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Article

Wealth and Welfare: Do Private and Public Safety Nets Compensate for Asset Poverty?

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Abstract
Economic shocks test the resilience of families around the world. Lockdowns, extended periods of unemployment, and inflation challenge the capabilities of private households to maintain their living standards whilst keeping their budgets in balance. Asset poverty is a concept invoked frequently to measure the capacity of private households to mitigate income loss by relying exclusively on their savings. In contrast to conventional asset poverty measures, we quantify the combined cushioning effect of private and public safety nets. Highlighting the importance of public safety nets and familial networks, this article devises a modified concept of asset poverty: Rather than purely simulating a household's asset decumulation without replacement income, the modified indicator accounts for replacement income in a static setting. The empirical assessment of modified asset poverty in Europe and America combines harmonised microdata on household finances with simulations of institutional rules set by social insurance systems. Our results reveal how differences in social relations and institutional rules shape cross-country variation in the vulnerability of private households. We find that, in contrast to the US, where the asset poverty of families is particularly low, households in most European countries are less vulnerable because generous social security systems coexist with low private assets. However, in some European countries, benefit generosity decreases the longer income losses last, exposing time dynamics in vulnerability. Complementing social insurance mechanisms, in countries such as Greece, households are more likely to receive financial support from family or friends. Cross-national heterogeneity in vulnerability suggests that a shock may have different implications across countries.

Keywords
family networks; financial buffers; private wealth; safety nets; social insurance; vulnerability; welfare state

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1. Introduction

According to the IMF's world uncertainty index, global economic uncertainty has been on the rise in the last decade. The index value has peaked recently, showing the highest levels of uncertainty recorded since its inception in the 1950s. Recent shocks, not least Covid-19, are mirrored in the economic sentiment. In this global environment, vulnerability and insurance are more important than ever when monitoring social conditions. This brings questions about the performance of different economies—specifically in relation to maintaining living standards, financial stability, and aggregate demand—to the fore. This article engages in refining the measurement of vulnerability. It aims to devise a composite indicator ("augmented asset poverty") reflecting different insurance mechanisms at the disposal of private households. In a cross-national comparison, we explore

whether the shock-absorbing capacity of social insurance, private wealth, and family networks differ across OECD countries. In addition to proposing a new indicator, this article contributes to the debate by assessing the balance between potential crowding-out effects of private insurance through public provision and under-insurance in the absence of the latter. As such, it offers a comparative perspective on vulnerability outcomes.

The concept of vulnerability is characterised frequently by referring not to current deprivation, but to "defencelessness, insecurity, and exposure to risk, shocks and stress" (Chambers, 1989, p. 1). Private assets are considered a key determinant of vulnerability (Kuypers & Marx, 2019; Swift, 1989). In this spirit, asset poverty is an indicator that is often used to assess households' vulnerability to shocks (Azpitarte, 2012; Haveman & Wolff, 2004; Kuypers & Marx, 2021; Oliver & Shapiro, 2006). While different definitions exist, the benchmark approach to asset poverty in this article identifies households that cannot replace their income for a given amount of time by drawing down assets. Thus, it measures their private capacity to weather income loss by running down assets. Especially during times of economic uncertainty, the use of such an indicator could provide invaluable information to policymakers. For example, Mongey et al. (2020) find that workers most affected by social distancing measures during the Covid-19 pandemic tend to have disproportionately lower liquid savings. It is important to note that asset poverty has been an underused indicator, particularly in European analyses. This may, in part, be due to scepticism around the extent to which assets are used as buffers to shocks across countries. Indeed, extensive social safety nets, strong labour market interventions, or informal familial support can render asset poverty less critical to vulnerability outcomes.

This article aims to provide a definition of asset poverty that integrates measures of private and public insurance in order to document more exhaustively the vulnerability of private households across countries. Thus, the measure considers how states, markets, and families act as (potentially imperfect) substitutes for one another in some situations, whilst providing limited insurance in other situations. At the same time, income and wealth correlate imperfectly, such that a joint measure of safety net adequacy will not identify the same set of vulnerable households as one that focuses on assets only. Analytically, the augmented measurement approach allows for the decomposition of cross-national patterns of vulnerability outcomes according to the different types of insurance mechanisms—both private and public. In view of policymaking, an encompassing measure of the safety nets available to households may prove useful for the monitoring of social conditions and well-being. Moreover, the different levels of insurance across countries revealed by this augmented measure of asset poverty implies that symmetric shocks to a group of countries have asymmetric consequences. This calls for specific policy responses in an EU context, for instance. From an analytical perspective, the augmented measure of asset poverty developed in this article is a new lens through which to compare vulnerability outcomes across countries.

