0.694	0.670	0.676
Adjusted LMRT (p)	13685.718***	2007.167***	1999.157***	578.519***	478.781***	289.252***
BLRT (p)	13809.695***	2061.715***	2053.488***	594.241***	491.792***	297.113***
Class size (%)						
Class 1	3806 (38.49%)	2169 (21.94%)	1892 (19.13%)	827 (8.36%)	1376 (13.92%)	2227 (22.52%)
Class 2	6082 (61.51%)	3449 (34.88%)	1282 (12.97%)	2846 (28.78%)	619 (6.26%)	2729 (27.60%)
Class 3		4270 (43.18%)	3678 (37.20%)	1228 (12.42%)	1359 (13.74%)	694 (7.02%)
Class 4			3036 (30.70%)	2066 (20.89%)	2316 (23.42%)	1644 (16.63%)
Class 5				2921 (29.54%)	1420 (14.36%)	693 (7.01%)
Class 6					2798 (28.30%)	519 (5.25%)
Class 7						1382 (13.98%)

Note. BIC = Bayesian Information Criteria. SSABIC = Sample size adjusted BIC. LMRT = Lo-Mendell-Rubin Likelihood Ratio Test. BLRT = Bootstrap Likelihood Ratio Test. p = p value. ***$p < .001$