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The Intergenerational Persistence of Poverty in High-Income Countries

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MAY 2023

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ABSTRACT

The Intergenerational Persistence of Poverty in High-Income Countries*

Exposure to childhood poverty increases the likelihood of adult poverty. However, past research offers conflicting accounts of cross-national variation in the strength of the intergenerational persistence of poverty and the mechanisms through which it is channeled. This study investigates differences in intergenerational poverty in the United States (U.S.), Australia, Denmark, Germany, and United Kingdom (UK) using administrative- and survey-based panel datasets. We introduce a framework to decompose intergenerational poverty into family background effects, mediation effects, tax/transfer insurance effects, and a residual poverty penalty. Intergenerational poverty in the U.S. is four times stronger than in Denmark and Germany, and twice as strong as in Australia and the UK. Intergenerational poverty in Denmark is primarily channeled through family background effects, but persists in the UK and Germany through mediators such as adult education and employment. The U.S. disadvantage is not channeled through family background, mediators, neighborhood effects, or racial/ethnic discrimination. Instead, the U.S. has comparatively weak tax/transfer insurance effects and a more severe residual poverty penalty. Should the U.S. adopt the tax/transfer insurance effects of peer countries, its intergenerational poverty persistence could decline by more than one-third. The study offers a foundation for renewed research on the intergenerational persistence of poverty in high-income countries.

JEL Classification: I32, I38

Keywords: poverty, intergenerational mobility, stratification, social mobility

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1 Introduction

Poor children are more likely to become poor adults, but less so in some countries compared to others. Prior research offers conflicting accounts of the factors that promote stronger or weaker intergenerational persistence of poverty, as well as the mechanisms through which it is channeled. Moreover, intergenerational poverty research has generally studied a single institutional context, often excludes women and the lowest-income men from analyses, uses incomplete income measures, and/or lacks the data needed to observe the social processes through which disadvantage persists. This study addresses these concerns using comparative panel datasets derived from administrative and survey records covering the United States, Australia, Denmark, Germany, and the United Kingdom. We investigate cross-national differences in the intergenerational persistence of poverty and explain the economic, social, and institutional factors that drive those differences.

Our study of intergenerational poverty differs from conventional studies of economic mobility in several ways. Rather than studying upward and downward mobility across the entire set of parent and child income distributions, we focus on mobility out of poverty, defined broadly as experiencing a lack of resources relative to needs during childhood. As is well documented, exposure to poverty during childhood is associated with poorer health conditions, weaker learning outcomes, and less favorable later-life economic outcomes (Brooks-Gunn and Duncan, 1997; Duncan et al., 2012). Exposure to poverty at any age is associated with a higher likelihood of food insufficiency or other forms of material hardship (Nolan and Whelan, 2011).

Understanding the processes that facilitate mobility out of childhood poverty is thus of considerable importance. However, existing studies tend to be limited in scope, rarely testing across competing theories related to the relative role of the family, market, and state in explaining intergenerational poverty. Most studies are cross-sectional; studies that do examine intergenerational poverty tend to be single-country studies (typically focused on the U.S.), thus of limited value if our aim is to compare across different political and institutional

contexts. Prominent studies of intergenerational poverty tend to focus on individual (rather than family or household) earnings, and often only among fathers and sons (Björklund and Jäntti, 1997; Blanden, 2013; Corak, 2006; Mazumder, 2005).

This study aims to promote conceptual and methodological improvements, based on newly harmonized datasets, to revitalize the literature on intergenerational poverty. We harmonize panel datasets across five high-income countries with different institutional features, allowing for direct comparisons of intergenerational poverty using post-tax/transfer household income measures for each country. We address cross-national variations in selective attrition, attenuation bias, life-cycle bias, and other factors that could potentially affect cross-national comparability.

Conceptually, we distinguish seven competing perspectives on intergenerational poverty and, unlike much of the existing literature, we explicitly test competing theories of poverty that focus on family characteristics, market outcomes, and welfare state institutions in explaining the intergenerational persistence of poverty. Moreover, we access restricted data for the U.S. to investigate the role of local conditions in shaping the country’s comparative rate of intergenerational poverty (Chetty et al., 2018; Sharkey, 2013).

Methodologically, we present a decomposition framework to empirically adjudicate competing perspectives on intergenerational poverty. The framework fully decomposes the intergenerational persistence of poverty into family background effects (e.g. the role of parental education or employment), mediation effects (e.g. the role of education, employment, and family structure in adulthood), tax and transfer insurance effects (e.g. the role of the state in reducing income disadvantages with certain education, employment, or family structure features), and a residual poverty penalty. We further decompose our mediation effects into two sub-components: benchmark attainment (how childhood poverty is associated with adult benchmarks, such as higher education) and benchmark returns (the pre-tax/transfer returns to those benchmarks). In doing so, we are able to not only provide high-quality descriptive evidence on cross-national variation in intergenerational poverty, but we can also distinguish

the specific mechanisms through which poverty persists across high-income countries.

Substantively, our findings lead to three primary takeaways for the intergenerational mobility and poverty literature. First, we find that the intergenerational persistence of poverty is notably stronger in the U.S. relative to other high-income countries. Spending one's entire childhood in poverty in the U.S. is associated with a 42 percentage point increase in the mean poverty rate in early adulthood (ages 25 to 35). This is four times stronger than in Denmark and Germany, and more than twice as strong as in Australia and the UK. We document that the strength of intergenerational poverty is not systematically related to the extent of childhood poverty. Moreover, we demonstrate that the study of intergenerational poverty is conceptually and empirically distinct from evaluations of intergenerational income mobility, and thus research on intergenerational poverty warrants a discrete, issue-specific analysis within the broader economic mobility literature.

Second, our decomposition framework reveals that the higher intergenerational persistence of poverty in the U.S. is not primarily channeled through differential access or returns to higher education, the dominant focus of the broader intergenerational mobility literature (Torche, 2011). The U.S.'s comparative disadvantage is not driven by family background effects or mediation effects; instead, the U.S. disadvantage has its roots in weaker tax/transfer insurance effects and a stronger residual poverty penalty. While Denmark and the UK use taxes/transfers to reduce their intergenerational persistence of poverty by 10 and 16 percentage points, respectively, the U.S. reduction is merely 2 percentage points through taxes/transfers. We find that poverty persistence is largely channeled through family background effects in Denmark, a country in which institutions generate more egalitarian access and returns to adult benchmarks such as education; in the UK and Germany, in contrast, adult mediators, such as education and employment, carry relatively more weight than family background.

Third, we expand our U.S. analysis to reveal that the country's comparatively strong intergenerational poverty persistence is not primarily channeled through neighborhood ef-

fects or racial discrimination. Even among White individuals, and individuals in the most economically mobile neighborhoods in the U.S., the intergenerational persistence of poverty is stronger than in our other high-income countries. Moreover, we rule out that the comparable U.S. disadvantage is channeled through wealth, home ownership, physical health, union membership, or past incarceration. Instead, a weak system of tax/transfers, as well as more severe unobserved consequences of exposure to poverty in childhood, explain the U.S.'s outlier status. These findings are consistent across relative and absolute measures of poverty, as well as an alternative measure of material hardship, namely food insecurity.

This study's data, conceptual, and methodological advancements offer an overdue foundation for future research on the intergenerational persistence of poverty across high-income countries. Our substantive findings, meanwhile, advance our knowledge on the mechanisms through which disadvantage persists across time, as well as of potential strategies for increasing mobility out of poverty.

2 Background

Intergenerational Persistence of Poverty

A large literature studies the association between parents' and children's socioeconomic outcomes, or the intergenerational persistence of disadvantage (Torche, 2015). In recent decades, sociologists, demographers, and economists have investigated parent-child associations through the lens of occupational mobility, social class, educational outcomes, individual earnings, wealth, and more (Corak et al., 2014; Torche, 2015). Our study's focus on the intergenerational persistence of poverty shares some commonalities with this literature, but it also includes important distinguishing features, which we elaborate on here.

Conceptually, poverty represents an economic state in which a household's resources are insufficient to meet basic needs and/or in which members of a household cannot adequately participate in society (Atkinson, 2019). Whereas intergenerational income elasticities and

parent-child rank analyses simultaneously capture economic mobility across the full parent and child income distributions, a focus on intergenerational poverty captures mobility from a state of deprivation.

Analytically, the study of intergenerational poverty generally operationalizes ‘socioeconomic outcomes’ using measures of income, consistent with much of the recent intergenerational mobility literature; however, measuring poverty requires a more comprehensive measure of income than mobility studies tend to adopt. Specifically, the poverty literature has emphasized the importance of measuring poverty using a post-tax, post-transfer household income definition to fully capture the set of resources through which a household can meet its basic needs (Atkinson, 2019; Brady et al., 2017; National Academy of Sciences, 2019).

In practice, studies claiming to assess the intergenerational persistence of poverty rarely meet this standard; instead, they often focus on individual earnings and often exclude women and the lowest-income men from their analysis altogether. In asking “Do Poor Children Become Poor Adults?”, for example, Miles Corak’s influential study compares generational earnings elasticities between fathers and sons across countries (Corak, 2006). Put differently, the study compares estimates of individual earnings rather than post-tax/transfer household income, it examines upward and downward mobility across the full parent and child earnings distributions, and it excludes women from the analysis. The study’s log-log specifications also exclude individuals with zero current earnings, who are perhaps the most likely to be in poverty. These practices are not unique to Corak (2006), but instead are common among studies that examine upward mobility from poverty (Björklund and Jäntti, 1997; Corcoran et al., 1992; Mazumder, 2005).

How researchers measure incomes for individuals likely to be in poverty can also affect conclusions of studies focused more broadly on intergenerational income elasticities. Particularly in studies of earnings correlations using logged incomes, zero values (individuals without current earnings) are either dropped or manipulated with an artificial income (a

value of 1 to ensure inclusion in log transformation). Such approaches can lead to strongly biased estimates of intergenerational disadvantage, both in terms of the strength of parent-child income associations and of the mechanisms underpinning intergenerational transmission (Engzell and Mood, 2021; Mitnik and Grusky, 2020). Administrative estimates of intergenerational mobility are also vulnerable to this problem, particularly in the U.S.: tax-based records of intergenerational mobility exclude many of the poorest households given that the low-income population is not mandated to file taxes.

In contrast, our analysis is less vulnerable to these challenges: we can produce estimates of poverty rather than income (limiting censoring bias) over at least five years of childhood (limiting attenuation bias) and over multiple years between ages 25 and 35 (limiting life cycle bias).¹ Further justifying a focus on intergenerational poverty is evidence of nonlinearity in intergenerational income elasticities, particularly in studies that account for censoring bias and include very-low-income adults in their analysis (Mitnik and Grusky, 2020).

The few intergenerational studies that adopt a more comprehensive measure of poverty are generally focused on a single country, and the U.S. in particular (Corcoran and Adams, 1997; Parolin et al., 2022). These single-country studies can be useful in isolating whether specific policy interventions can, in any given context, promote upward mobility. In practice, a large share of the U.S.-focused literature has studied intergenerational “welfare dependence,” or the association of parents’ receipt of social assistance benefits with their children’s eventual receipt of such benefits (Corcoran, 1995; Hartley et al., 2022). Such studies, by design, ignore how variation in national policy context can influence the magnitude of upward mobility, as well as the mechanisms through which it occurs, with implications for our understanding of the social processes through which poverty persists across the life-course.

Our study, in contrast, is able to adjudicate competing theoretical perspectives of upward mobility from poverty, including the characteristics of one’s parents, behavioral char-

¹Though our study faces a potential sampling frame bias that all surveys face, we emphasize that administrative estimates based on tax records more explicitly experience this form of error due to low-income households not being required to file taxes.