This article draws on microdata from European and US household surveys in order to carry out a cross-country comparison of asset poverty. Adjusting asset poverty measures for the US and 17 European countries to include income replacement policies in a first step, we find that, in Europe, accounting for replacement income from social insurance systems implies lower levels of vulnerability. In contrast, the absence of generous social insurance provisions in the US leaves a large share of the population with inadequate buffers. However, even in some European countries, support from social insurance is only available for a limited amount of time, resulting in an increasing reliance on private forms of welfare provision over the longer term. Therefore, we consider the extent to which intra-family transfers can provide insurance in addition to formal social policies. While in some countries, such as Greece, social networks play a decisive role in resource provision, these mechanisms might not be available at full shock-absorbing capacity if income losses affect broader segments of the population simultaneously.

Our analysis begins with a literature review in Section 2, exploring the concept of asset poverty and its connection to the insurance function of private wealth. It suggests that existing measures do not suffice to identify deficient safety net coverage. Therefore, our key contribution is to extend the asset poverty measure by including in the analysis several additional buffers available to private households during lockdown, as described in Section 3. Section 4 presents the results of the empirical implementation, starting with the mitigating effect of social benefit systems and proceeding to short-time work arrangements and informal networks. Section 5 offers a synthesis of the findings and their implications for policy.

2. Rethinking Asset Poverty

Asset poverty is a measure frequently employed to measure household vulnerability. In this perspective, vulnerability needs not to be confined to households vulnerable to social exclusion by living with low or insufficient incomes, consumption deprivation, and subjective economic stress; instead, it has been argued that low asset holdings and the lack of other buffers are also essential to vulnerability (World Bank, 2000). Conventionally, measures of asset poverty assess the extent to which families can draw on private wealth to buffer shocks. To date, the most prominent operationalisation of asset poverty calculates the share of individuals living in households with insufficient financial assets to support them at the level of the income poverty line for at least three months (Balestra & Tonkin, 2018; Brandolini et al., 2010). Others

convert wealth into an annuity flow so as to make income and assets commensurable (Weisbrod & Hansen, 1968).

Asset poverty has gained increasing relevance as a measure of vulnerability, not least against the background of rising wealth-to-income ratios in many countries (Piketty, 2020) and thus the growing economic significance of private wealth. Furthermore, the Covid-19 pandemic has stirred interest in asset poverty (Kuypers et al., 2022; Loschiavo & Graziano, 2022). A growing literature investigates the extent to which accounting for assets and debt affects indicators of poverty and living conditions (Jäntti et al., 2008; Kuypers & Marx, 2021). For example, it has been noted that a "substantial share of income poor elderly households own significant assets" (Kuypers & Marx, 2019, p. 131). Moreover, Kuypers and Marx (2021) find that accounting for asset holdings in poverty measurement demonstrates that elderly households particularly are better off. Azpitarte (2012) finds a similarly strong life-cycle dependence on the importance of assets in completing the picture of household resources and vulnerability in a comparison of the US and Spain. Yet, he finds that pronounced cross-country differences in vulnerability as measured by asset poverty prevail, even when taking into account the differences in household characteristics associated with high asset poverty.

Several recent contributions address the cushioning effect of wealth when it comes to averting shocks to household living standards. Research on the buffer function of wealth points towards an important role of private assets in moderating the effects of adverse life events. For instance, Rodems and Pfeffer (2021) show that the link between material hardship and disruptive life events, such as income loss and divorce, depends crucially on household asset endowments. While results are more mixed when the moderating effect of wealth on the link between shocks and subjective outcomes is considered (Kuhn & Brulé, 2019), significant cross-country heterogeneity may make general conclusions more challenging (Müller et al., 2021). Closely related to this article, Kuypers et al. (2022) investigate the cushioning effect of assets to help households weather income shocks during the Covid-19 pandemic. Combining information on the probability of earnings losses with a careful approach to modelling income dynamics in a realistic lockdown scenario, they find that half of Covid-19-related earnings losses can be compensated by private assets. Most importantly, the study also draws on estimates of the effect of Covid-19 on gross incomes vis-à-vis net incomes, to model the buffering effect of taxes and transfers.

The substantial cross-country variance in the importance of assets and their buffer function against adverse shocks highlights the important role of the institutional environment (Hochman & Skopek, 2013). Indeed, trends related to "property-based" welfare, referring to the idea that households draw on home equity to support their livelihoods in contingencies traditionally covered by now-retrenching welfare states, have crucial implications for household balance sheets (Crouch, 2009; Dewilde & Flynn, 2021; Lennartz, 2017). In countries where these trends are the furthest developed, asset poverty is likely to be a crucial determinant of well-being. This line of reasoning is closely related to a strand of literature that investigates the relationship between wealth inequality and the welfare state (Feldstein, 1976; Fessler & Schürz, 2018). Most relevant to this article on asset poverty is a recent study comparing asset poverty outcomes in Canada and the US that suggests that increases in benefit generosity may indeed raise asset poverty rates (Rothwell et al., 2020). However, the study also finds lower levels of asset poverty in the US, despite its more residual social policy institutions. The authors caution against drawing a causal interpretation of such findings.

