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Updating Poverty Thresholds Over Time: Considerations and Options

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Across the world countries with official monetary poverty measures vary widely in their definitions and methods, but regardless of the approach taken, all measures are expected to be updated over time to account for changes in prices and changes in living standards. Methods of updating can be thought of as a spectrum. At one extreme is accounting for only price changes by updating using a price index, for example through the use of a consumer price index. At the other extreme is accounting for all changes, including changes in income, consumption, economic growth, and prices, through the production of a strictly relative measure. Problems are associated with these two extremes. Alternatives have been proposed and are being used across the world. For examples see World Bank (2018) and UNECE (2017).

Updating only for prices, as with a strictly absolute poverty measure, raises two common issues of concern.¹ First, critics commonly cite consumer price indexes (CPI), which are used by most countries, as not accurately capturing the changes in prices paid by the poor, nor what is purchased by the poor (Atkinson 2019, UNECE 2017). It is also the case that CPIs may not accurately reflect economic changes resulting from new and disappearing goods as well as substitutions.² Therefore, considerations in determining which index is most appropriate to adjust poverty thresholds include identification of the population upon which the index is based, whether the measure reflects the prices faced by the poor, and consistency with the definition of the poverty threshold. Second, strictly absolute poverty measures are frequently critiqued for failing to account for changes in living standards. A possible solution to this problem is to update the poverty thresholds by reproducing them at regular intervals, as with a strictly relative poverty measure. However, there are other concerns when reproducing the thresholds. Although a strictly relative poverty measure will naturally update over time as the income (or consumption) distribution changes, the effects of policy on poverty are frequently obfuscated because the income distribution is influenced by a variety of factors. As a result,

¹ It should be noted concerns about variations in prices resulting from geographic differences have also be raised, but are not the focus of this paper and therefore will not be addressed.

² The BLS produces the Chained CPI (C-CPI-U), which accounts for consumer substitution across product categories by using more current weights.

shocks to the income or consumption distribution can result in counter intuitive outcomes such as the poverty measure falling in response to an economic downturn.

The concepts underlying the thresholds and their construction can inform one's choice of updating. For the current research, we focus on the U.S. Official Poverty Measure (OPM), a strictly relative poverty measure, and the Supplemental Poverty Measure (SPM), which is neither a strictly absolute nor a strictly relative measure. The current OPM is considered a strictly absolute poverty measure and is updated annually using the all items CPI-U, which measures the average price change for all items for consumers living in urban areas. The SPM is defined using reported expenditures for food, clothing, shelter, and utilities (FCSU) by consumer units with two children (the estimation sample), a group identified as being most impacted by federal transfer policies. The level of thresholds are based on the 33rd percentile of the FCSU expenditures distribution. Updating is done implicitly through the reproduction of the thresholds each year based on a five-year moving average of FCSU expenditures for the estimation sample. This updating approach was recommended by a U.S. National Academy of Sciences Panel, and reflects the Panel's position that such thresholds would gradually account for changes in living standards over time, unlike a strictly absolute measure set in the distant past and unlike a strictly relative measure that would account for these changes yearly. But a criticism of SPM thresholds has been that it is not clear if poverty rates change because the thresholds change or because resources change, a criticism of strictly relative measures as well. To address this critique, work by Garner and Gudrais (2013) show in the three years following the Great Recession, total spending by all consumer units around the 33rd percentile are shown to be virtually unaffected by the Great Recession.³ Preliminary analysis provides further support by showing the elasticity of income for consumer units around the 33rd percentile is 0.33. Based on this estimate, a \$10,000 increase in income for one of the five years would lead to an increase of 0.66% in the SPM threshold.

The purpose of the current research is to explore the implications of employing different updating mechanisms using data for the U.S. First, results will be presented using different price indexes, for example, the all items CPI-U, Chained CPI-U, Personal Consumption Expenditure deflator, and experimental price indexes for different demographic subgroups. In addition, to understand movements in the SPM thresholds a decomposition of the thresholds over time into price effects, income effects, changes in tastes and preferences, and changes in family structure will be explored; results will be compared to a similar decomposition of a strictly relative poverty measure. It is our hope the work presented in this paper will provide a deeper understanding of the implications of various updating procedures and help other countries make more informed choices about how their poverty thresholds are updated.

³ For additional work on the Great Recession and poverty thresholds see Jenkins (2018) and Jenkins et al (2013).