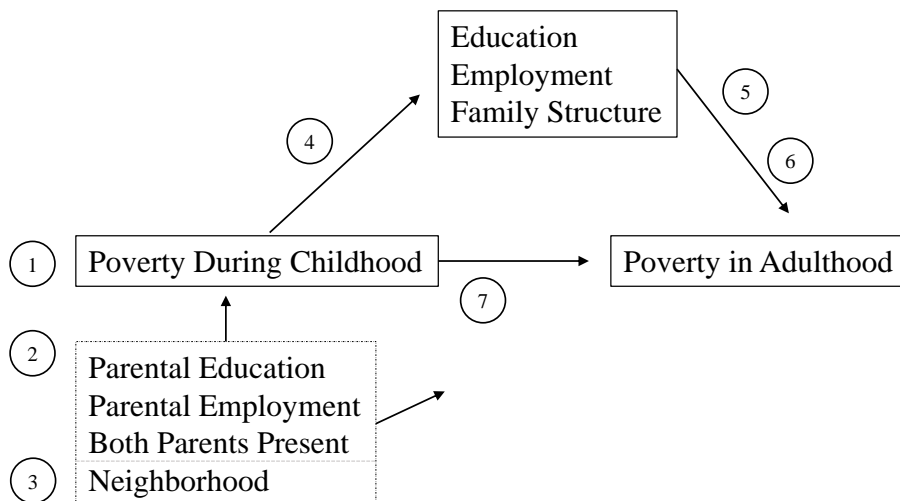
acteristics in adulthood, the role of taxes/transfers, and more. While prior poverty studies have emphasized the importance of examining these competing perspectives simultaneously (Brady, 2019; Chen and Corak, 2005), no study, to our knowledge, has convincingly done so while studying the intergenerational persistence of poverty.

We are not the first to lament the lack of comparative research on intergenerational poverty. In their review of the literature, Stephen Jenkins and Thomas Siedler (2007:5) emphasize the lack of comparative research, writing that “most of research about intergenerational links has been undertaken using US data, and it is not clear that any specific conclusions should carry over to another country with very different social norms and institutions” (Jenkins and Siedler, 2007). More than a decade later, a review from Brian Nolan led to a similar conclusion: “while studies that trace current poverty or disadvantage to conditions in childhood exist for many countries, available research has struggled to compare directly the strength of this transmission across countries in a robust fashion” (Nolan, Forthcoming). This study addresses these concerns and advances the study of intergenerational poverty.

Competing Perspectives on Intergenerational Poverty

What can explain the link between childhood poverty and exposure to poverty in adulthood, and the strength of that relationship across place? In reviewing the poverty literature, we identify seven dominant and often competing perspectives on intergenerational poverty. We illustrate these seven perspectives in Figure 1, which we return to when elaborating on each. Afterward, we will describe our decomposition framework that empirically adjudicates the relative strength of the competing perspectives in shaping cross-national variation in intergenerational poverty. As a preview, the decomposition framework will capture how the association of family resources and adult poverty status (perspective 1) is channeled through family background (perspective 2), adult mediation effects (perspectives 4 and 5), tax and transfer insurance effects (perspective 6), and a residual (perspective 7). We then separately evaluate within-country variation across place (e.g. U.S. counties) of the strength

Figure 1: Seven perspectives on the intergenerational persistence of poverty



Notes: Each circled number represents one of the seven perspectives on intergenerational poverty that this section of the manuscript discusses.

and channels of intergenerational poverty (perspective 3).

Perspective 1: Family Resources and Investment. The first perspective on intergenerational poverty argues that family resources have direct consequences for child development and, in turn, the likelihood of poverty in adulthood.

In the economics literature, the Becker-Tomes model (1979) argues that parental resources affect parents’ investments into their children’s “human capital,” or their education and health in particular. Families with higher incomes can better balance demands for current consumption (e.g. paying rent and feeding the family) with investments that generate longer-run rewards for children (e.g. tutoring and schooling). Solon (1992) suggests that parental investments are particularly consequential where public investments into children are lower, and when returns to education are higher, both of which tend to be true in the U.S. compared to other high-income countries (Gornick and Jäntti, 2012).

The Family Investment Model of child development similarly acknowledges that more resources also allows for more time with children, including time spent reading books and other enrichment activities associated with more favorable development outcomes (Conger

et al., 1992; Jackson and Schneider, 2022; Solon, 1992). A lack of resources, meanwhile, can generate psychological distress and harsher parenting, further inhibiting child development (e.g. Family Stress Model) (Cross, 2020), and can also result in bio-social developmental hindrances (McEwen and McEwen, 2017). In line with these models, prior research has established that public income transfers can contribute to improvements in children’s health, well-being, test scores, high school completion rates, and college attendance rates (Bastian and Micheltore, 2018; Berger et al., 2017; Cancian et al., 2013; Hoynes et al., 2016), whereas policy-driven reductions in income lead to more unstable living conditions for children in low income households (Wildeman and Fallesen, 2017).

In Figure 1, the resources perspective is represented by the encircled 1 alongside our measure of exposure to childhood poverty. As we discuss later, we use a post-tax, post-transfer measure of childhood poverty that captures a comprehensive set of available household resources that can be used for investments into the children’s and family’s well-being.

Perspective 2: Family Background. A second perspective argues that it is not merely family income that matters in shaping opportunity, but also other characteristics of the family that may be associated with their income, such as the presence of both parents, or the education and employment of the parent(s) (Harding et al., 2003). This “correlated disadvantages” argument (Corcoran, 1995) suggests that even if two families had equivalent incomes, children in the family with comparatively lower-educated parents, as one example, may nonetheless experience poorer later-life economic outcomes (Haveman and Wolfe, 1995).

The family background perspective is central to *What Money Can’t Buy: Family Income and Children’s Life Chances*, in which Susan Mayer (1998) argues that parental preferences and traits, more so than income, affect children’s later-life opportunities. Mayer argues that investments into children’s human capital, such as the purchase of books, are relatively affordable, and influxes of cash payments to parents with children often lead to consumption on leisure goods and services rather than investments into children. Family traits thus matter as much, if not more, than family income, according to the argument.

There are several other potential pathways through which non-monetary characteristics of the parents and family can affect their children’s later-life economic opportunity. Evidence on role model effects suggests that children frequently take cues from their parents’ behaviors that carry over into adulthood, including whether to pursue higher education or employment (Corcoran, 1995; Harding et al., 2003). Analyses of intergenerational welfare receipt, for example, often point to culture as a mediating device through which a child may view receipt of welfare as a socially legitimate income source in adulthood (see a summary of cultural arguments in Corcoran, 1995). Moreover, parenting styles, more so than material well-being, may have stronger influence on children’s cognitive skills (Esping-Andersen, 2016, Corak, 2006), and family instability has been linked directly to downward mobility (Bloome, 2017). Regardless of the specific pathways through which family background matters (which is beyond the scope of the present study), past research has convincingly demonstrated that it is likely to matter for children’s later-life outcomes.

In Figure 1, the family background perspective is represented by the encircled 2 alongside our measures of parental education and employment, and the presence of both parents (as a non-exhaustive list of family background characteristics). Empirically, the strength of family background in shaping the intergenerational persistence of poverty can be descriptively estimated based on the weakened association of childhood poverty and adult poverty when accounting for family background characteristics.

Perspective 3: Place Effects. A set of related arguments moves beyond income and family background to instead focus on the characteristics of the place where the child is raised. Many studies have demonstrated that neighborhood effects carry implications for economic and social well-being that cannot be reduced to family resources or family background (Sharkey and Faber, 2014). In the U.S., in particular, several studies have documented the persistent negative consequences of living in areas where disadvantage is more concentrated (Chetty et al., 2014; Sharkey, 2008).

Perhaps most prominently, Wilson (1987) has demonstrated how labor market changes

that induce declining demand for industrial workers can lead to a cascading set of challenges – from declining employment opportunities to declining revenues for maintaining public services – that generate a persistent, geographic concentration of poverty. More recently, Sharkey (2013) documents that younger Black adults are 10 times more likely to live in poor neighborhoods than younger White adults, and that growing up in one of these high-poverty neighborhoods affects children’s cognitive development. How much a neighborhood affects children’s economic opportunity is likely conditional on the neighborhood’s characteristics and how persistently exposed a child is to the neighborhood (Sharkey and Faber, 2014).

Outside of the U.S., evidence of negative place effects is less consistent. A study from Toronto, for example, finds no strong effects of low-income children’s neighborhoods on future earnings (Oreopoulos, 2003). Musterd’s (2019) review of neighborhood effects in Europe, where welfare state and labor market institutions tend to be stronger, similarly concludes that “[n]eighborhood effects in Europe seem to be milder than in the USA” (Musterd, 2019). Though U.S.-specific evidence of place effects is strong, it nonetheless remains unclear how spatial variation in intergenerational poverty across the U.S. compares to the overall U.S. performance relative to other high-income countries. Such an analysis has implications for evaluating how neighborhood effects rank among these competing perspectives in shaping the intergenerational persistence of poverty in the U.S.

In Figure 1, the place effects are represented by the encircled 3 alongside our measure of the neighborhood in which a child is raised. As we discuss later, we only access place effects for our U.S. sample (through restricted-access PSID data). We assess whether variation in intergenerational poverty across low- and high-mobility neighborhoods across the U.S. affects the U.S.’s overall performance relative to other high-income countries.

Perspective 4: Mediation through Benchmark Attainment. The next two perspectives focus broadly on mediation effects, but from two different perspectives: differential attainment of benchmarks associated with economic success, and differential returns to given benchmarks. Here, we focus on the fourth perspective: benchmark attainment, or the asso-

ciation of childhood poverty with achieving adult benchmarks.

Specifically, *benchmarks* refer to measurable milestones in adulthood that are often associated with reduced likelihood of poverty, such as completing high school, attaining a university degree, finding full-time employment, and entering into a stable family arrangement (Parolin et al., 2022). More exposure to poverty during childhood often leads to a lower likelihood of meeting these benchmarks (Parolin et al., 2022). As such, benchmark attainment is likely lower for adults with more disadvantaged childhoods, though the strength of this relationship likely varies across place.

Consider access to a university degree, which is the perhaps the most commonly-studied mediation effect in the intergenerational mobility literature (Blau and Duncan, 1967; Hout and DiPrete, 2006; Torche, 2011). Higher education is often considered the ‘Great Equalizer’ in that economic origins matter less for adult outcomes among the subpopulation that finishes university; however, access to higher education is strongly stratified, and especially in contexts where the cost of attending university is high (Torche, 2011). Among the countries in this study, the U.S. has the highest average tuition fees for public universities, while university attendance in Denmark is free and students receive a monthly stipend (Corak et al., 2014). These differential barriers to access may shape the relationship between exposure to child poverty and the likelihood of obtaining a university degree. In turn, policy recommendations for improving upward economic mobility often focus on access to education. Blanden’s study of intergenerational mobility in the UK, for example, emphasizes “the importance of improving the educational attainment and opportunities of children from poorer backgrounds for increasing social mobility,” a takeaway that is mirrored in studies focusing on other high-income countries, as well (Blanden et al., 2006; Torche, 2015).

However, even countries with more affordable university tuition, such as Germany, may still experience strong mediation through education. Tracking in Germany sorts school-aged children into different education pathways according to their early educational performance. It is well-established that students from poorer families are more likely to be tracked away

from the pathways that lead to a university degree and higher pay (Hillmert and Jacob, 2010). Beyond education, studies have linked childhood poverty to lower likelihood of employment in adulthood and a higher likelihood of having a child before marriage, poorer health, and more (Duncan et al., 2012). In Figure 1, these benchmark attainment effects are represented by the encircled 4, connecting childhood poverty to adult benchmarks.

Perspective 5: Mediation through Benchmark Returns. It is not merely differential attainment of benchmarks that matter, however, but also the returns to those benchmarks (e.g. the earnings advantages associated with completing a university degree). Consider that if attainment of higher education were unequal, but higher education had no relative economic benefit compared to that of not achieving higher education, then the differential attainment of higher education would not have any weight in explaining intergenerational poverty. Put differently, benchmark attainment and returns interact to shape overall mediation effects. While the prior perspective discussed *attainment*, this perspective focuses on differential *returns* (based on pre-tax, pre-transfer earnings) associated with a given benchmark.

Higher education is central to this perspective. Where returns to education are higher, theory suggests that market earnings differentials and intergenerational earnings elasticities should be larger (Solon, 1992). To exemplify, the U.S. has particularly high university wage premiums, as well as comparatively strong intergenerational earnings elasticities (Blanden, 2013; Solon, 2004; Torche, 2015). Cross-national variation in these education-related earnings premiums can be attributed to many factors, such as supply of, and demand for, higher-educated workers (Goldin and Katz, 2008); technology-induced productivity gains biased toward knowledge-intensive occupations (Goos et al., 2014); and labor market institutions that regulate the earnings distribution (Parolin, 2020).