In addition to welfare state institutions, familial support networks are likely to shape the accumulation process of assets and the importance of ownership. Indeed, networks of family and friends are a relevant support system for dealing with the material consequences of unexpected financial shocks. Lusardi et al. (2011) use a specialised survey to analyse the coping strategies of households during financial shocks in eight advanced economies. They find that assistance from family and friends is the second most used mechanism in an emergency after drawing from own savings in all but one of the countries considered in the study. Based on this evidence, it is crucial to investigate the role of a family's capability to financially support other households, thus mitigating financial hardship. In countries with residual welfare states, friends and relatives assume a particularly important buffering function.

In sum, the welfare state and family institutions determine the importance of private assets as an insurance mechanism and the speed at which assets are depleted when household circumstances change. Yet, the asset poverty measure is indifferent towards these institutions. This article's contribution is to provide an augmented measure of asset poverty, respecting different institutional environments. While the value of such an extended view has been stressed before (Balestra & Tonkin, 2018; Shapiro et al., 2009; Weller & Logan, 2009), we propose a definition and examine cross-national differences in household capacity for self-insurance after controlling for the safety net provided by both the welfare state and family networks. Rather than providing an assessment of the buffering capacity of assets in a specific shock such as Kuypers et al. (2022), we offer a more general adjustment to the measurement of asset poverty.

In addition to refining the measurement of asset poverty, the approach taken here also contributes to the broader research field around economic security, defined by Eurostat (2022) as an "individual's ability to make use of financial resources if these are urgently required" (for a comprehensive overview see Hacker, 2018). Most importantly, the augmented measure of asset poverty developed here marries a micro-level

approach with benefit rules derived from social insurance system characteristics. The latter, in the form of aggregate statistics on loss probabilities and benefit replacement rates, has previously been featured in the economic security literature (Osberg, 2015). Another popular indicator of vulnerability identifies the share of households that see their income decline by 25% in a given period and lack the wealth to replace the cumulative income loss. Even though it is possible to assess the income-smoothing effect of social security (Hacker, 2018), this perspective is limited to households that have experienced income losses in the past. Additionally, this approach relies on substantial data requirements that are not met in many countries. The augmented measure of asset poverty in this article offers a simple alternative.

3. Method and Data

3.1. Method

Given the need to adapt existing approaches, insights from the asset-based measurement of living standards can be employed to design a measure that accounts for the role of both private and public safety nets in reducing vulnerability and allows us to disentangle their respective contributions. Rather than considering assets as a separate dimension of well-being, wealth can be made commensurable to income if it is converted into an annuity (Brandolini et al., 2010; Weisbrod & Hansen, 1968). While this usually measures current living standards rather than economic security, we propose the consideration of assets as a supplement to replacement income and other buffers, thus changing the perspective to vulnerability. Such a measure better informs the user about households' capacity to maintain a minimum living standard over three, six, or 12 months without income.

Building on the annuitised income approach, we take the idea of integrating income and assets into one measure to assess living standards and supplement this by drawing on some features of the asset poverty measure. In particular, rather than assuming a parameter for the length of the annuity, we compute our measure for different time horizons reflecting shock scenarios. As we focus on limited periods of up to 12 months maximally and financial assets with potentially low interest rates, assumptions on the latter are left aside. Instead, we simply take the present market value of financial assets and assess the extent to which it covers the difference between the poverty line and replacement income.

We concentrate on total financial assets as they can be mobilised quickly to fund current consumption. Financial assets differ in their liquidity from real assets such as cars or housing wealth, where markets may be significantly less liquid. While this argument unquestionably holds for deposits and securities, it might be less obvious if it is applied to long-term investments. In particular, this refers to private pension plans, that constitute an important part of household portfolios in some countries. In line with previous literature (Brandolini et al., 2010; Haveman & Wolff, 2004), we assume that, in times of need, potentially even pension savings are liquidated to cover necessities of life and therefore also consider them a part of households' financial buffers. In doing so, and as we refrain from including assumptions about fire-sale discounts, our estimates represent lower bounds for the actual vulnerability of private households. Based on these considerations, we derive the ordinary income poverty rate. It is defined as the proportion of households with an equivalised disposable income after social transfers below 60% of the national median. This is complemented by the share of asset-poor households and our extended measure. We consider households to live in asset poverty if:

$$W_{ic} < \frac{t}{12}\left(Z_c - Y^r_{ict}\right) \quad t \in \{3, 6, 12\}$$

The condition identifies households i in country c that possess insufficient financial assets W_{ic} to cover the difference between their net replacement income Y^r_{ict} and the national poverty line Z_c for three, six, and 12 months of market income loss respectively. Note that both Z_c and Y^r_{ict} are computed on an annual basis. Therefore, we divide both by $\frac{t}{12}$, so as to obtain the share of annual income required to remain above the poverty line and the share of annual replacement income disbursed in t months. Each household satisfying this condition is weighted by the number of household members to obtain a headcount.

