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Evaluating the Effects of Geographic Adjustments on Poverty Measures Using Self-Reported Financial Well-Being Scores

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Evaluating the Effects of Geographic Adjustments on Poverty Measures Using Self-Reported Financial Well-Being Scores

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Abstract

A central aspect of poverty measurement is how well the measure can identify the people and places that are experiencing financial hardships. This paper explores the relationship between poverty and financial hardship by using the CFPB's financial well-being scale, which reflects individuals' self-assessments of their financial challenges. Using this measure, for every 1 percentage point increase in a state's official poverty rate for working-age adults, there is a 0.59 percentage point increase in the share of working-age adults with very low financial well-being. In contrast, the state's supplemental poverty rate is negatively correlated with the rate of financial hardship using the CFPB measure. This finding is due to the supplemental poverty measure's geographic adjustment shifting poverty towards areas that have lower rates of self-reported financial hardship.

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The poverty rate has long served as the most prominent measure of the financial progress of disadvantaged families in the United States. Since its inception in the 1960s, policymakers have used the official poverty measure to gauge financial progress among low-income families. More recently, however, academic and government researchers have proposed alternatives to the official poverty measure and argued that it fails to properly identify those who are most financially disadvantaged (Citro and Michael 1995; Council of Economic Advisers 2018; Interagency Technical Working Group 2020). The most prominent such alternative is the supplemental poverty measure (SPM), which is now published by the Census Bureau alongside the official poverty measure each year (Shrider and Creamer 2023).

A fundamental question is how well each of these poverty measures identify those experiencing higher rates of financial hardship. This paper adds to the literature considering the quality of poverty measures by examining the relationship between poverty and financial well-being, using the Consumer Financial Protection Bureau (2015) financial well-being score. This CFPB financial well-being score was designed to identify whether people “can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life” (Consumer Financial Protection Bureau 2015, 2017a). In many respects, this is similar to the definition of poverty outlined by Citro and Michael (1995), which stated that “[w]e define poverty as economic deprivation. A way of expressing this concept is that it pertains to people’s lack of economic resources ... for consumption of economic goods and services.” The CFPB financial well-being score therefore provides a useful benchmark for evaluating whether poverty measures are capturing those who self-identify as experiencing financial distress. In particular, it can be used to identify whether high poverty

areas align with areas that have large shares of people with low financial well-being.¹ The CFPB measure is also unique in that it builds off of Kahneman and Krueger's (2006) work on the value of subjective well-being measures by focusing on how individuals themselves see their financial circumstances rather than inferring it from other outcomes.

To evaluate the relationship between financial well-being and poverty, we first consider the relationship between state-level poverty rates and financial well-being based on the CFPB measure. Among the working-age population, state-level official poverty rates are well correlated with rates of financial distress using the CFPB scale.² However, the supplemental poverty rate is not. Instead, the supplemental poverty rate is negatively correlated with financial distress based on the CFPB scale. A decomposition analysis demonstrates that the supplemental poverty measure's geographic cost of living adjustment shifts measured poverty to high-price states that have lower rates of financial hardship according to the CFPB scale. These findings complement recent results by Meyer and Sullivan (2012), Meyer, Wu, and Curran (2022), and Renwick (2018) who looked at the relationship between poverty measures and a wide range of material deprivation measures. Meyer and Sullivan (2012) and Meyer, Wu, and Curran (2022) observed that geographic adjustments cause poverty measures to pick up a less financially deprived population, while Renwick (2018) suggests that a partial geographic adjustment would better align with material deprivation than either the SPM approach or using no adjustment.

¹ Data limitations require analyzing CFPB scores relative to the cost of living and poverty rate in the individual's local area, rather than their own individual poverty status. Nevertheless, this remains a useful measure given that the state and national poverty rates are used as important summary indicators of the level of financial challenge in society.

² Among older adults, both poverty measures are largely uncorrelated with rates of financial hardship as measured by the CFPB financial well-being scale. This reflects the importance of resources other than income for retired populations, which are not reflected in either of these poverty measures and suggests a need for alternate approaches to identify financial disadvantage among older populations.