From an intergenerational poverty perspective, the negative association of higher education with poverty in adulthood is likely to be conditional on prevailing labor market institutions. In countries where organized labor is stronger and where minimum wages are

higher, a university degree may be of less necessity for avoiding poverty (OECD, 2019). Still, even in such contexts, education-based differences in economic opportunity are likely to persist (Serafina and Tonkin, 2014).

Employment and family structure in adulthood are also associated with different returns to benchmarks: the lack of employment or working few hours are linked to lower household earnings, conditional on the earnings received by other members of the household. Household and family structure should also help to explain differential outcomes: two-adult households are more likely than single-adult households, and single-parent households especially, to have larger pre-tax, pre-transfer incomes (Nieuwenhuis and Maldonado, 2018). Given rising assortative mating, higher returns may also be increasingly concentrated in households with two higher-educated adults (Breen and Salazar, 2011; Parolin and Gornick, 2021), further reducing the likelihood of poverty among higher-educated individuals.

We elaborate on our full list of mediators in the Data and Methods section. In Figure 1, benchmark returns are represented by the encircled 5, connecting adult benchmarks to adult poverty status.

Perspective 6: Tax and Transfer Insurance Effects. Our sixth perspective captures the insurance effect of taxes and transfers against the attainment of our observed mediators and family background characteristics (we provide an empirical specification of the insurance effect later).

While earnings returns to benchmarks such as education or employment have received considerable attention in the intergenerational mobility literature, market earnings are only one component of income. As the cross-sectional literature on poverty and inequality has regularly demonstrated, taxes and transfers also matter considerably in shaping poverty outcomes. When taxes and transfers reduce the penalty associated with not meeting a given benchmark (i.e., reducing the likelihood of poverty for an unemployed individual), they effectively insure against social risks and reduce the relevance of differential earnings returns. This leads to our sixth perspective: the tax and transfer insurance effect.

Direct income transfers from the state are among the most powerful interventions in addressing poverty and inequality. Cross-nationally, country patterns of the strength of tax and transfer systems are well-documented: the Nordics countries tend to reduce poverty more through income transfers, whereas the U.S. has generally been a laggard, even compared to the UK (Gornick and Jäntti, 2012; Rainwater and Smeeding, 2003).

The intergenerational mobility literature has had relatively little to say about the role of taxes and transfers in shaping mobility. As noted before, a large share of the intergenerational mobility literature focuses solely on earnings and excludes government income support from their analyses altogether (see, however, Landersø and Heckmann (2017)). In studies that do incorporate this role of the state, analyses tend to focus on how income transfers boost family incomes during childhood, or on facilitating benchmark attainment, rather than insuring against risk in adulthood (Bastian and Michelmore, 2018; Corcoran and Adams, 1997). In describing the potential role of the state in shaping mobility, for example, Torche (2015) writes that “public policy could foster mobility in two ways: investing in the human capital development of disadvantaged children . . . and financing higher education to ameliorate the effect of credit constraints.” But this perspective, echoed in other mobility research (Corak, 2006), does not acknowledge the insurance effect of taxes and transfers in adulthood: even when children grow up in disadvantaged homes and lack access to higher education, the state can still intervene to reduce poverty in adulthood.

Our focus on income transfers as potentially reducing intergenerational poverty also contrasts strongly with the tradition of a U.S.-centric literature in identifying intergenerational social assistance receipt as a proxy of intergenerational disadvantage (Corcoran, 1995; Hartley et al., 2022). Poverty concerns the level of resources that a household has to consume basic necessities and participate in society; in contexts where public transfers boost household income, poverty research should acknowledge as such rather than using receipt of transfers as a proxy for disadvantage. This is particularly true for the non-U.S. countries in our sample, where receipt of income support is near-universal among some subpopulations (e.g. universal

child allowances).

As we describe later, we can produce pre- and post-tax/transfer poverty estimates for each of our comparative datasets, allowing us to measure the insurance effect of taxes and transfers. In Figure 1, this effect is represented by the encircled 6, connecting adult benchmarks to adult poverty status alongside benchmark returns.

Perspective 7: Residual Poverty Penalty. Finally, childhood poverty may operate beyond the pathways identified above in influencing poverty in adulthood. In the intergenerational mobility literature, the “direct effects of social origins” refer to the residual association of childhood and adulthood socioeconomic status (Gugushvili et al., 2017). Commonly, a residual association exists even after accounting for, as one example, access to higher education. This may also be the case in our study of intergenerational poverty. We label this potential residual effect as a “residual poverty penalty.”

A residual penalty could reflect omitted variable bias, or the influence of unobserved (and/or unobservable) characteristics that mediate the relationship of intergenerational poverty. For example, wealth (an observable characteristic, but unobserved in our data framework due to lack of information across countries) could play a role in shaping intergenerational poverty and will likely not be fully explained by education, employment, and family structure mediators. Alternatively, non-cognitive traits (typically unobservable), such as communication ability or personality, may be handed down from parents to children and are not fully aligned with other mediators.

Should these unobservable features universally affect intergenerational poverty, we may see similarly-sized residual poverty penalties across the five countries of our study. In contrast, a large variation in the residuals would suggest that other institutional features may matter. Specifically, a stronger residual poverty penalty in one country versus another could reflect real differences in the severity of child poverty exposure. In contexts where childhood poverty exposure is coupled with low-quality and low-access public services, for example, the penalty of that exposure may persist into adulthood independent of our other observed

characteristics. As one example, lack of access to affordable and quality healthcare, which is more common in the U.S., might generate conditions where poverty is more strongly associated with adverse health outcomes; to the extent that these health outcomes are difficult to measure and yet affect later-life economic opportunity, they may appear in our residual term, alongside other unobserved/unobservable correlates of poverty.²

In Figure 1, the encircled 7 represents the residual poverty penalty, connecting childhood poverty to adult poverty independent of the other mechanisms examined.

Magnitude and Mechanisms of Intergenerational Poverty across Place

In the following we attempt to adjudicate these seven competing perspectives to explain cross-national variation in the intergenerational persistence of poverty. To do so, we convert the perspectives into a four-part decomposition framework that dissects the intergenerational persistence of poverty into family background effects, mediation effects, the tax/transfer insurance effect, and the residual poverty penalty. We elaborate on the precise measurement of these four components later. Here, we briefly discuss expectations of why our five countries may vary with respect to the strength of, and the mechanisms generating, intergenerational poverty.

Why might the strength of the intergenerational persistence of poverty vary? We anticipate that countries with (1) stronger stratification into adult benchmarks such as education and full-time employment, (2) larger earnings returns to those benchmarks, and (3) weaker tax/transfer insurance effects will have the largest intergenerational persistence of poverty. These characteristics accurately summarize the U.S.; as such, we anticipate that the U.S. will feature the strongest intergenerational persistence of poverty. The U.S. is the archetype of a liberal and residualist welfare state, featuring stratified access to higher education and employment, strong earnings returns to higher education, and a comparatively weak welfare state to insure against risks in adulthood.

²The residual term could also include differential returns to benchmarks for individuals from more versus less advantaged backgrounds. For example, two individuals with a university degree may experience different earnings returns if the more advantaged individual has social connections that can translate into higher-paid employment. Later, we discuss how we test for this possibility.

We anticipate that Australia and the UK will follow the U.S. Australia features a more comprehensive welfare state than the U.S., including the provision of universal health care, as well as higher levels of unionization and stronger employment protection laws (Castles, 1994). And yet, higher education is costly relative to most European countries, even if it is generally more affordable than in the U.S. Meanwhile, the UK is typically classified as a liberal welfare state in line with the U.S., but has historically featured more generous income transfers, as well as provision of state-provided universal healthcare (Waldfogel, 2013). University education is cheaper than in the U.S., but more expensive than in Denmark and Germany. Labor market institutions are also stronger than in the U.S., as evidenced by the UK's comparatively high rate of union membership (Denny and Nickell, 1991).

We then anticipate that Germany and Denmark will follow Australia and the UK. Germany features a strong, but employment-centered welfare state in which so-called 'labor market insiders' (those with long employment histories and coverage under collective bargaining agreements) are well-protected against social and economic risks in adulthood, while the 'labor market outsiders' are often left with a more residualist social protection. While university education is free, early-age tracking into stratified education trajectories largely determines who earns the right to attend university (Gamoran and Mare, 1989; Van de Werfhorst, 2019). At the same time, strong vocational education, combined with comparatively strong labor market institutions, reduces the earnings rewards associated with higher education and may, in turn, weaken the association between university education and adult poverty status.

Denmark, in contrast, arguably features the most generous tax and transfer system among our five countries. Higher education is free, employment-facilitating childcare is strongly subsidized, and high collective bargaining coverage compresses the Danish earnings distribution and, in turn, the relative returns to education and employment benchmarks.

Importantly, we do not anticipate that the strength of intergenerational persistence is directly related to levels of childhood poverty in any given country; while weak welfare state

and labor market institutions can influence both poverty levels and intergenerational persistence, we later demonstrate that poverty levels are of limited relevance in explaining poverty persistence. The consequence is that the study of intergenerational poverty is conceptually and empirically distinct from the study of child poverty *levels*.

In which contexts might family background effects or adult mediators carry more weight in explaining intergenerational poverty? We anticipate that family background effects – such as parental education, employment, and family structure during one’s childhood – will carry relatively more weight in contexts where institutions more strongly equalize access and returns to adult benchmarks, such as one’s education and employment. Put differently, where higher education is freely available, and where labor market institutions generate low earnings inequalities, adult mediators should explain less of intergenerational poverty; instead, any differences in personal characteristics associated with family background may carry more weight. Denmark best embodies the political and institutional characteristics described above; as such, we expect family background effects to explain more of intergenerational poverty in Denmark relative to other countries.

In contrast, we expect mediators to carry more weight in contexts where welfare state, labor market, and education systems stratify to a greater extent attainment of adult benchmarks, and do less to compress the relative returns to those benchmarks. The U.S., UK, and Australia align, to varying degrees, with these characteristics, while Germany partially aligns. Germany’s educational tracking system may influence benchmark attainment among children with greater exposure to childhood poverty, even if comparatively strong labor market institutions in Germany compress the earnings distribution.

In which contexts might tax/transfer insurance effects or the residual poverty penalty explain more variation in the intergenerational persistence of poverty? We anticipate that the tax and transfer insurance effect will be stronger in Denmark than in the other countries studied, and will be weakest in the U.S. As noted, Australia and particularly the UK boast stronger welfare states than the U.S. and are likely to do comparatively more to reduce

the penalties associated with a lack of benchmark attainment. In Germany, we expect a modest role of taxes/transfers given (1) the country’s employment-centered system of social insurance and (2) the lower likelihood that adults who were raised in poverty are among the ‘insiders’ benefiting from those protections. As noted before, we expect our residual poverty penalty to be strongest in countries where exposure to childhood poverty may carry more severe consequences for well-being, namely the U.S. The stronger and more varied the consequences of poverty, the stronger the likelihood that its persistent effects will operate through pathways, such as physical health, that are not fully observable in survey-based datasets.

3 Data & Methods

Our primary data sources are panel data files for the United States (U.S.), United Kingdom (UK), Australia (AU), Germany (DE), and Denmark (DK). For the U.S., UK, AU, and DE, we use harmonized data files from the Cross-National Equivalent File (CNEF) database, which we then further harmonize to allow for comparable estimates of intergenerational poverty. We supplement our U.S. dataset with a restricted-access version of the PSID that provides geographic identifiers on where our residents have lived. We also supplement the UK files with variables extracted from the British Household Panel Survey and the UK Household Longitudinal Survey³.

For Denmark, we use administrative (registry) data harmonized to match the input variables of the CNEF files. Comparing estimates from Danish register data to survey-based estimates from other countries has precedent in prior research (most notably, see Landersø and Heckmann (2017)); we address potential challenges of comparing across these data sources, such as differential rates of selective attrition, in a later section.

³We add the following variables for the UK: post-tax income for 2007 and 2008, current (monthly) income for the years before 2008 and education for all years (these variables were absent in the CNEF files at the time this text was written). Both the BHPS and UKHLS are available at <https://ukdataservice.ac.uk/>. The first two variables, in particular, were extracted from the BHPS-derived dataset Bardasi et al., 2012.