The annual replacement income Y^r_{ict} derives from pre-shock disposable income Y^l_{ic} and a replacement rate R_{kct} measuring the share of net disposable income that is replaced in the case of unemployment, including all other transfer income such as family allowances. The replacement rates are derived from the OECD TaxBEN database and differ across countries, time horizons, and household type k:

$$Y^r_{ict} = Y^l_{ic} \bullet R_{kct}$$

Challenges remain in measuring assistance from social networks. As a result, we simply consider whether households below the poverty line, when accounting for other buffers, can count on financial support of a given amount of €5,000.

The analysis can be readily extended and refined. For instance, a limitation of the account offered in this article is its indifference towards actual benefit take-up, as it uniformly imputes replacement incomes. Indeed, some groups might be less inclined to claim the benefits they are entitled to receive, which results in lower buffers for those households. It should be also noted that depending on the type of shock, asset valuations could decline during an economic crisis and thereby limit the capacity to provide for basic consumption needs for a specific period of time. Concerning the reporting of transfers in the surveys, there is likely to be underreporting of benefits as they are surveyed through only a limited set of questions.

Moreover, a more differentiated approach towards deriving net incomes from gross income data can improve the analysis. For example, some transfers can also be taxable while access to certain benefits may be lost when becoming eligible for other benefits. While this can be done using the OECD TaxBEN model, such a level of detail is beyond the scope of this treatment. On the contrary, the OECD TaxBEN model explicitly does not consider asset tests, which restrict access to or lower the number of social benefits in some countries. While this results qualitatively in an overestimation of the cushioning effect of benefits and replacement incomes, the quantitative impact on our results is arguably limited, given that households with significant assets are not considered asset poor in either the original or the modified concept. Instead of financial assets, one could regard total assets net of liabilities as the buffering capacity of private households. Since net wealth generally exceeds financial assets, using this measure would lead to lower levels of asset poverty although the implications of welfare state and family buffers are qualitatively similar. In an addition, our indicator can be combined with data on income loss probabilities for different segments of the population. For example, a possible extension would consist in combining our approach with the Lockdown Working Ability Index developed by Palomino et al. (2020), to reflect the shock scenario of Covid-19 in particular. Another option, that reflects the probability of income loss, is to analyse unemployment rates by occupation.

3.2. Data

For our analysis, we draw on survey data from the third (2017) wave of the European Central Bank's Household Finance and Consumption Survey (HFCS), ensuring a high level of cross-national comparability. For the US, the computations rely on the 2016 Survey of Consumer Finances. These data sources allow for a comparison of augmented asset poverty across different welfare state regimes (Esping-Andersen, 1990). The entire set of HFCS countries is included in the analysis, except for Croatia, Cyprus, Ireland, Malta, and Spain. For the first two countries, income data is incomplete, Ireland and Malta lack information on relevant household characteristics, and Spain deviates strongly from the other countries in terms of the year of data collection. Detailed methodological reports are provided by the European Central Bank (2020) and the Board of Governors of the Federal Reserve System (2016). Weights, as well as the multiple imputations provided by the data producers, are appropriately taken into account. The field period of the 2016 Survey of Consumer Finances is 2016 to 2017. All income variables in the HFCS refer to income in 2016, with the exception of Greece, Hungary, Poland, and Luxembourg. While in Luxembourg income refers to the year 2017, in Greece, Hungary, and Poland, data refers to income over the last 12 months. Assets in the HFCS are measured at the time of the interview, except in Belgium (2017), Greece (2018), as well as in Italy, Lithuania, and Finland (2016). Fieldwork in all HFCS countries was conducted between 2016 and 2018.

The surveys provide us with information on the financial wealth of households, the number and age of all household members, factor income as the sum of labour and capital income as well as public and private transfers. Additionally, within the HFCS, households are asked if they can rely on financial assistance of €5,000 from friends or relatives in an emergency. Aggregating the income components allows the gross total household income to be determined. However, both data sources lack information on taxes and social security contributions, which are necessary to derive the disposable income of households.