We also consider the direct relationship between metropolitan statistical area (MSA) level cost of living and financial well-being at the individual level by income. This allows us to better understand the observation that cost-of-living adjustments are leading to the negative correlation between financial well-being and state-level poverty rates. Among those with high-incomes, financial well-being declines as cost of living rises, consistent with the effects of these higher costs on their purchasing power. Yet among those with low-incomes, financial well-being is higher for those living in areas with higher costs of living. This likely reflects that other factors (potentially including family or friend networks, social support, or neighborhood characteristics) are offsetting the negative effects of facing higher prices for those with low incomes.

Background on the official and supplemental poverty measures

The official poverty measure produced by the Census Bureau has served as the official measure of poverty in the United States since 1968. This measure defines poverty by comparing a family's pre-tax, cash income with a national poverty line for the family's size. This poverty line is based on the number of family members, the number of children, and, for one or two person families, whether anyone in the family is over age 65. However, for two individuals with the same age and family size, the poverty line is uniform nationwide, without any adjustments for differences in cost of living based on where the individual lives.

In addition to the official poverty measure, the Census Bureau provides a supplemental poverty measure alongside the official measure for years back to 2009 (Shrider and Creamer 2023). There are several substantial differences between the official and supplemental measures, including that the supplemental poverty measure adjusts the poverty threshold for cost-of-living across geographies (MSA or non-metro area and state) and for homeownership status (see Creamer and Burns 2023 for a discussion of other differences between these measures and see

Garner and Munoz 2021 for a valuable analysis of key choices when defining poverty measures). While the official poverty measure assumes that two families of equal size (and ages) with identical incomes have the same poverty status, the supplemental poverty measure adjusts the poverty threshold based on the housing costs in the local area using the Median Rent Index (Renwick 2011).³ Consequently, the level of income that one needs to be considered non-poor is higher for those in expensive housing markets than it is for those living in lower cost areas. The supplemental poverty measure also assumes different poverty thresholds for owners with a mortgage, owners without a mortgage, and renters.

Background on the CFPB Financial Well-Being Scale

The CFPB Financial Well-Being Scale is a financial well-being index derived from a battery of questions regarding one's financial situation. This sequence includes questions such as whether respondents could handle a major unexpected expense; whether they are concerned the money they have or save won't last; and whether they have money left over at the end of the month (see CFPB 2017a for the full battery of questions). For each question, respondents rate the extent to which the statement describes them or applies to them, and based on these responses the individual is assigned a financial well-being score between 0 and 100.⁴ In their testing of this measure of well-being, the CFPB (2017a, 2017b) found that low scores are correlated with material hardship, a lack of emergency savings, poor credit ratings, and adverse economic shocks. They also observed that financial insecurity and skipping medical care due to cost is higher among those with lower financial well-being scores.

³ Other geographic cost of living adjustments that have been considered for poverty measurement include the BEA Regional Price Parities, the BEA Regional Price Parities for Food, Apparel and Rent, and the Comparable Wage Index (see e.g. Interagency Technical Working Group 2020 and Renwick, Figueroa, and Aten 2014). In 2021 the Census Bureau completed updates to the SPM, although the changes to the geographic adjustment were minor, shifting the treatment of telephone expenditures in the adjustment (Burns and Fox 2021).

⁴ Although it is described by the CFPB (2017a) as 100-point scale, the lowest possible score that a respondent can receive using the standard scoring table is 14 and the highest possible score is 95.

Subsequent research has documented that low financial well-being is also associated with lower rates of savings and investments as well as higher rates of material hardship (Collins and Urban 2020). Low financial well-being is also associated with higher rates of financial stress and lower rates of financial satisfaction (Fan and Henager 2022). Among young adults, Lusardi (2019) has also found that lower rates of financial literacy is associated with lower financial well-being.