Table 1: Overview of sample and data sources

Country	Data Sources	Coverage	Final Sample
United States	Panel Study of Income Dynamics	1982 - 2019	9,561
United Kingdom	British Household Panel Survey & UK Household Longitudinal Study	2004 - 2017	962
Australia	Household Income Dynamics	2013 - 2020	1,563
Germany	Socio-Economic Panel	1996 - 2016	1,708
Denmark	Statistics Denmark Register Data	1980 - 2019	1,801,813

Coverage refers to the span of years in which we can observe the adults that make it to our final sample in their adulthood (i.e. their childhood may have taken place before the coverage period). Adults are defined as individuals between ages 25 and 35. Note that, for the US, the PSID was conducted every two years from 1997. For the UK, it is not possible to link UKHLS and BHPS data in 2009.

For all countries, we generate an added list of variables that are not present in the CNEF-provided files. We detail these in the codebook in the Supplemental Appendix. Some indicators required proxying to achieve harmonization across all countries. For example, we do not consistently observe who is the mother of an individual in our base samples, but we are able to observe all the relationships within the household with respect to the household head. Thus, we consider the “mother” a female household head or partner of the head. Nonetheless, most variables of interest were readily comparable.⁴

The harmonized files allow us to measure concepts – such as post-tax/transfer income, employment rates, and demographic indicators – similarly across countries throughout the lives of each of our respondents. Our measure of post-tax/transfer income includes near-cash transfers and refundable tax credits, such as SNAP and EITC benefits provided in the U.S. In each of the countries, we can observe a subset of respondents’ income throughout their childhood (between birth and age 17) and during their early adulthood (between ages 25 to 35).

⁴Noteworthy exceptions are that the UK employment variable changed in 2008 - we use level of employment as a proxy for “employed” after 2008. There is no discontinuity in the mean level of employment at the switch. Furthermore, the UK data in 1991 does not have weights, so we have used unweighted income for the construction of poverty measures in that year. Issues regarding current versus annual income measures in the UK can be found in Appendix G.

We measure each adult’s poverty rate as the mean poverty rate between ages 25 and 35. For adults not observed through age 35, we take the mean poverty rate between age 25 and final age of observation below age 35. Observing poverty over several possible years, rather than a single year (say, only at age 25), reduces the risk of single-year measurement error (transitory fluctuation bias), income volatility (Latner, 2018), or life cycle bias influencing our results (Solon, 1992; Torche, 2015). Given that poverty risks are likely to decline between ages 25 and 35, we control for the final age of observation in all models.⁵

We measure exposure to childhood poverty as the mean poverty rate between birth and age 17 and restrict our sample to adults who were observed for at least 5 years during their childhood to ensure that we can reliably estimate their exposure to poverty during childhood.

For all poverty measurements, we follow standard practice of applying a relative poverty measure in which poverty thresholds are set at 50 percent of the national equivalized median household income for the given country and year. We apply a square root equivalent scale. We construct thresholds using nationally representative country-year data⁶. Given that the poverty threshold is year- and country-specific, our analytical focus is more akin to *relative* mobility out of poverty rather than *absolute* mobility from the poverty threshold applied in the parent’s years of observation. This means, for instance, that a case in which incomes uniformly increase in percentage terms would yield minor effects on exits out of poverty.⁷ In Appendix D , however, we present alternative results using an ‘absolute’ poverty threshold, PPP- and inflation-adjusted, across all country-years. We also present results using a variation of the relative poverty threshold set to 60 percent of the median for each country-year.

Our final sample therefore comprises the set of individuals for which we observe their

⁵In our final sample, the mean age of the final observation for each adult ranges from 28 in Australia to 33 in Denmark.

⁶In the case of Germany, the poverty threshold is separately calculated for East and West Germany until 2014, after which CNEF data does not provide information on the individual’s region of residence, and so we use a whole-Germany threshold. We explore the different patterns of poverty persistence across regions in Germany in Appendix E

⁷In fact, poverty rates defined as half of median income would increase in such a scenario.

income for at least 5 years in childhood and at least once after turning 25. We collapse our panel data at the individual level, obtaining adult outcomes (means/maximums over ages 25 to 35) and childhood characteristics (means from birth to age 17). We provide further details on variable construction in the Supplemental Appendix and summary statistics in Appendix B.

Methods

We introduce an accounting framework to descriptively decompose the sources and magnitudes of the intergenerational persistence of poverty into four primary components: family background (F), mediating benchmarks (M), taxes and transfers (T), and a residual term (R) that captures the persistent effect of childhood poverty on adult poverty that is not channeled through F , M , or T . We further decompose our ‘mediating benchmarks’ M into two components: benchmark attainment and benchmark returns. Related to seven perspectives presented before, our decomposition framework captures how the association of family resources and adult poverty status (perspective #1) is channeled through F (#2), M (#4 and #5), T (#6), and R (#7). We return to place effects (#3) later.

Equation (1a) provides our baseline equation for measuring the intergenerational persistence of poverty, while Equation (1b) documents how we decompose the intergenerational persistence of poverty into its four sub-components.

$$Pov_{Post} = \beta_1 ChPov + \varepsilon \tag{1a}$$

$$\beta_1 = IGPov = F + M + T + R \tag{1b}$$

In Equation (1a), β_1 captures the association of (post-tax/transfer) child poverty exposure ($ChPov$) with post-tax/transfer poverty in adulthood (Pov_{Post}) for individuals in a given country. β_1 thus captures the mean association of childhood poverty with adult poverty, or the intergenerational persistence of poverty ($IGPov$). Recall that childhood poverty is averaged over birth through age 17, while adult poverty is averaged over ages 25 through

35. Equation (1b) formalizes this understanding and details the four components in which we will subsequently decompose $IGPov$.

To isolate the effect of family background (F), we estimate Equations (2a) through (2c) as follows:

$$Pov_{Pre} = \rho_1 ChPov + \varepsilon \quad (2a)$$

$$Pov_{Pre} = \delta_1 ChPov + \delta_2 Fam + \varepsilon \quad (2b)$$

$$F = \rho_1 - \delta_1 \quad (2c)$$

Equation (2a) is similar to (1a), but instead applies a pre-tax/transfer version of adult poverty status (recall that we will estimate the effects of taxes and transfers in a later step). The parameter ρ_1 gives us the association of childhood poverty with pre-tax/transfer young adult poverty; in equation (2b), the parameter δ_1 provides us the conditional association after incorporating family background controls (Fam) into the model. We present all indicators included in this vector in Table 2. The difference between these two parameters informs of us F , or the influence of family background characteristics on the intergenerational persistence of poverty. As before, we run models separately for each of our five countries.

To isolate the overall effect of mediating benchmarks (M), we estimate:

$$Pov_{Pre} = \gamma_1 ChPov + \gamma_2 Fam + \gamma_3 Med + \varepsilon \quad (3a)$$

$$M = \delta_1 - \gamma_1 \quad (3b)$$

Equation (3a) builds off Equation (2b), but adds in our set of mediating benchmarks into the equation. We discuss how we operationalize the mediators in Table 2. As Equation (3b) describes, the influence of the mediators, M , in shaping poverty persistence is captured by the decline in the association of childhood poverty with pre-tax/transfer adult poverty across these two equations. Recall that M itself is decomposable into two components: benchmark attainment and benchmark returns. We provide a formal definition of these two terms in

Appendix A.

To identify the effect of the tax/transfer insurance effect, and also the residual term, we conclude our framework with:

$$Pov_{Post} = \theta_1 ChPov + \theta_2 Fam + \theta_3 Med + \varepsilon \quad (4a)$$

$$T = (\beta_1 - \rho_1) - (\theta_1 - \gamma_1) \quad (4b)$$

$$R = \theta_1 \quad (4c)$$

In Equation (4a), the only difference from (3a) is the switch to a post-tax/transfer outcome indicator (capturing poverty in adulthood with a full income definition). Combined with information from the prior models, we can compute how taxes/transfers insure against our measures of family background disadvantage and not meeting our mediating benchmarks. Specifically, the first part of Equation (4b), $(\beta_1 - \rho_1)$, captures the overall effect of taxes/transfers in reducing the association of childhood poverty with adult poverty. We then subtract from that the insurance effect against unobserved/unobservable background and benchmarks, computed as $\theta_1 - \gamma_1$. The outcome provides us a direct estimate of how taxes/transfers provided to adults reduces the penalty associated with observable characteristics – such as low educational attainment or joblessness – that may also be linked to child poverty exposure. We elaborate on the calculation of this tax/transfer insurance effect in Appendix A.

As Equation (4c) specifies, the residual poverty penalty in our decomposition framework is simply θ_1 , or the remaining association of childhood poverty with post-tax/transfer adult poverty independent of F , M , and T .⁸

Table 2 summarizes the decomposition framework, the parameters of interest, and the

⁸The residual can include omitted variable bias, differential returns to omitted mediating benchmarks, and/or real variation in the severity of child poverty exposure not channeled through our observable characteristics. Given that we capture the residual after including taxes/transfers, differences in the residual could also be due to differences in the role of taxes/transfers in insuring against unobserved characteristics. The pre-tax/transfer (uninsured) residual is represented by the value of γ_1 .

specific indicators used to estimate each parameter. One can validate that the sum of equations (2c), (3b), (4b), and (4c) is equal to β_1 , or the intergenerational persistence of poverty. We weight all of our analyses using the mean of each adult's weight during childhood, following Bastian and Micheltore (2018).

We acknowledge that our framework is potentially sensitive to the order in which the given components are added; however, the framework is sequenced in its logical order: family background naturally occurs before mediating factors in adulthood, and taxes/transfers only apply to a family after its mediating benchmarks (e.g. whether currently employed or not, and other factors shaping current income) are determined. Though results could vary in alternative sequences (placing M before F could reduce the value of F), such a sequence would lack conceptual validity. We also acknowledge that, in line with most of the intergenerational mobility literature, our methods are not designed to infer causality; instead, our framework offers useful non-causal evidence on the social processes through which childhood and adulthood poverty are associated⁹. Finally, we acknowledge that F may moderate the returns to M ; later, we present an alternative specification in which we interact each M with each F but do not find that it meaningfully alters our conclusions.

⁹Ultimately, we provide (the interpretation of) an accounting exercise.

Table 2: Summary of decomposition framework and indicators of interest

Component	Parameter	Description
Intergenerational persistence of poverty (IGPov)	β_1	The association of childhood poverty with adult poverty, equivalent to the sum of F, M, T, and R
Family background (F)	$\rho_1 - \delta_1$	The influence of the following indicators on IGPov: Share of childhood in home with no [woman / man] present; share of childhood in single-parent home; age of mother at birth; mean maternal employment rate during childhood; highest educational attainment of mother; average number of children in home during childhood
Mediating benchmarks (M)	$\delta_1 - \gamma_1$	The influence of the following indicators, observed in young adulthood, on IGPov, conditional on F: has high school degree; has more than high school degree; is employed; is employed and works more than 30 hours per week; is a single parent with children present in home; is married; is married and spouse has more than a high school degree; has another person in the home who is employed (at some point in adulthood)
Tax and transfer insurance (T)	$(\beta_1 - \rho_1) - (\theta_1 - \gamma_1)$	The effect of taxes and transfers in insuring against observable family background characteristics and benchmark attainment
Residual (R)	θ_1	The persistent association of childhood poverty with adult poverty that is not channeled through F or M and is not offset by T

See Equations (1) through (4) for formal descriptions of the parameters. All mediating benchmarks are measured as mean/maximum values over the ages of 25 to 35 (see the Supplemental Appendix for precise variable definitions). In all models, we include a base set of controls for maximum and minimum age observed, sex, maximum year observed, whether living with one's parents, and the share of ages 0-5, 6-10, and 11-17, respectively, during which the individual is observed in our data. See Appendix B for descriptive statistics by country.