In order to address this issue, we use information from the OECD tax-benefit model to impute a proxy of disposable income. The OECD TaxBEN model considers the detailed national tax and benefit rules and calculates household incomes after government intervention for a wide range of policy-relevant family situations (OECD, 2020a). More specifically, we use the average all-in tax rates by single and couple households, both with and without dependent children for the respective reference period of the survey data, to estimate net factor income. Disposable income is then the sum of net factor income and all monetary transfers, as reported in the surveys. To make the living conditions of different household types more comparable, we equivalise disposable income and wealth with the square root of household size. Relying on the square root scale is in line with previous literature on asset poverty and allows us to include Finland and Poland, where the HFCS database does not provide the age of all household members, in the analysis.

Furthermore, the OECD TaxBEN model provides comprehensive information on benefit rules for the same household constellations as described above. Besides unemployment benefits, the model also considers guaranteed minimum income provisions as well as child and housing benefits for various eligibility periods. We apply these replacement rates to the components of household income earned on the labour market. This also includes incomes of the self-employed, as we assume governmental income replacement programmes extend comparably to this group of the labour force as well. This assumption will only have a limited impact on our estimates because the self-employed constitute a small part of the working population (OECD, 2020b). Taken together, this allows us to impute net replacement rates for different household types and unemployment spells of three, six, and 12 months.

In sum, the estimation of asset poverty rates follows from individual-level information from the wealth surveys. Aggregate information on income replacement rates from social insurance policies enters the analysis to estimate the incomes of individual households for the hypothetical scenario where labour market income is zero. Informal networks are considered by distinguishing

between vulnerable households that can rely on their networks and vulnerable households lacking this support. The following section sets out the findings.

4. Results

Before elaborating on our extensions of the asset poverty measure, the conventional measure is computed for all countries in the sample. We present the results of our analysis in Figure 1. It shows the poverty rate (dashed line), the share of vulnerable households according to the traditional definition (light grey bar), and our refined measure that includes the operations of social insurance schemes (dark grey bar) by different unemployment spells for 18 OECD countries in the most recent wave of their wealth surveys.

Traditional asset poverty is considerably more widespread than income poverty in almost every country. While the poverty rate lies between 15% and 30%, asset poverty ranges between 23% and 75% (three months) and 50% and 92% (12 months).

The only exception within our sample is the Netherlands, where the shares of income and asset-poor households (three months) are almost on par. However, it is important to note that these are not necessarily the same households. In Austria and the Netherlands, approximately only half of income-poor families are also poor in terms of assets, whereas in the US (80%) and Latvia and Greece (more than 90%) the vast majority of income-poor households lack the necessary levels of financial wealth to buffer income shocks.

As expected, the share of vulnerable households increases as the timeframe in which income losses must be covered solely by savings is extended. Even so, heterogeneity prevails; countries with lower rates of short-run asset poverty tend to be characterised by more