In addition to creating the overall score, CFPB (2019b) categorizes individuals based on their scores as ranging from very low financial well-being (score under 30) to very high financial well-being (score over 67). These ranges are based on the frequency of financial difficulties experienced by individuals in each group. Among those with very low financial well-being, 82 percent experience food insecurity and 96 percent find it at least somewhat difficult to meet ends meet. For comparison, among those with “medium-high” financial well-being (score 50 to 57), a far lower 16 percent report experiencing food insecurity.

This CFPB developed scale provides a unique perspective on how individuals say that they are faring financially rather than attempting to determine financial hardship based on external metrics such as income, wealth, or asset holdings. Consequently, it can offer insights into poverty measures by assessing whether areas with a high share of people identified as poor under each poverty measure also have a large share of adults reporting financial strain.

Data

To assess poverty measures’ abilities to identify the areas with the greatest rates of self-reported financial hardship, this paper uses data from the 2018 and 2021 FINRA National Financial Capabilities Study (NFCS). The NFCS is a nationally representative survey of adults

conducted every three years to monitor financial outcomes.⁵ The FINRA sample consists of over 25,000 U.S. adults each year, including about 500 respondents per state and is weighted to be representative of the state populations with respect to age, gender, education, and ethnicity (for additional details on the survey methodology, see FINRA 2019, 2022).

In 2018 and 2021, the NFCS included the 5-question sequence from the CFPB that can be used to construct financial well-being scores.⁶ Nationwide, the survey found that 18 percent of adults had low financial well-being (score below 38) in 2018, which includes 9 percent with very-low financial well-being (score below 30). Since the official poverty rate based on March Current Population Survey data for adults ages 18 and older in 2018 was 10.5 percent and the supplemental poverty rate for adults was 12.5, we focus on the share who have very low financial well-being, as this is similar to the share of adults who are considered to be in poverty.⁷

Because the NFCS only asks a single categorical income question, it does not have sufficient income information to determine the poverty status of respondents using either poverty measure. Hence, we instead focus on the geographic relationships between with financial well-being and poverty, exploring whether areas with low financial well-being align with the areas with high poverty rates from Current Population Survey (CPS).⁸

Results

To understand how the relationship between financial well-being and different poverty measures, we first look at the state-level poverty rates and shares with low-financial well-being.

⁵ The 2018 and 2021 surveys were fielded over the course of 5 months from June through October.

⁶ The CFPB provides both their standard 10-question sequence, as well as an abbreviated 5-question sequence. The CFPB (2015) notes that the correlation between these measures is high and either sequence can be used to compute a financial well-being scale.

⁷ The adult poverty rates are computed for adults ages 18 and older to match the age restrictions for the NFCS and are slightly lower than the poverty rates in 2018 for the entire US population.

⁸ Throughout, this paper uses the IPUMS version of the CPS data (Flood et al. 2023).