Data Validation & Potential Objections

In Appendix C, we take several steps to validate our data, to address potential objections regarding the comparability of our panel datasets, and to address potential shortcomings in our methodological approach. First, we present evidence that cross-national variation in selective attrition is unlikely to bias cross-national variation in our findings. Second, we demonstrate that variation in the years during which young adults are observed do not meaningfully affect our findings. Third, we verify that cross-national variation in life-cycle bias is unlikely to meaningfully affect our findings. Fourth, we document that measuring family resources during childhood is an appropriate measure of parental circumstances and can be reliably applied in an analysis of intergenerational poverty. Fifth, we show in Appendix G that our UK results are consistent, though less precise, if we exclude the post-2008 UKHLS sample, in which the procedure for collecting income questions changed relative to the BHPS. Sixth, we discuss that, due to changes in the SOEP sampling procedures in the early 1990s, we must exclude children who grew up entirely in East Germany from our primary estimates for Germany. This is consistent with past use of the SOEP data in mobility estimates (Couch and Dunn, 1997; Stockhausen, 2018), but is unfortunate given that poverty is more concentrated in East Germany. We thus present an alternative set of results for Germany in Appendix E and display how sensitive our German findings are to the exclusion of East Germany.

In short, while there are many potential challenges in comparing intergenerational poverty across countries, the evidence we present in Appendix C is able to directly address several of these concerns, while ruling out that others are likely to meaningfully affect our findings.

4 Findings

Having introduced our accounting framework and data sources, we now turn to the main analyses. Table 3 presents descriptive data on poverty, and unconditional estimates of the

intergenerational persistence of poverty, across our five countries.

Table 3: Poverty in adulthood and childhood by country

Country	(1) Association of Childhood Poverty and Adult Poverty	(2) Mean Exposure to Childhood Poverty	(3) Young Adult Poverty Rate	(4) Adult Poverty Rate if No Childhood Poverty
United States	0.43	18.6%	17.9%	9.9%
United Kingdom	0.16	15.6%	11.6%	9.1%
Australia	0.21	10.3%	9.2%	7.0%
Germany	0.15	4.7%	9.8%	9.1%
Denmark	0.08	5.4%	8%	7.5%

Germany sample excludes individuals who spent all of their childhoods in East Germany. Poverty is defined as having a post-tax/transfer income below 50% of the national median equivalized household income. See Table 1 for sample details.

Column 1 of Table 3 shows that the intergenerational persistence of poverty is 0.43 in the U.S., indicating that experiencing all of one’s childhood in poverty is associated with a 43 percentage point higher mean poverty exposure during early adulthood (relative to an adult with no child poverty exposure). In contrast, the degree of poverty persistence is 0.21 in Australia, 0.15 in Germany, 0.08 in Denmark, and 0.16 in the UK. The differences between the U.S. estimates and that of each of the other countries are statistically significant at conventional levels, as we visualize in later figures.

Column 2 displays mean childhood poverty rates for our sample of adults. The average adult in our U.S. sample spent 18.6 percent of her childhood in poverty, slightly higher than the UK rate (15.6 percent) and notably higher than the German rate (4.7 percent). Importantly, cross-national variation in the intergenerational persistence of poverty is not mechanically related to childhood poverty exposure. As one example, the UK features notably higher child poverty rates than Australia or Germany, yet features comparable poverty persistence as in those two countries.

Column 3 of Table 3 describes the mean poverty rate in early adulthood for each country,

while Column 4 presents the predicted poverty rate for a young adult with no exposure to childhood poverty. In the U.S., the mean poverty rate in early adulthood was 17.9 percent, the highest among our countries; however, the mean adult poverty rate for a person experiencing no childhood poverty was 9.9 percent in the U.S., comparable to the rate in the UK or Germany. The higher overall poverty rate in early adulthood in the U.S. is thus attributable to the higher childhood poverty rates and stronger intergenerational persistence of poverty.

We now apply our decomposition framework to explain these cross-national differences in the intergenerational persistence of poverty. Table 4 presents results from Equation (2), which allow us to measure the role of family background (F) in influencing the intergenerational poverty.

Model 1 shows the association of childhood poverty with the pre-tax/transfer poverty rate in adulthood, conditional on our baseline controls (age, sex, year, whether living with parents, and ages during childhood observed). The U.S., Australia, and UK feature comparable associations of childhood poverty with pre/tax transfer adult poverty (0.45, 0.47, and 0.48, respectively), whereas the magnitudes are smaller across Germany and Denmark (0.25 and 0.16, respectively). For all countries, the strength of that relationship declines when incorporating our family background characteristics (see Model 2), though at varying intensities, as the final column summarizes. In the U.S. and UK, family background effects absorbed, respectively, 8 and 13 percentage points of the intergenerational poverty relationship. This contrasts with the small role of family background in Germany (0.08 from a base of 0.25) and its dominant role in Denmark (0.12 from a base of 0.16).

That the family background effects descriptively explain more of the intergenerational persistence of poverty in Denmark than in the U.S. and UK aligns with the expectations we put forth earlier: in Denmark, institutions do more to equalize access and returns to adult benchmarks, leaving family background characteristics with a greater relative weight

Table 4: Association of childhood poverty with pre-tax/transfer adult poverty by country

Dependent Variable: Pre-Tax/Transfer Adult Poverty			
	M1	M2	F
United States (n=9121)			
Child Poverty	0.449*** (0.011)	0.370*** (0.015)	0.079
United Kingdom (n=798)			
Child Poverty	0.484*** (0.050)	0.356*** (0.071)	0.128
Australia (n=1556)			
Child Poverty	0.473*** (0.040)	0.295*** (0.050)	0.178
Germany (n=1683)			
Child Poverty	0.247*** (0.056)	0.172*** (0.066)	0.075
Denmark (n=1801813)			
Child Poverty	0.160*** (0.00)	0.040*** (0.00)	0.120
Gender, Age and Year Effects	✓	✓	
Family Background Controls		✓	

Models run separately for each country. 'Family background controls' include mother's age at birth, mean number of children in household during childhood, share of childhood in single-parent household, share of childhood with no adult woman in household, share of childhood with no adult man in household, educational attainment of mother, and mother's mean employment rate during childhood.

in explaining differences in adult outcomes.¹⁰

The subsequent figures address the second component of our decomposition framework: mediators (M) of intergenerational poverty. Figure 2 visualizes benchmark attainment, while Figure 3 visualizes benchmark returns, and Figure 4 presents their combined effects in mediating intergenerational poverty (see Appendix A for details on the formal relationship among these three indicators).

Specifically, Figure 2's focus on benchmark attainment presents the conditional association of child poverty with the likelihood of meeting the given benchmark in early adulthood. Panel A of Figure 2 shows that spending one's entire childhood in poverty (conditional on

¹⁰Part of the family background effect in Denmark may also be driven by immigration and/or citizenship status; we exclude these indicators from our primary analyses given inconsistent coverage across our five countries.

baseline controls and family background effects) is associated with a reduced likelihood of achieving a high school degree (or equivalent) that ranges from 14 percentage points in in Australia to 3 percentage point in Denmark.¹¹ The U.S. features a reduced likelihood of 13 percentage points, comparable to the UK, Germany, and Australia. Similarly, Panel B shows that the conditional association of childhood poverty with achieving more than a high school degree is statistically similar in the U.S. (23 percentage point disadvantage) as in Australia and the UK. In Germany and Denmark, in contrast, the conditional penalty is closer to 4 percentage points. These findings are generally consistent with evidence on greater barriers to tertiary education in the U.S., UK, and Australia, where tuition costs are notably higher (especially in the U.S.) relative to Europe.

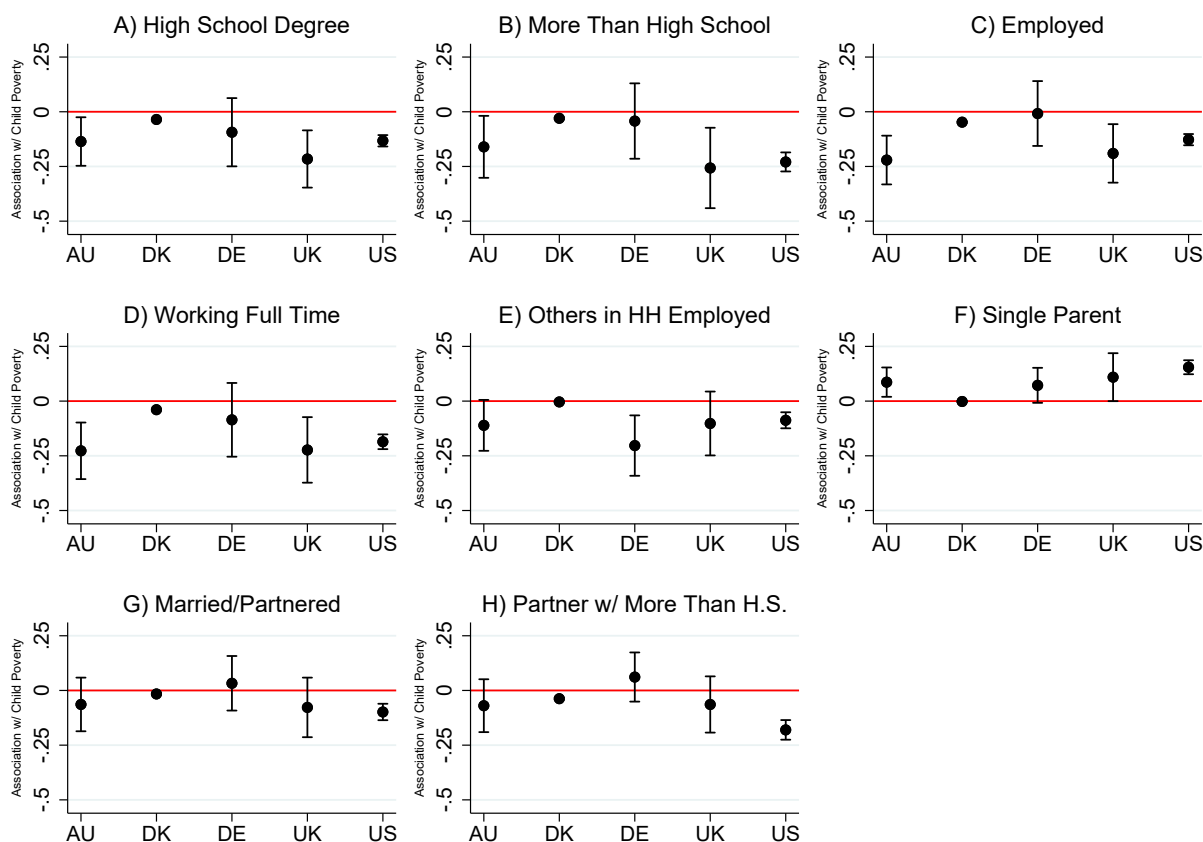
With respect to adult employment (Panel C), the U.S. is again statistically similar to the Australia and the UK, featuring a conditional penalty around 13 percentage points. In contrast, the conditional penalty of childhood poverty is 5 percentage points in Denmark and 1 percentage point in Germany. These patterns also hold for full-time employment (Panel D). Panel E shows similar patterns with respect to employment of one's household members, with the exception of Germany where exposure to childhood poverty is associated with a heavier conditional employment penalty.

In the U.S., more child poverty is conditionally associated with an increased likelihood of being a single parent, a reduced likelihood of being married/partnered and of having a partner (conditional on marriage/partnership) with more than a high-school degree (Panels F, G, and H respectively). These patterns do not obtain in the other countries observed; here, the conditional penalties are not statistically different from zero.

Broadly speaking, the U.S. shows stronger benchmark attainment effects relative to Germany and Denmark, but not compared to the UK and Australia. For benchmark attainment to meaningfully explain intergenerational poverty, however, benchmarks must be associated with reduced poverty in adulthood. Figure 3 visualizes the pre- and post-tax/transfer like-

¹¹The levels of the variables for each country can be found in appendix B.