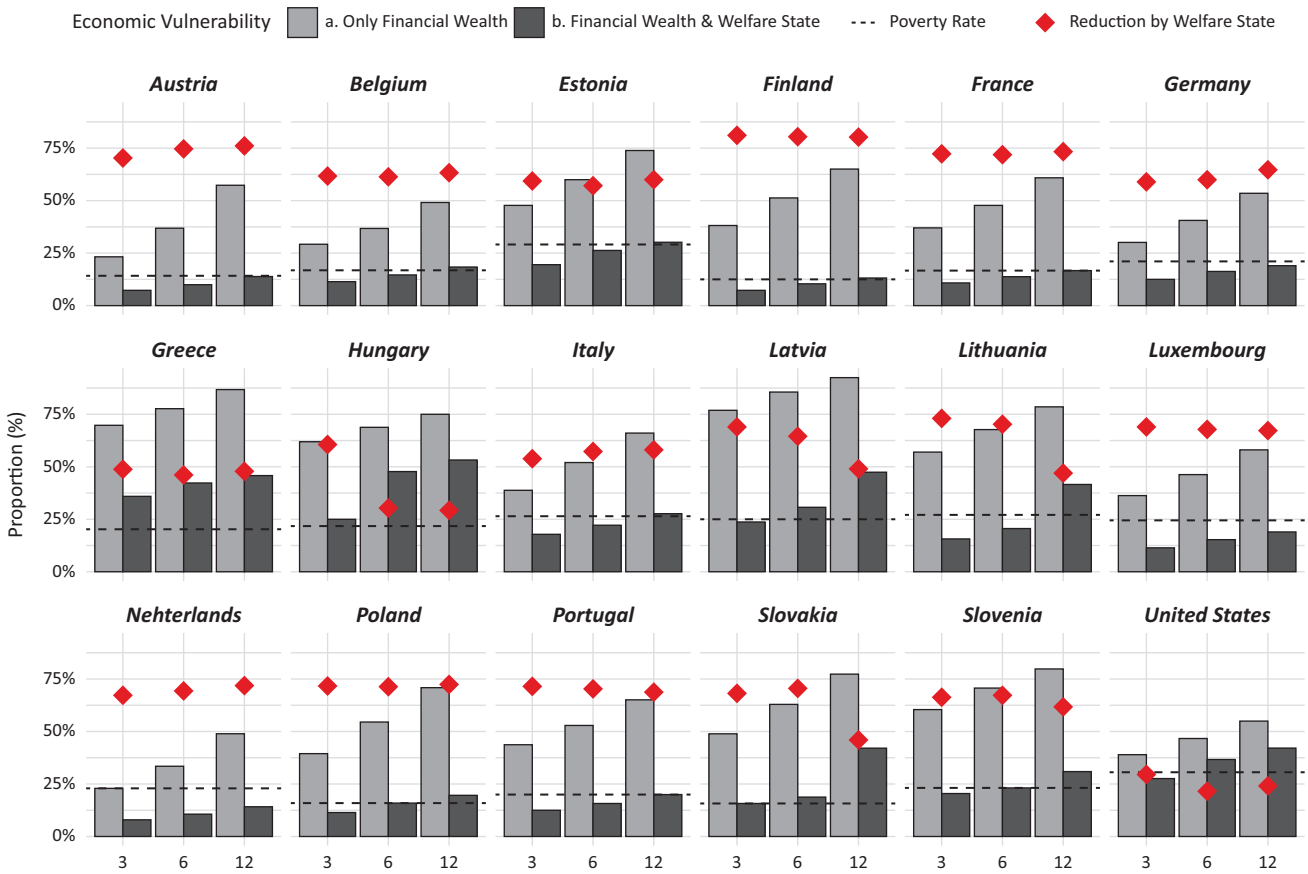

Figure 1. Economically vulnerable households in selected OECD countries. Notes: This graph shows the share of individuals that are vulnerable (defined as living in households with insufficient savings to finance consumption at the level of the national income poverty threshold); the bars in dark grey show the proportion that cannot fund the difference between welfare state provisions and the poverty line; the red rhombus refers to the percentage reduction in asset poverty by the welfare state; the red rombus corresponds to the fraction of households considered asset poor by the traditional measure of asset poverty, but do not count as asset poor once welfare state support is accounted for (for example, the traditional measure for asset poverty for the duration of six months in Austria is 37%); considering social assistance from the welfare state results in a value of around 9%, which is equivalent to a reduction of measured asset poverty by 75%; results are displayed for spells of income loss for three, six, and 12 months. Sources: Authors' work based on Board of Governors of the Federal Reserve System (2016); European Central Bank (2020); OECD (2020a).

noticeable gains over time, partly resulting in a doubling of rates over a 12-month period.

4.1. Social Insurance

The most significant finding of our analysis uncovers the extent to which social insurance substitutes for the lack of financial assets that can be mobilised in case of emergency. Across all countries and unemployment durations, the share of vulnerable households is substantially smaller compared to the traditional approach. Asset poverty, according to the enhanced measure, is particularly low in Austria, Finland, and the Netherlands (7%). In 14 out of the 18 countries, the rate is below 20% in the three-month period and below 30% in the 12-month perspective. Only Latvia, Hungary, the US, and Greece have proportions of vulnerable families above these numbers. When compared to the poverty line, all countries except Greece and Hungary bring vulnerability below the current poverty line. It follows that in these countries, over three months, even the combined effort of private wealth and the social security system may not fully absorb the shock of the crisis. From an annual perspective, social insurance and private wealth will absorb the shock to an extent that prevents vulnerability from increasing beyond the poverty threshold in only six out of 18 countries. In Belgium, Estonia, Finland, and Italy, vulnerability—as measured by the enhanced asset poverty indicator—exceeds the anchored poverty rate only by a small margin.

Governmental programmes have a pronounced dampening effect on the share of economically vulnerable households. For the European countries, we see that welfare state mechanisms reduce the number of asset-poor individuals by more than half. In Finland, Austria, France, Poland, and Portugal, the numbers drop by about 75%. Whilst cross-national variation is limited for the three-month perspective, the longer-term view brings substantial differences between economies to the fore. Welfare states differ in their generosity of income support, particularly after six or 12 months of unemployment. While the mitigating effect of social transfers remains reasonably stable in most countries, it drops after 12 months in Latvia, Lithuania, and Slovakia. In Hungary, a similar drop occurs after six months.

The US provides an interesting comparison to Europe. Starting with a comparatively low share of households in asset poverty in the standard approach, the US income support is less effective in cushioning asset poverty compared to its European equivalents. According to our extended measure of asset poverty, the US belongs to the top three nations in terms of the share of vulnerable families.