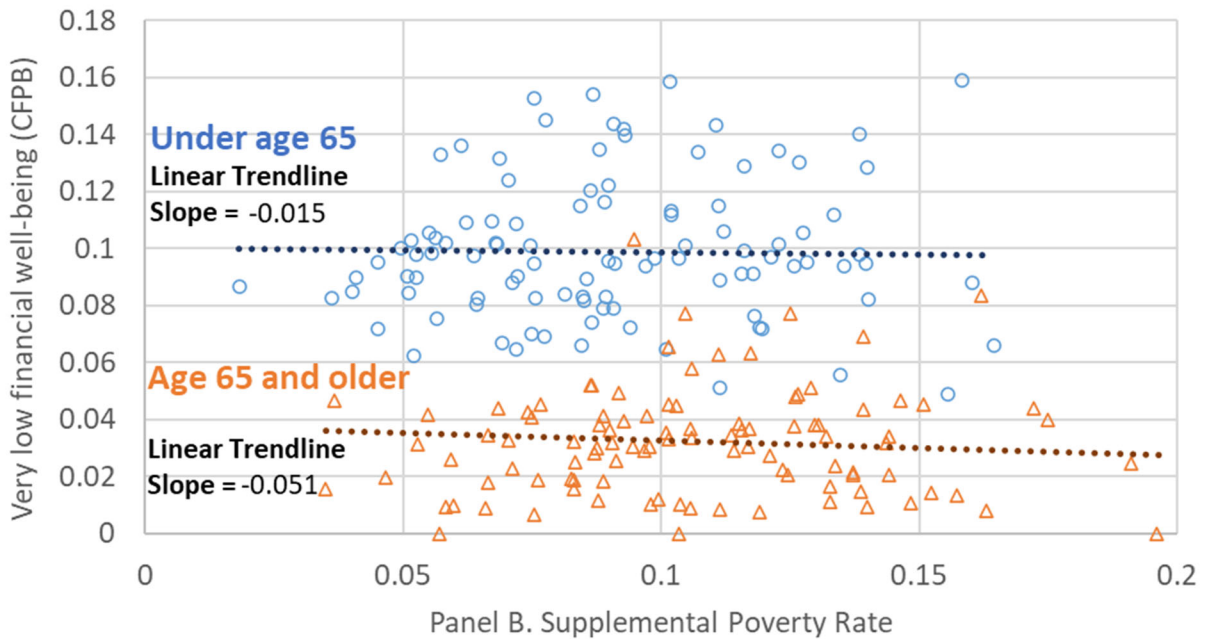
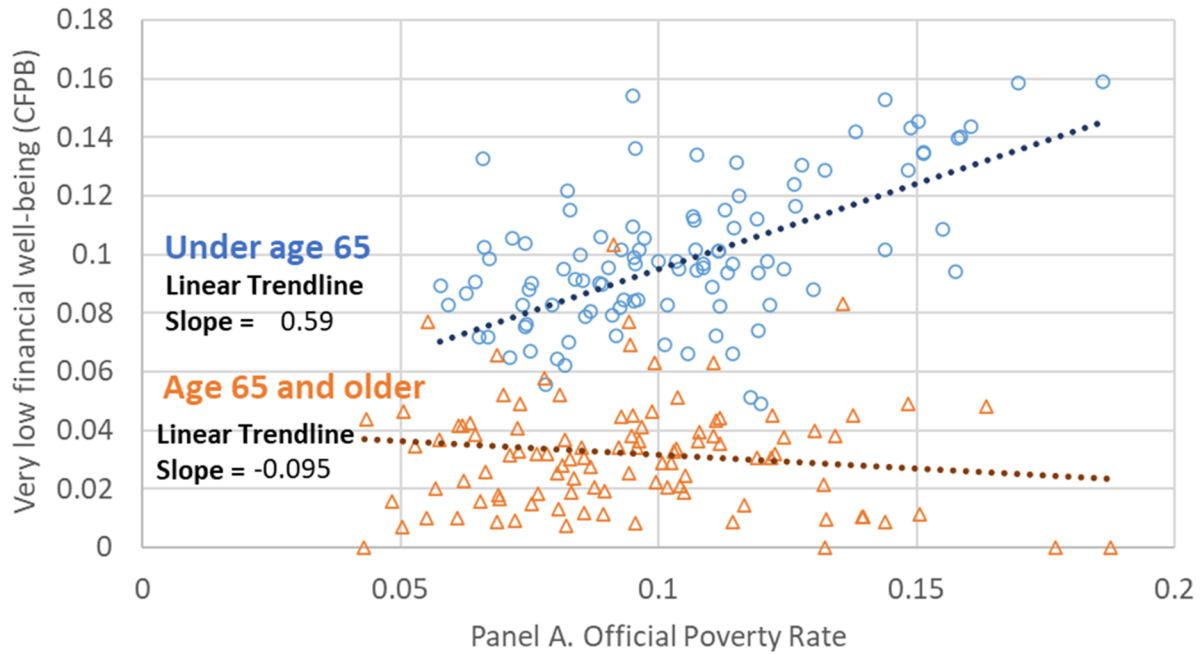
Panel A of Figure 1 compares the state-level poverty rates for working age (ages 18 to 64) and older (age 65 and above) adults with the share of adults in each age group with very low financial well-being based on the CFPB financial well-being score. Each dot represents a state-year observation.