Figure 2: Benchmark attainment: Association of childhood poverty with adult benchmarks

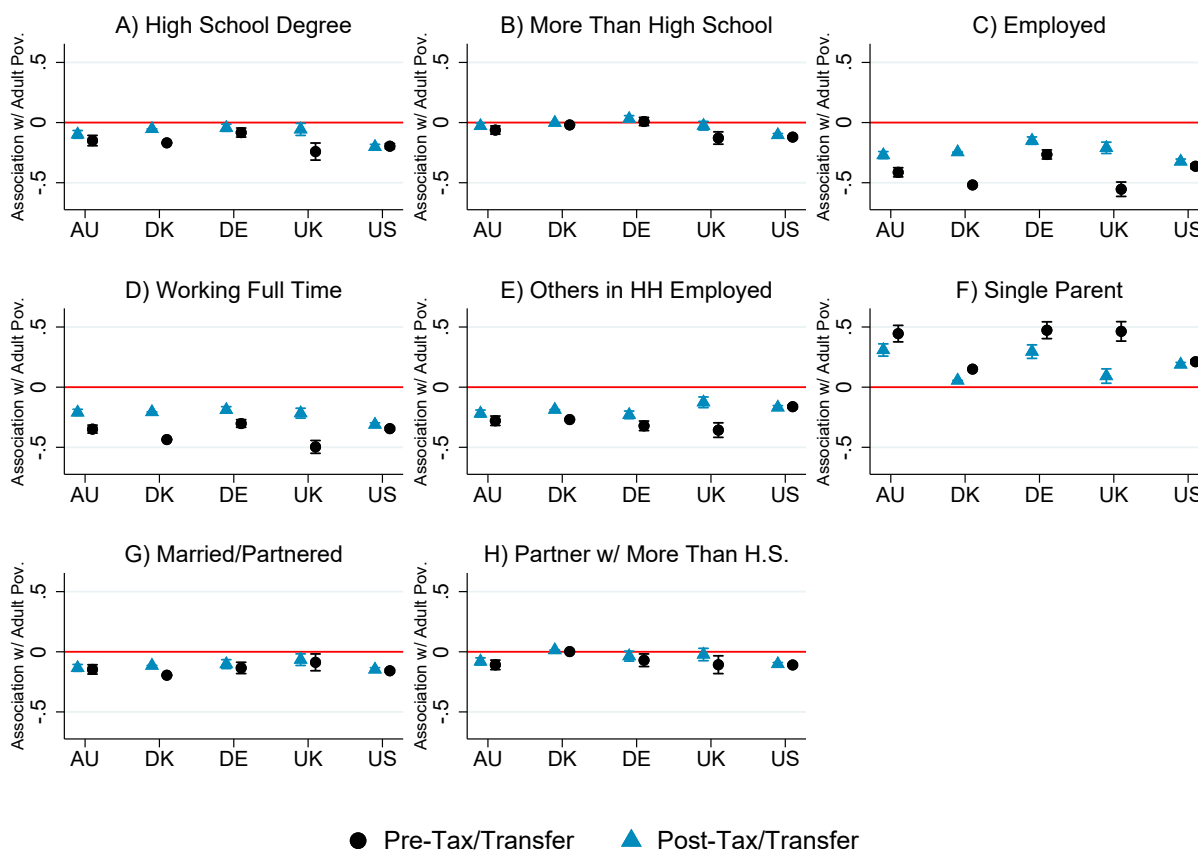


Note: The figure plots the association of childhood poverty with the likelihood of benchmark in early adulthood (ages 25-35). The model includes controls for family background characteristics, for age, sex, year, whether living with one's parents, and the share of ages 0-5, 6-10, and 11-17, respectively, during which the individual is observed in our data. See Equation A in Appendix A for full model specification.

likelihoods of adult poverty associated with benchmark attainment. Again, these estimates are conditional on our baseline controls and family background characteristics, but are not conditional on other mediators.

The black circles in Figure 3 represent the association between the benchmark and pre-tax/transfer adult poverty, whereas the blue triangles represent the association with post-tax/transfer adult poverty. The differences provide a first look at our tax/transfer insurance effect, or how the welfare state reduces the penalty associated with not meeting a given

Figure 3: Benchmark returns: Association of benchmark with adult poverty status



Note: The figure plots the association between the labeled benchmark and poverty in early adulthood. The model includes controls for family background characteristics and child poverty exposure, plus controls for age, sex, year, whether living with one's parents, and the share of ages 0-5, 6-10, and 11-17 during which the individual is observed in our data. See Equation B in Appendix A for full model specification.

benchmark.

Panel A shows the conditional likelihood of poverty associated with high school degree (or equivalent) completion. The pre-tax/transfer reduction in poverty ranges from 0.24 in the UK to 0.08 in Germany. However, incorporating taxes/transfers strongly alters those rates: in Denmark, the associated likelihood of poverty drops to -0.05 (one-third its pre-tax/transfer value), while the UK association falls to -0.06. The main exception is the US: taxes/transfers do very little to reduce the penalty for not completing high school. Panel B

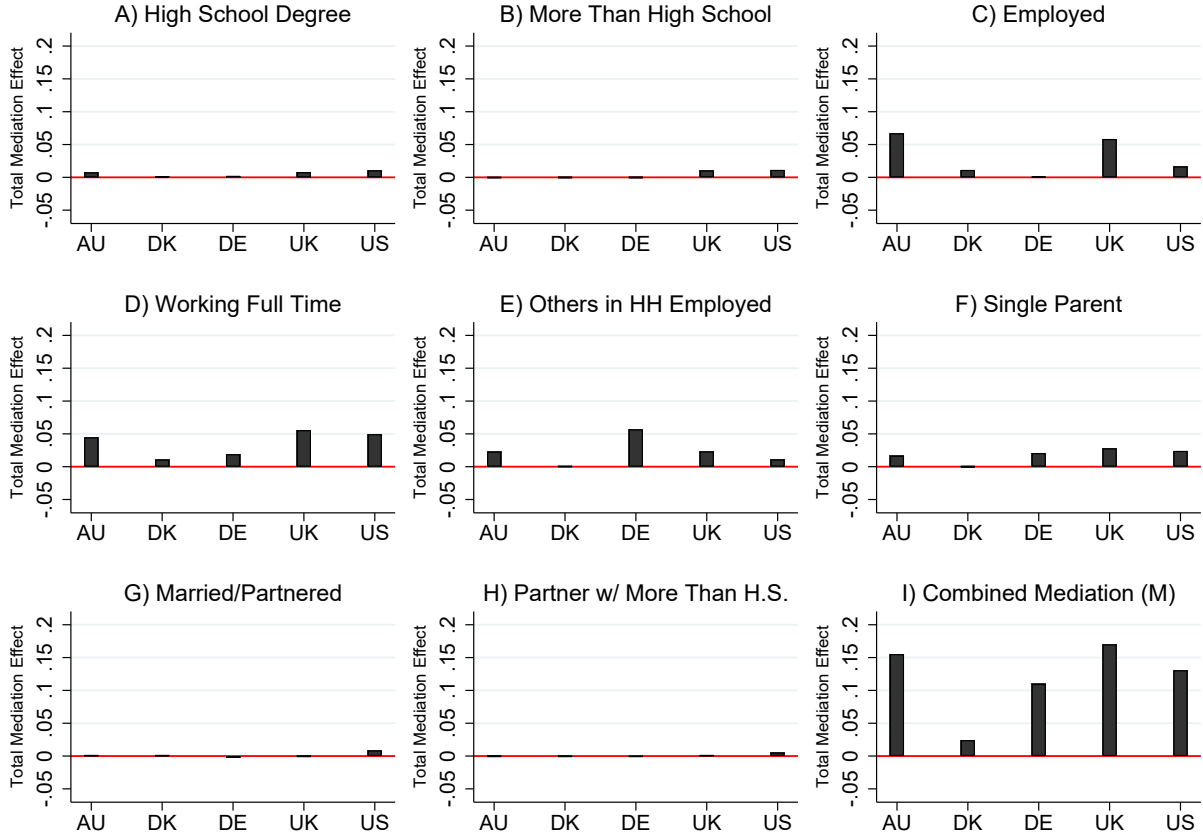
presents similar patterns for obtaining more than a high school degree.

Panel C displays the conditional likelihood of poverty associated with employment status. As expected, the pre-tax/transfer penalties are particularly large, ranging from around 50 percentage points in Denmark and the UK to 26 percentage points in Germany. (Given that we measure household income, an individual's own lack of employment does not necessarily indicate that she will be in poverty). Taxes and transfers, however, strongly insure against the lack of employment in most countries. In the UK, the penalty drops from 55 to 21 percentage points. In Denmark, it falls from 51 to 24 percentage points. In Germany, the absolute decline is smaller (26 to 15 percentage points). The U.S. again features only a very small decline in the penalty for being jobless when incorporating taxes and transfers. Patterns are very similar for full-time employment in Panel D.

Panels F, G, and H demonstrate that in all five countries, single parenthood is associated with higher levels of poverty, while marriage/partnership and having a partner with more than a high school degree are associated with lower poverty. Taxes/transfers do the most to reduce the adult poverty penalty for single parents, and particularly for single parents outside of the U.S. In the UK, taxes/transfers reduce the conditional penalty from 46 to 9 percentage points, while in Denmark it falls from 15 to 6 percentage points. With taxes/transfers included, the conditional penalty in the U.S. (19 percentage points) is lower than in Australia (31 percentage points) and Germany (30 percentage points).

We plot the total mediation effects directly in Figure 4, in which each vertical bar represents the overall mediation effect of the given indicator for the given country (conditional on the other mediators), while Panel I presents their sums, equivalent to the overall mediation effect of our benchmarks in shaping intergenerational poverty (or M). In all countries, employment stands out: individual employment (Panel C), full-time employment rather than part-time (Panel D), and having others in the household who are employed (Panel E) tend to be the strongest mediators. Single parenthood (Panel F) follows in magnitude for several countries, with marriage/partnership, partner's education, and own education trailing

Figure 4: Combined mediation effects by country



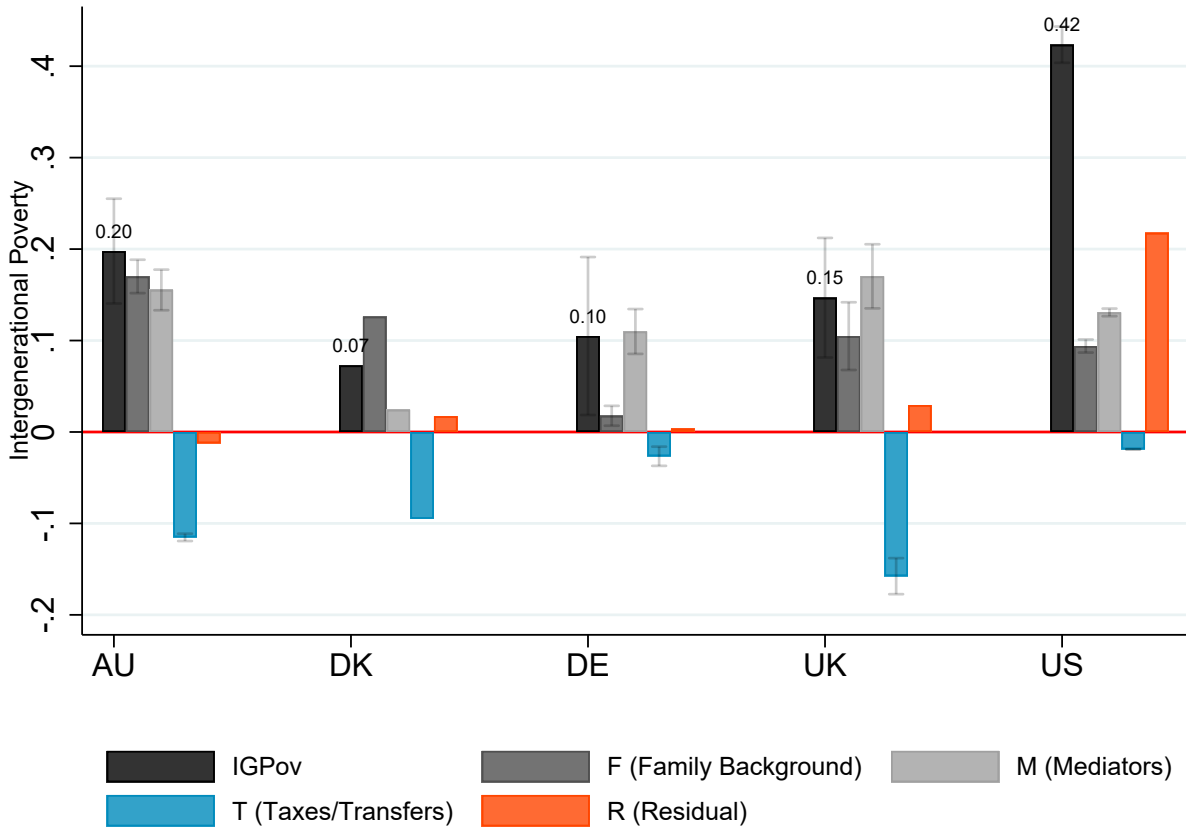
Note: The figure plots the total effect of the labeled benchmark in mediating the relationship between childhood and adult poverty. See Equation 3b for full model specification.

behind.