4.2. Support of the Networks of Family and Friends

In many situations, support from family members can be vital to maintaining living standards. However, the share of households that can count on their network of family and friends differs substantially across countries. As defined by a household's ability to raise €5,000 among relatives and friends, economic support from such networks is particularly widespread in the Benelux countries and Portugal. In Greece and Italy, such households account for almost half of the population. The Baltic countries stand out with a particularly high prevalence of households unable to rely on family and friends for financial support. Indeed, in Estonia and Latvia, at least two-thirds of all individuals live in households without social network buffers.

The differences in family safety nets between countries remain when the scope is narrowed down to households living in asset poverty. Figure 2 illustrates the reduction in asset poverty rates achieved by family networks. It shows the reduction of asset poverty if only households without family buffers are considered asset poor. Given that the implicit assumption behind this approach is that households with family support of at least €5,000 will have enough support to weather income shocks of three to 12 months, Figure 2 refers to an upper boundary of the buffering capacity of family support systems. In the Netherlands, Luxembourg, and Poland, around half can count on financial support from family. Crucially, this number is below the rate of the total population (i.e., Netherlands and Luxembourg: 69%; Poland: 75%), suggesting that households in asset poverty are less likely to be supported by their family and friends in emergencies. In contrast, asset-poor households in Greece and Italy are only slightly less likely to be supported by relatives and friends than those with adequate asset buffers. Finally, a notable case is Portugal, where support networks tend to be widespread (70% of the total population); indeed, familial support is just as important in households with low financial assets, as in more privileged households.

Along with the share of households in asset poverty supported by family and friends, Figure 2 plots the reduction of the asset poverty rate achieved by social safety nets and their combined effect. In most countries, familial networks realise a lower buffering effect than social security safety nets. France and Estonia can be found among the countries with the most clear-cut dominance of public social security nets. Furthermore, some countries rely on the welfare state in the short run, while over the 12-month period, family support may become more pivotal, ultimately substituting for the welfare state; the most pronounced cases include Latvia, Lithuania, and Slovakia.

It should be noted that such networks may be less effective when most needed; if many households experience income shocks at the same time, their capacity to lend informally to others is likely to fall. The data for Greece illustrates this point: After a prolonged recession, the number of individuals without potential support from other households peaked in 2014 (corresponding results available upon request), at almost