The share of working-age adults who have very low financial well-being in each state is positively correlated with the share of working-age adults who are poor based on the official poverty measure (blue dots). For every one percentage point increase in the official poverty rate among working-age adults, the state has a 0.59 percentage point increase in the share of working-age adult with a very low financial well-being based on the CFPB measure. This is broadly consistent with earlier observations by the Consumer Financial Protection Bureau (2019a) that low financial well-being is well correlated with official poverty rates.

While states with high poverty and very low financial well-being are highly correlated among working-age adults, this is not the case among older adults (orange dots). For adults ages 65 and older, there is a slight negative correlation between state-level poverty rates and the share with very low financial well-being, reflecting the limitations of measuring financial hardship among older adults using income alone. Since the official poverty measure is a purely income-based metric, it is less able to track the financial well-being of older adults who rely on assets or resources other than current income to finance consumption. Fisher et al. (2009) and Levy (2015), among others, have pointed to the challenges of using income as a measure of poverty for retirees, and these findings further support the importance of looking beyond income when measuring well-being of older adults.⁹

⁹ In addition to potential limits of using income alone to evaluate the financial picture of older adults, the CPS is known to underestimate pension and retirement income (Bee and Mitchell 2017; Larrimore, Mortenson, and Splinter 2021) which can further affect this relationship.

Figure 1. Relationship between share of people in each state with very low financial well-being and poverty rates, 2018 and 2021



Source: FINRA National Financial Capabilities Study; Current Population Survey
Note: Each dot represents a state-year pair for the specified age group. Trendline is weighted using the FINRA Financial Capabilities Study weights. Data include 2018 and 2021.

Panel B of Figure 1 provides a similar comparison, but uses the supplemental poverty measure rather than the official poverty measure. Like that seen when using the official measure, there is little relationship between the state-level supplemental poverty rates for older adults and the share of older adults with very low financial well-being. However, in sharp contrast to that seen using the official measure where low-financial well-being was positively correlated with poverty rates, there is a slight negative relationship between the supplemental poverty rate and the share of working-age adults with low financial well-being. For every one percentage point increase in the state-level supplemental poverty rate, there is a statistically insignificant 0.05 percentage point decline in the share who have very low financial well-being. Hence, it appears that the supplemental poverty measure does a far worse job than the official poverty measure at identifying states with low financial well-being.

A crosswalk from the official poverty measure to the supplemental poverty measures shows that the supplemental poverty measure's geographic adjustment is the reason that the supplemental poverty measure underperforms the official poverty measure. The first column of Table 1 starts by regressing very low financial well-being in the NFCS data on the official poverty rate. This matches the linear trendline from panel A of figure 1. To ensure that the level differences of the different poverty rates are not driving results, column 2 anchors the official poverty measure in each year to the supplemental poverty rate (supplemental poverty rates were higher than the official poverty rates in 2018 and lower in 2021).¹⁰ While lower than seen in column 1, the correlation between poverty and low financial well-being remains strong, with a 1

¹⁰ The approach to this anchoring is consistent with Burkhauser et al. (2024), where the official poverty threshold is adjusted such that the same share of people are poor using the official and supplemental measure. In 2018, when the supplemental poverty rate is above that in the official poverty measure, this involves an increase to the official threshold, and in 2021 when the supplemental rate is lower, it involves a decrease in the official threshold.

percentage point increase in the official poverty rate being associated with a 0.38 percentage point increase in the anchored official poverty rate.¹¹

In column 3, we switch to the supplemental poverty measure – but do so with a single national poverty threshold and do not incorporate the geographic adjustments (still anchoring to match the SPM poverty rate). The relationship between financial well-being and poverty is similar to that seen in column 2 when using the anchored official measure. Finally, column 4 adds the geographic adjustments to the supplemental poverty measure. These geographic adjustments result in the sharp change in relationship between poverty measures and financial well-being that were seen in Figure 1. Hence, the geographic adjustments appear to be driving the finding that supplemental poverty and low-financial well-being are not well correlated among working-age adults.