While education beyond high school (and a university degree, in particular) is of importance for moving to the upper parts of the earnings distribution, it pales in mediation magnitude relative to employment when it comes to achieving an adult pre-tax/transfer income above the poverty line.¹² Panel I presents the overall mediation effect for each country: the UK, AU, and US feature the largest absolute mediation effects. Recall that these mediators are conditional on family background characteristics (which pre-date the mediators),

¹²An important caveat to this point is that we compare the strength of either mediator conditional on the inclusion of all other observed mediators. If we removed employment from the model, the mediating strength of education would increase.

Figure 5: Decomposition of intergenerational persistence of poverty across country



Note: The black, labeled bar plots the intergenerational persistence of poverty (*IGPov*). The subsequent bars plot the contribution of our four sub-components, which add up to the value of *IGPov*. See 1b and subsequent equations.

and that family background has a greater influence in Denmark, contributing to the lower overall mediation effect observed in Denmark.

Figure 5 now presents the full results of our decomposition framework. The black bar with the value label for each country represents the intergenerational persistence of poverty (see Equation 1a). The subsequent bars represent the four components of our framework, respectively: family background, mediators, taxes/transfers, and the residual poverty penalty. The results confirm that the magnitude and sources of intergenerational poverty differ considerably by country.

Germany and Denmark feature the lowest magnitudes of poverty persistence (0.10 and 0.07, respectively; these differences are not statistically significant); however, the mechanisms through which poverty persists varies across the two countries. In Germany, mediators explain nearly all of the intergenerational persistence of poverty, with a small role for family background effects. Taxes and transfers play a small insurance role (3 percentage points), while a very small residual poverty penalty persists (0.04 percentage points). In Denmark, family background effects explain most of the intergenerational persistence of poverty, while mediators play a minor role. Tax/transfer effects reduce poverty persistence in Denmark by nearly 10 percentage points, offsetting most of the family background effects. As in Germany, a small residual persists (1.7 percentage points).

In Australia, family background effects and mediators contribute roughly evenly – around 16 to 17 percentage points each – to the country’s intergenerational persistence of poverty of 0.20. However, the tax/transfer insurance effect pushes the magnitude of poverty persistence downward by around 12 percentage points, nearly offsetting the contribution of the mediating factors. The residual poverty penalty is again relatively small in Australia, suggesting that the vast majority of poverty persistence is ‘explained’ by our observed indicators.

The most similar country to Australia is the UK, where a poverty persistence of 0.15 is primarily channeled through mediators, followed by family background effects, but strongly reduced through tax/transfer insurance effects. In fact, without the downward effect of tax/transfer insurance, both Australia and the UK would have poverty persistence magnitudes above 0.30, nearing the U.S. rate.

The U.S. features the highest magnitude of poverty persistence at 0.42. In contrast to Australia and the UK, however, the residual poverty penalty explains the largest share of poverty persistence in the U.S. (more than 0.22, or over half, of the overall persistence). Mediators and family background effects explain around 13 and 9 percentage points, respectively. The other notable difference in the U.S. is its lack of tax/transfer insurance, which diminished poverty persistence by 2 percentage points, less than a fifth of the absolute rate

observed in Australia, the UK, or Denmark (and even smaller in relative terms when compared to the baseline levels of intergenerational poverty in each country). Put simply, the U.S. has a higher intergenerational persistence of poverty relative to our other countries not due to the role of family background effects or mediators, but due to its comparatively weak tax/transfer insurance effects and strong residual poverty penalty.

Further Analyses & Sensitivity Tests

We conduct several further analyses to (1) add further insight into the U.S.'s outlier status with respect to the intergenerational persistence of poverty and to (2) assess the sensitivity of our findings across alternative sample and modelling decisions.

First, we assess the extent to which racial discrimination and place affect the U.S.'s comparatively high poverty persistence. Given that Black individuals are exposed to much higher levels of child poverty relative to White individuals in the U.S. (Baker, 2022), a stronger intergenerational persistence of poverty among Black individuals could be driving the U.S. findings. In the left panel of Figure 6, we examine if the intergenerational persistence of poverty is similar for White and Black individuals in our sample, so as to provide initial evidence on whether racial discrimination can explain the U.S.'s outlier status. The results show substantively similar magnitudes and mechanisms of intergenerational poverty for Black and White individuals (even if Black individuals are exposed to much more childhood poverty than White individuals). While racial discrimination contributes to poverty and economic opportunity (Baker, 2022), we do not find evidence that it explains the U.S. performance relative to other high-income countries.

As emphasized previously, the literature on neighborhood effects has consistently demonstrated that where a child grows up in the U.S. has a strong influence on her later-life chances (Chetty and Hendren, 2018; Sharkey and Faber, 2014). To test whether spatial differences in mobility can help explain the outlier status of the U.S., we use restricted-access PSID data to evaluate whether counties with higher levels of economic mobility, according to Op-

portunity Insights and Chetty (2018), have notably different levels of poverty persistence.¹³ To preserve sample size, we classify all counties into low-, medium- and high-mobility counties based on their respective tercile within the distribution of all observed counties. The right panel of Figure 6 shows that the intergenerational persistence of poverty is lower in high-mobility counties but remains comparatively high: the point estimate of 0.33 is higher than in all our other countries. We thus conclude that other factors – including tax/transfer insurance effects – explain more of the U.S. performance.

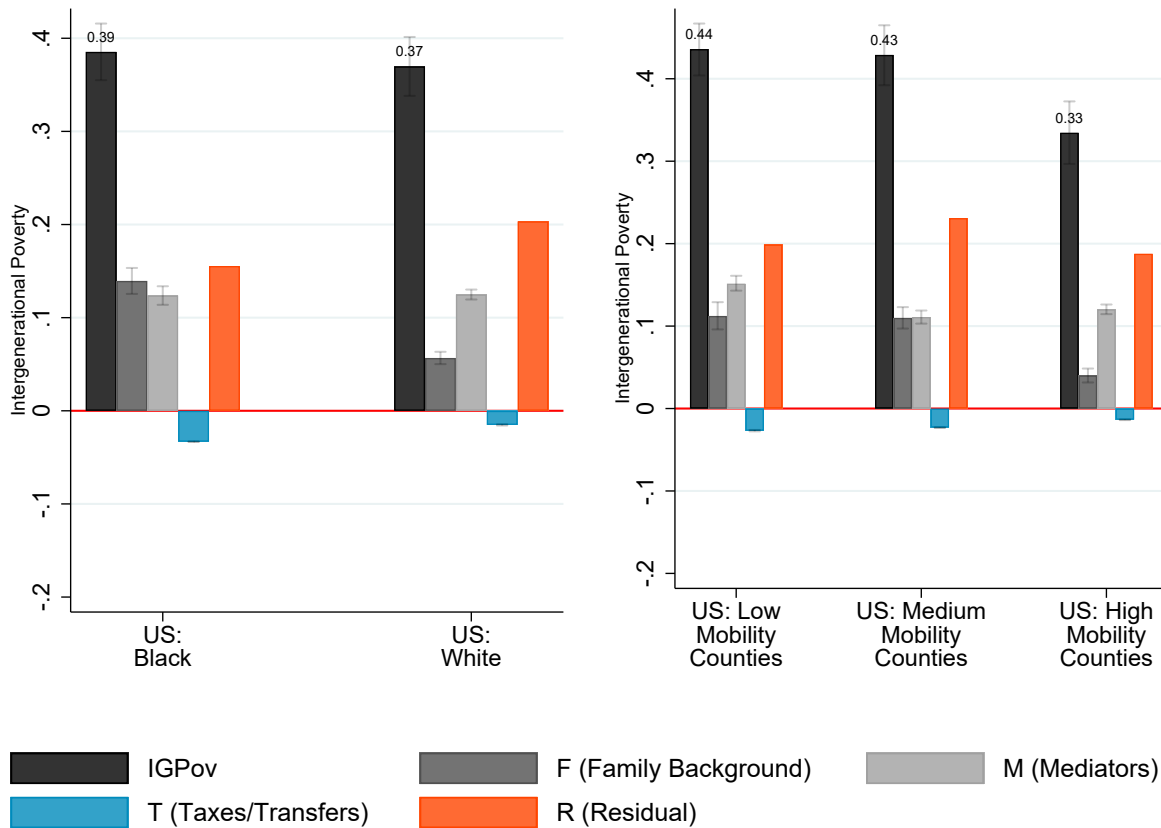
Second, we evaluate whether country-specific mediators (potential observable mediators that exist in our U.S. data but are not comparably available across all countries) help to explain the high residual poverty penalty for the U.S. In Appendix F, we add information on university degree, union membership, household wealth decile, self-reported health, asthma and/or high blood pressure, past incarceration, and homeownership. The inclusion of these mediators only lowers the U.S. residual from 0.22 percentage points to 0.20 percentage points.

Third, we corroborate our U.S. findings with an alternative measure of adult deprivation: food insecurity. Specifically, we measure the share of young adulthood with low or very low food security, defined by the U.S. Department of Agriculture as “reports of reduced quality, variety, or desirability of diet” and/or “reports of multiple indications of disrupted eating patterns and reduced food intake.” If we find effects of childhood poverty on adult poverty, but not adult food insecurity, our results could reflect broader measurement error in our U.S. income data. Instead, our findings are robust when applying adult food insecurity as an outcome, including with the extended mediators described above (see Appendix F).

Fourth, we demonstrate that our estimates of intergenerational poverty are empirically distinct from estimates of intergenerational income mobility (using rank-rank estimates, or regressing parents’ rank in the income distribution in children’s rank in their adulthood). In Appendix H, we show that switching to rank-rank estimates strongly increases intergenerational income associations in the UK, Germany, and Australia, consistent with cross-national

¹³Specifically, we merge in the Opportunity Insights estimates of mean adult income rank for the given county for children born to parents with incomes at the 25th percentile of the income distribution.

Figure 6: Decomposition of intergenerational persistence of poverty: by race and place, U.S.



Note: The black, labeled bar plots the intergenerational persistence of poverty ($IGPov$). The subsequent bars plot the contribution of our four sub-components, which add up to the value of $IGPov$. See 1b and subsequent equations. In the right panels, counties are grouped into mobility terciles using place-based economic mobility estimates from Opportunity Insights.

mobility evidence; meanwhile, the residual term increases for all countries while the role of tax/transfer insurance effects declines. These results are unsurprising: taxes/transfers should have greater effects when studying upward mobility from poverty, rather than examining movement across the income distribution as a whole.

Fifth, we address two points related to the (non-)linearity of childhood poverty and adult poverty. In Appendix K, we identify nonlinearities in the likelihood of adult poverty for individuals exposed to at least some childhood poverty. For the latter group, average poverty in adulthood is substantially higher than for those with higher mean incomes relative to the

poverty line, and the slope of the childhood to adulthood resources is also notably stronger. These discontinuities in levels and slopes reinforce our conceptual argument of poverty as a distinct economic state worth studying. We also present evidence that, within groups (i.e. among those exposed or not to childhood poverty), a linear model is nonetheless an appropriate estimator of intergenerational persistence, since it captures well the association between childhood and adult disadvantage. In Appendix K, we also present a non-parametric assessment of intergenerational poverty that aligns with our conclusions.

Sixth, we assess cross-national differences in intergenerational poverty with two alternative poverty thresholds: an absolute poverty threshold and an alternative relative threshold in which we set the poverty threshold at 60 percent (rather than 50 percent) of the national median equivalized income (see Appendix D). Our results are consistent across these alternative poverty definitions.

Seventh, we assess the sensitivity of our German results conditional on our inclusion of the East German sample that appeared later in the SOEP. Recall that we follow other studies (Couch and Dunn, 1997; Stockhausen, 2018) in removing East Germany from our primary analysis given that East Germans were excluded from the first part of the SOEP. Appendix E shows that East Germany features greater poverty persistence than West Germany, and that including East Germany into our German analysis roughly doubles the intergenerational persistence of poverty in Germany (from 10 to 19 percentage points). The relative influence of each of our decomposition components, however, is comparable across East and West Germany. These findings suggest that our primary estimates likely understate intergenerational poverty in Germany as a whole, despite providing us a more consistent sample from which to estimate poverty persistence.