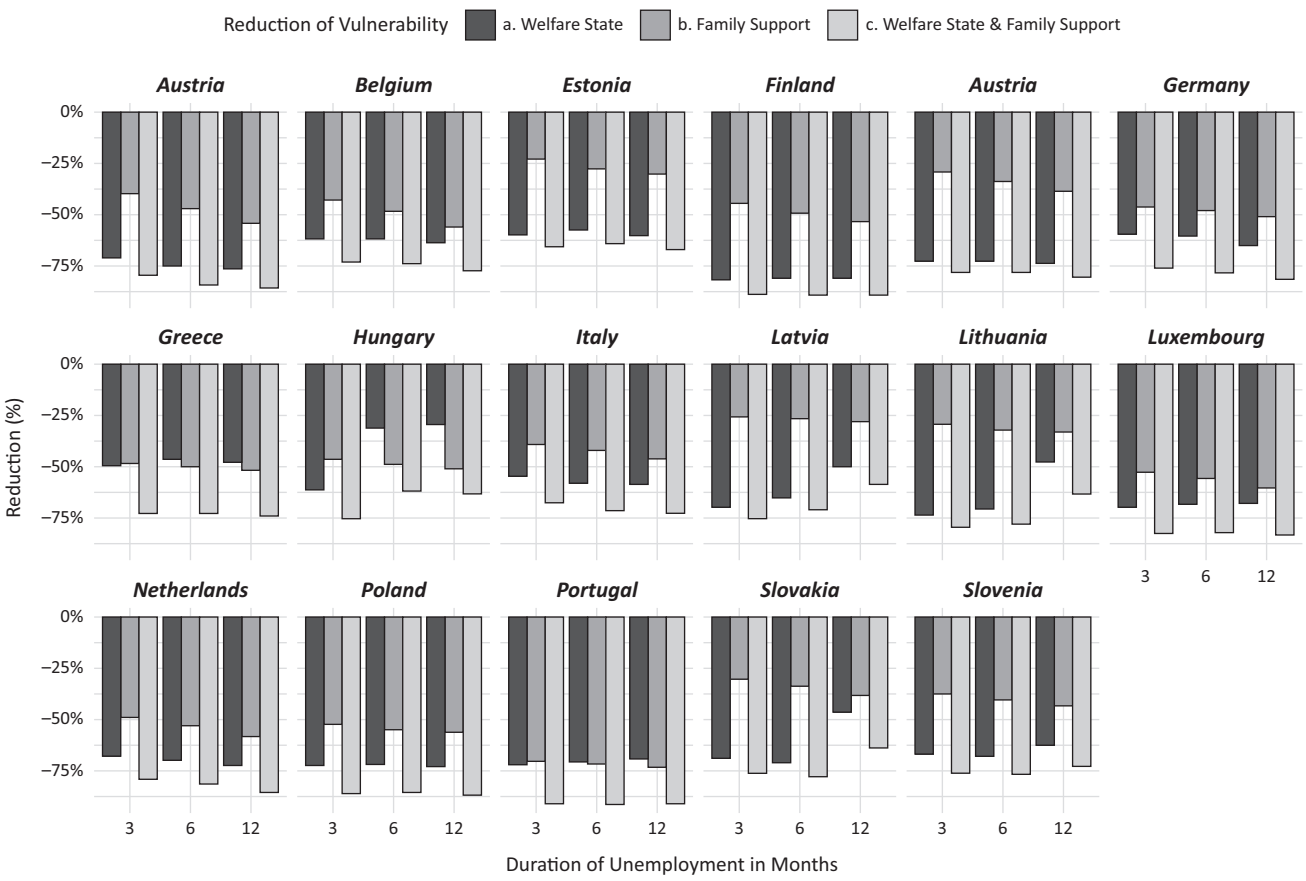

Figure 2. Reduction of vulnerability by welfare state and wider family. Notes: This graph shows the reduction of vulnerability achieved by the welfare state, family networks, and their interaction; reduction is measured as the relative difference between the traditional asset poverty indicator and our extended measures; results are displayed for income losses of three, six, and 12 months; missing values in some countries for family support (variable HB0800) have been discarded: around 1% (Latvia, Portugal, Estonia), around 3% (France, Belgium, Finland, Hungary), and between 5 and 6% (Poland, Lithuania, Netherlands). Sources: Authors' work based on European Central Bank (2020); OECD (2020a).

two-thirds of the total population, before recovering in 2017.

5. Conclusion

Our assessment of the shock-absorbing capacity in 18 OECD economies, which relies on a holistic measure of the buffers available to households, highlights important cross-national differences in vulnerability. Indeed, our augmented asset poverty measure demonstrates that countries with converse levels of asset poverty arrive at similar levels of vulnerability once other buffers are considered. For example, the US has a high prevalence of private buffers and therefore one of the lowest asset poverty rates in our sample. At the same time, it exhibits comparatively high levels of vulnerability due to weakly developed social safety nets according to the enhanced asset poverty measure. While asset poverty is reduced by one-quarter in the US by social insurance mechanisms, some European countries, such as Austria and Finland, reduce vulnerability by approximately three-quarters. However, it is not only in the US that large fractions of the population do not have adequate safety nets; in several European countries, certain buffering systems may also be insufficient for mitigating the impact of long-term income losses, due to decreases in the generosity of benefits over longer entitlement periods. Networks of relatives and friends are an important source of funds during emergencies in some countries. However, we find that in the context of wide-ranging economic shocks, the effectiveness of such networks decreases.

Further research may refine the augmented asset poverty indicator in view of addressing its limits as outlined in this article. In addition, the indicator could be employed to study the link between insurance mechanisms and vulnerability in countries beyond Europe and the US as well as over time. Given that public insurance is only one dimension of welfare regimes, an indicator of vulnerability outcomes that goes beyond formal social insurance mechanisms to include dimensions of private buffers may shed new light on the nature and extent of change in social policy.

Despite several shortcomings, the measure set out in this article remains better suited to the needs of policy-

makers required to consider asset poverty within their national institutional context. In addition to serving as a practical tool to monitor policies and living conditions following large-scale disruptions in the labour markets, our analysis provides important insights for the consideration of the future of social insurance. For example, the European Monetary Union's incompleteness in view of the shallow integration of its automatic stabilisers might prove a weakness in responding to the crisis. Our analysis reveals that countries differ markedly in their capacities to buffer the economic fallout of large shocks. This constitutes a serious threat to the European Monetary Union, as differences in vulnerability can result in asymmetric consequences. Indeed, in the aftermath of the 2008 financial crisis, the differences in the way the European Monetary Union's member states experienced the crisis challenged the union's foundations. As a consequence, the idea of a European unemployment (re-)insurance scheme has been debated with increasing frequency and ardour (Andor, 2016). A more uncertain future might galvanise renewed support for such arguments.

In order to decrease vulnerability, extending the length of eligibility for generous unemployment protection (usually granted only for the initial weeks without work) to cover longer spells of unemployment may be an effective policy response. However, the Covid-19 pandemic has also shown that governments may be willing to use discretionary measures to support patchy social insurance mechanisms. The extent to which policymakers strike the balance between automatic and discretionary policies in the future, and the degree to which the latter is employed to complete existing systems of insurance, will have important implications for vulnerability.

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Conflict of Interests

The authors declare no conflict of interests.

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