Table 1. Relationship between the share with very low financial well-being and state poverty rates, crosswalk from the official poverty rate to the supplemental poverty rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Official poverty rate	0.5856 (0.036)				0.4976 (0.551)			
Anchored official rate		0.3812 (0.058)				0.4536 (0.054)		
SPM, no geographic adjustment			0.3467 (0.043)				0.4632 (0.057)	
SPM				-0.0154 (0.100)				0.0672 (0.065)
Demographic controls	No	No	No	No	Yes	Yes	Yes	Yes
N	43,196	43,196	43,196	43,196	43,196	43,196	43,196	43,196

Source: FINRA National Financial Capabilities Study; Current Population Survey

Note: Demographic controls include race, parental status, year, age, and highest level of education.

¹¹ While the focus here is on those with very-low financial well-being to broadly align with the share in poverty each year, an alternate measure is those who have low financial well-being (CFPB financial well-being score below 38). When using low financial well-being instead, the results are similar. A one percentage point increase in the state official poverty rate is associated with a 0.73 percentage point increase in the share with low financial well-being. Yet a one percentage point increase in the state supplemental poverty rate is associated with a 0.13 percentage point decline in the share with low financial well-being.

Columns 5 through 8 of Table 1 add key demographic controls – age, race, parental status, year, and education.¹² When including these individual-level controls, the point-estimate for the correlation between state-level supplemental poverty rates and low financial well-being is slightly positive rather than slightly negative. Nevertheless, it remains statistically insignificant and stands in contrast to the strong positive correlation observed both for the official poverty measure or when using the supplemental measure without geographic controls.

Relationship between financial well-being and the supplemental poverty measure’s MSA-level geographic adjustment factor

Another approach to look at the relationship between cost-of-living and financial well-being is to incorporate the cost-of-living adjustment from the median rent index directly in the regression analysis. This approach directly explores the relationship between cost of living and financial well-being rather than how the poverty measures result in different shares of people in poverty. This can be expressed as:

$$FWB_i = \beta_0 + \beta_1 C_i + \beta_2 X_i + \varepsilon_i \quad (1)$$

where FWB_i is an indicator for whether the individual has very low financial well-being, C_i is the cost-of-living index in the respondent’s state and MSA (with higher values reflecting higher cost of living and a national average of 1), and X_i is a vector of individual demographic controls. The MSA-level geographic adjustment is consistent with the geographic disaggregation used by the Census Bureau for calculating the SPM.¹³

¹² Due to restrictions in the NFCS data, race is identified only as whether the respondent is White or non-White, rather than detailed racial and ethnic information. Additionally, age is categorical (18–24, 25–34, 35–44, 45–54, 55–64, and 65+).

¹³ MSA was determined for NFCS respondents using zip-code level data generously provided by the FINRA Foundation. Results are similar if adjusting for cost of living at the state-level, as was done for Table 1, rather than at the MSA-level.

Table 2 provides the regression results for the expression in equation (1). The first column of Table 2 uses no individual level controls. Consistent with that seen previously in Table 1, living in a high cost of living area is associated with lower rates of low financial well-being. Column 2 adds the individual-level demographic controls discussed above – age, race, parental status, year, and education – finding similar results that those living in a high cost of living areas are less likely to have low financial well-being.

One reason that financial well-being may not deteriorate as cost-of-living rises is that individuals with the same backgrounds may be paid more in high-cost areas. Column 3 addresses this possibility that skills are differently compensated in high- and low-cost areas by also controlling for individual level income.¹⁴ Perhaps surprisingly, even when controlling for income the coefficient for the area’s cost of living remains negative – individuals in *higher cost* areas have higher financial well-being.

Table 2. Regression results for the relationship between cost of living adjustment and very low financial well-being

	(1)	(2)	(3)
Cost of living adjustment	-0.1508 (0.011)	-0.1204 (0.012)	-0.0619 (0.012)
Demographic controls	No	Yes	Yes
Income control	No	No	Yes
N	43,194	43,194	43,194

Source: FINRA National Financial Capabilities Study; Current Population Survey

Note: Demographic controls include age, race, parental status, year, and highest level of education. Cost of living adjustment is based on the respondent’s state and MSA.

Table 3 shifts from looking at the share with very low financial well-being to the financial well-being score itself. Here, higher values mean greater financial well-being.

¹⁴ FINRA provides eight categorical income categories, rather than continuous incomes. The eight categories are those displayed in Figure 2.

Consistent with that seen in table 2, before including controls for individual level income, people in areas with a higher cost of living have higher financial well-being based on the CFPB measure (columns 1 and 2 of table 3). When including individual level income controls, the relationship between financial well-being score and the cost of living in the local area is small and statistically insignificant.

Table 3. Regression results for the relationship between cost of living adjustment and financial well-being score

	(1)	(2)	(3)
Cost of living adjustment	7.7335 (0.517)	4.3719 (0.530)	-1.4327 (0.501)
Demographic controls	No	Yes	Yes
Income control	No	No	Yes
N	43,194	43,194	43,194

Source: FINRA National Financial Capabilities Study; Current Population Survey

Note: Demographic controls include race, parental status, year, age, and highest level of education. Cost of living adjustment is based on the respondent's state and MSA.

These findings should not be interpreted to mean that individuals in high-cost areas are financially better off because of the higher costs. Instead, it likely reflects that there are other factors (such as family and friend networks or social supports) that assist those with lower incomes, which offset the negative effects on financial well-being of facing higher prices. To explore this possibility, we can add an interaction term between the cost of living and categorical incomes to equation (1), now estimating:

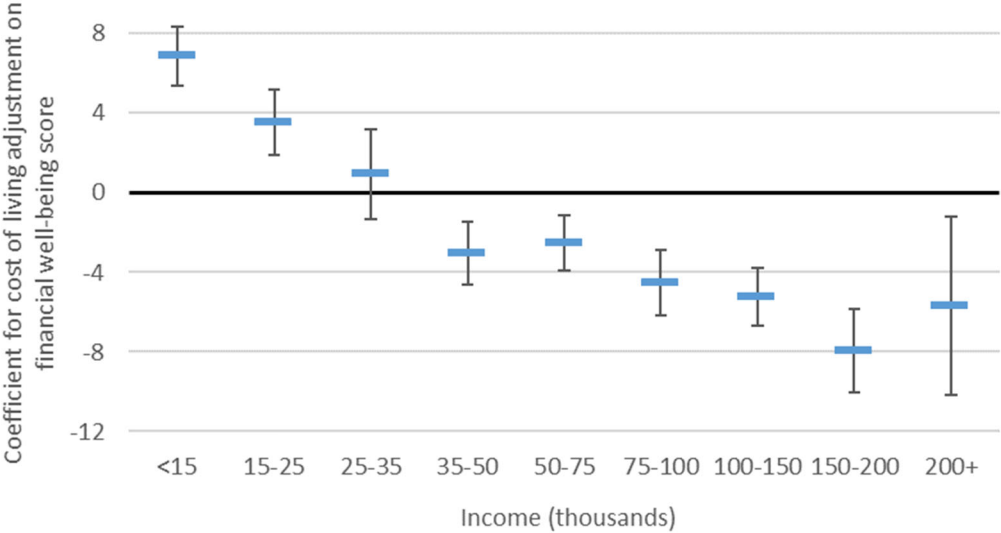
$$FWB_i = \beta_0 + \beta_1 C_i + \beta_2 X_i + \beta_3 C * I_i + \varepsilon_i \quad (2)$$

Figure 2 shows coefficients regressing cost of living on financial well-being score, interacted with individual-level incomes. When considering the relationship for those with low incomes, the relationship is positive (higher financial well-being in high-cost areas) and for those with high incomes, the relationship is negative (lower financial well-being in high cost areas).

Surprisingly, this is counter to the findings on the relationship between market consumption and cost of living observed by Diamond and Moretti (2023), who found that adults with less education had the largest negative effects on their consumption from higher cost of living – which may indicate that the effects of cost of living depends on the specific outcome variable.

Among individuals earning less than \$35,000 per year, the point-estimate for the relationship between cost of living and financial well-being is positive – especially among those with incomes under \$25,000. Among those higher in the income distribution, however, the sign of the relationship flips and those in higher cost-of-living areas have lower financial well-being. Hence, among low-income populations, living in a higher cost-of-living area does not appear to adversely affect financial well-being whereas for those with higher incomes it does.

Figure 2. Relationship between cost of living and financial well-being score, by income



Source: FINRA National Financial Capabilities Study; Current Population Survey
 Note: Demographic controls include race, parental status, year, age, and highest level of education.

Alternate single-question measure of financial well-being

To test the robustness of these results, we can also use the Federal Reserve Board’s Survey of Household Economics and Decisionmaking (SHED), which uses a single question financial well-being measure. It asks respondents to report how they are faring financially, offering them four choices from “finding it difficult to get by” to “living comfortably.” Over the five-year period from 2017 through 2021, 7 percent of respondents indicated that they were finding it difficult to get by – slightly below the share who had very low financial well-being using the CFPB score. Twenty-five percent of respondents were either finding it difficult to get by or were just getting by financially.

Table 4 repeats the analysis from Table 1, exploring the correlation between poverty measures and these financial well-being metrics from the SHED. Using the SHED’s financial well-being measure, there are less differences in the relationship with financial well-being across the poverty measures than was seen using the CFPB financial well-being score across the alternate poverty measures. There is a positive correlation between “struggling to get by” and poverty using both the official poverty measure and the supplemental poverty measure. However, consistent with that seen when looking at low financial well-being with the CFPB financial well-being scale, the correlation is stronger between the individuals who are struggling to get by and the official poverty measure than there is with the supplemental poverty measure. This further supports the finding using the CFPB score that the cost-of-living adjustment used for the supplemental poverty measure does not result in a better identification of areas where people are struggling financially.

Table 4. Relationship between the share struggling to get by and state poverty rates, crosswalk from the official poverty rate to the supplemental poverty rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Official poverty rate	0.3781 (0.059)				0.2792 (0.078)			
Anchored official rate		0.2161 (0.045)				0.2619 (0.078)		
SPM, no geographic adjustment			0.1916 (0.047)				0.2253 (0.079)	
Supplemental poverty measure				0.0863 (0.041)				0.1568 (0.075)
Demographic controls	No	No	No	No	Yes	Yes	Yes	Yes
N	41,112	41,112	41,112	41,112	41,112	41,112	41,112	41,112

Source: Survey of Household Economics and Decisionmaking; Current Population Survey

Note: Demographic controls include race, parental status, year, age, and highest level of education.

Conclusion

Although the supplemental poverty measure provides several advantages over the official poverty measure, there remains substantial uncertainty over whether it does a better job of identifying those experiencing financial deprivation. This paper uses a new approach for evaluating the supplemental and official poverty measures by exploring the relationship between self-reported financial challenges and poverty. It demonstrates that states with high official poverty rates also have higher shares of people who have low financial well-being based on the CFPB's (2015) financial well-being score. For every one percentage point increase in a state's official poverty rate, there is a 0.59 percentage point increase in the share of people with very low financial well-being. However, when measuring poverty using the supplemental poverty rate instead, the relationship with financial well-being reverses – states with higher supplemental poverty rates have somewhat lower shares of financial hardship based on the CFPB financial well-being score. These results are due to the geographic cost of living adjustment in the

supplemental poverty measure, which cause it to observe greater poverty in areas where financial well-being based on the CFPB score is higher.

Limitations of the available data mean that we cannot look at the poverty status and financial well-being status of the same individuals. It is also possible that cost of living adjustments at finer geographies may differ from those at the state or MSA level. As such, future research on the geographic adjustments using data where poverty status and self-reported financial well-being can be observed for smaller geographies or for the same individuals would be valuable to confirm these findings. Nevertheless, these results are consistent with recent findings by Meyer, Wu, and Curran (2022) indicating that cost of living adjustments may shift poverty to areas with less financial hardship. The results also suggest that geographic cost of living adjustments require further study before concluding that they are an enhancement to poverty measurement.

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