Eighth, we assess the sensitivity of our results for the UK depending on the two income concepts available in the BHPS: current income in the prior month versus annual income in the prior 12 months. In our primary analysis, we rely on annualized income to measure exposure to childhood poverty. We show in Appendix G that results are broadly consistent

when using monthly income instead. Moreover, we show that our UK results are consistent if we limit the UK sample to the BHPS (effectively ending the sample in 2008 and excluding the UKHLS transition). As such, we can rule out that changes in the procedures for collecting income data in the UKHLS meaningfully affect our conclusions.

Ninth, we provide evidence that levels of child poverty do not mechanically affect our estimates of intergenerational poverty persistence. For each country, we drop observations with no child poverty exposure at random until individuals with at least one year in poverty during childhood comprise 60 percent of the sample. We repeat this exercise 100 times, and plot the average results of our decomposition framework for each country. As shown in Appendix I, results are strongly consistent with our baseline findings. Relatedly, one may worry that our results may be biased due to omitted interactions between childhood poverty exposure and our mediator/background measures. Since the bias resulting from such omission should depend on childhood poverty levels, the robustness of our results serves as evidence that such bias does not substantially vary across countries and is likely small in magnitude. As further validation, Appendix J presents results that interact our mediators (M) with our family background characteristics (F); results do not meaningfully vary relative to our baseline specification.

5 Discussion & Conclusion

Given the large personal and societal costs of poverty, countries have invested considerable state capacity in reducing it, while researchers have long debated poverty’s primary causes (Brady, 2019; Chen and Corak, 2005; National Academy of Sciences, 2019). We have argued, however, that prior research on the topic nonetheless faces several shortcomings in revealing the mechanisms through which upward mobility out of poverty is achieved.

Moving beyond prior studies of intergenerational poverty, this study has (1) harmonized panel datasets across five high-income countries with different institutional features, allowing

for direct comparisons of intergenerational poverty measured with post-tax/transfer household income; (2) conceptually distinguished seven competing perspectives on the sources of intergenerational poverty; and (3) introduced a decomposition framework to empirically dissect intergenerational poverty into the sum of family background effects, adult mediators, tax/transfer insurance effects, and a residual poverty penalty. These advancements help to answer our two key questions: How do countries vary with respect to the intergenerational persistence of poverty? And what can explain the cross-national variation that we find?

In answering the first, we found that the U.S. has a much stronger intergenerational persistence of poverty than in our four other high-income countries. Spending all of one's childhood in poverty in the U.S. is associated with a 42 percentage point increase in the mean poverty rate during early adulthood. This is four times stronger than in Denmark or Germany, and more than twice as strong as in Australia or the UK. These findings hold when equalizing the years in adulthood during which respondents are observed and when accounting for potential variation in attrition bias; moreover, we have demonstrated that cross-national variation in life-cycle bias should not affect our conclusions (Appendix C). Our evidence demonstrates that cross-national variation in the intergenerational persistence of poverty is not systematically related to *levels* of child poverty exposure; thus, the study of *why poverty persists from childhood into adulthood* is not analogous to the study of *why certain levels of poverty exist*. Moreover, we have argued conceptually, and demonstrated empirically (Appendix H), that the study of intergenerational poverty is distinct from broader analyses of intergenerational income mobility.

In answering our second question, we find that countries vary meaningfully in the mechanisms through which intergenerational poverty is channeled, with important lessons for policies to reduce poverty persistence. Conceptually, we segmented competing perspectives into the role of (1) family resources, (2) family background characteristics, (3) place, (4) mediation through benchmark attainment, (5) mediation through benchmark returns, (6) tax/transfer insurance effects, and (7) a residual poverty penalty.

We find evidence consistent with past research that *family resources* during childhood can have consequences for later-life opportunities (Brooks-Gunn and Duncan, 1997). As noted, this is particularly true in the U.S., where the consequences of experiencing poverty during childhood are particularly severe for the likelihood of poverty in adulthood. In all countries, *family background* characteristics – such as parental education, employment, and family structure – also carried some weight in explaining poverty persistence, but with large variation across contexts. In Denmark, family background characteristics explain most of the positive relationship between childhood and adult poverty. This is consistent with our theoretical expectation: in a context in which welfare state and labor market institutions more forcefully equalize economic opportunity – through the provision of affordable childcare, free access to higher education, compressed earnings distributions, universal healthcare, and more – variations in family background characteristics are likely to carry more weight, particularly relative to adult mediators, in explaining variation in later-life outcome. In contrast, family background effects explain a smaller share of intergenerational poverty in countries such as the U.S. and UK, where the state does less to protect against social stratification across education, employment, and other mediators.

Though we could not incorporate *place effects* consistently across all countries in this analysis, we used restricted-access PSID data to investigate whether spatial differences in economic mobility across the U.S. help to explain the country’s outlier status with respect to intergenerational poverty. Though we find evidence of variations in intergenerational poverty across U.S. neighborhoods, consistent with prior work on U.S. neighborhood effects (Sharkey, 2008, 2013), we do not find evidence that *place* carries more weight than other perspectives in explaining the comparatively high rate of poverty persistence in the U.S. Even in the top one-third of the most economically-mobile counties in the U.S., the intergenerational persistence of poverty is 0.33, still higher than in our other high-income countries. To be sure, this finding does not negate the importance of spatial segregation within the U.S.; however, it does emphasize that should the U.S. want to match peer nations with respect to

the intergenerational persistence of poverty, it must seek solutions beyond the equalization of opportunity across neighborhoods.

Our two perspectives on mediators – benchmark attainment and benchmark returns – also varied in importance by country. Overall, the combined effects of benchmark attainment and returns carried particularly strong weight in Germany and the UK. In Germany, full-time employment, single parenthood, and living with other employed adults in the home each contributed to the intergenerational persistence of poverty, and primarily through the returns (rather than attainment) channel. In the UK, full-time employment and single parenthood contributed most to the country’s mediation effects, but largely through the attainment (rather than returns) channel. In all countries, the conditional mediating effect of educational attainment was relatively small. Though education plays a large role in intergenerational income mobility more broadly (Torche, 2015), its effects are smaller in an intergenerational poverty perspective, while employment tends to carry more relative weight.

More so than mediators, however, variation in the *tax/transfer insurance effect* separated the U.S. from its peer countries. As elaborated on previously, taxes and transfers are often ignored in studies of economic mobility; when they are studied, they are often evaluated with respect to their role in boosting family income during childhood. This study, in contrast, explicitly measures the role of taxes and transfers in insuring against risks *in adulthood*. Even if adults from disadvantaged backgrounds do not meet certain benchmarks associated with economic success, the state can still intervene to limit their poverty risks in adulthood. In the UK, the tax/transfer insurance effect reduced the intergenerational persistence of poverty by around 16 percentage points, nearly counteracting the positive effect of the country’s mediating factors. In Denmark and Australia, tax/transfer insurance effects also contributed to a reduced intergenerational persistence of poverty. The comparatively weak welfare state of the U.S., however, did relatively little to reduce poverty persistence. If the U.S. instead had the tax/transfer insurance effect of the UK, its overall intergenerational persistence of poverty might fall by more than 33 percent of its observed value (from 0.42 to 0.28,

assuming for simplicity that an alternative tax/transfer system would not have behavioral consequences).¹⁴

There is, of course, an argument that generous tax/transfer effects may generate moral hazards, in which state aid reduces the incentive to acquire more education or employment (Landersø and Heckman, 2017). Moreover, governments may prefer that adults achieve economic self-sufficiency rather than receiving state income transfers. Our evidence is not in contradiction to, and cannot generally speak to, these claims. What matters with respect to poverty, however, is the total level of resources that households command in order to consume basic necessities and participate fully in society; the inclusion of taxes/transfers, and the recognition of their ability to lessen risks of poverty in adulthood, is thus an essential component of the study of intergenerational poverty.

Finally, our residual poverty penalty measures the remaining variation in the child to adult poverty relationship that is not captured in our observable characteristics or in the tax/transfer insurance effect. In Australia, Denmark, Germany, and the UK, our residual poverty penalty is relatively small. In the U.S., in contrast, the residual penalty contributes more strongly than other components in explaining intergenerational poverty. We demonstrate in Appendix F that the inclusion of wealth, home ownership, union membership, health, and past incarceration in the U.S. only marginally reduces the residual; moreover, the residual persists when using a direct measure of adult disadvantage (food insecurity). The large residual poverty penalty suggests that exposure to childhood poverty is particularly severe in the U.S., and operates through more unobserved/unobservable pathways in shaping adult poverty, than in other high-income countries. As one example, less access to quality healthcare among low-income U.S. residents may strengthen the penalty associated with growing up in poverty, particularly if poverty is operating through unobserved health outcomes in influencing poverty in adulthood. As another example, variation in school qual-

¹⁴This simplified calculation comes from substituting the percentage-point reduction in the UK's intergenerational poverty persistence, or -0.16, in place of the U.S.'s observed reduction, or -0.02, to the U.S. intergenerational poverty rate of 0.42.

ity could strengthen the penalty of growing up in poverty in the U.S.

Our findings offer several broader contributions to the poverty, stratification, and mobility literatures. In directly testing competing theories of the roles of the family, market, and state in shaping intergenerational poverty, we are able to provide a more comprehensive account of the sources of intergenerational poverty. Recall that many studies in this field have instead examined individual earnings elasticities, and particularly among fathers and sons, effectively eliminating considerations of the family and state (Björklund and Jäntti, 1997; Corak, 2006; Mazumder, 2005). This study, in contrast, has developed a decomposition framework to account for the weight of each of these factors, and has emphasized the necessity of bringing the *state* into the study of intergenerational poverty. More generally, our analyses move beyond cross-sectional studies of *levels* of childhood poverty which, as demonstrated previously, are not directly analogous to the relationship between childhood poverty and adult poverty. In adopting a longitudinal perspective on poverty, we are able to evaluate the longer-run costs of child poverty exposure, as well as the mechanisms through which those costs are borne. In achieving this in a cross-national context, we are able to resolve concerns from Jenkins and Siedler (2007), Nolan (Forthcoming), and others who lament the lack of comparative research on intergenerational poverty.

Within the broader economic mobility literature, our study demonstrates, both conceptually and empirically, the need for further research of intergenerational *poverty*. Arguably, the study of upward mobility from poverty carries greater welfare consequences than general mobility across the broader income distribution. Regardless, our findings emphasize that the mechanisms facilitating mobility from poverty are not necessarily the same as those facilitating parental-child income correlations. Education, for example, has long been central to the economic mobility literature, yet is a less consequential mechanism in the study of intergenerational poverty. Tax and transfer insurance effects, meanwhile, play a notably larger role in shaping intergenerational poverty, and less so in influencing rank-rank correlations (see Appendix H).

We acknowledge several limitations and opportunities for future research. Due to our cross-national focus, we depend on indicators that can be used in a comparable manner across our countries. As such, some relevant indicators, such as school performance, cognitive- or non-cognitive skills, are not included in our models. Should these traits be differentially inherited based on parental income, and should they affect later-life economic outcomes, then they serve as a form of omitted variable bias in our models. We do not have sufficient reason to believe, however, that non-cognitive skills will be more important for intergenerational poverty in some of these countries relative to others; if true, then their exclusion should not bias our broader findings.

A related limitation is the lack of consistent information across our five countries to account for first- or second-generation immigrant status. First-generation immigrants who did not spend at least 5 years of childhood in their host country would be excluded from our analysis due to our restriction of measuring childhood poverty over at least 5 years of data. Second-generation immigrants tend to experience levels of intergenerational mobility that match or exceed that of children with native-born parents (Abramitzky et al., 2021); if the same were true for intergenerational poverty, and if our samples under-represent the share of second-generation immigrants in a country, then the level of intergenerational poverty for the country may be overstated. Given the small share of second-generation immigrants in our five countries relative to the population at-large, it is unlikely that any cross-national variation in sampling frame bias related to immigration status will affect our observed cross-national differences in intergenerational poverty. Nonetheless, we acknowledge that the study of intergenerational poverty by immigration status deserves more attention in future research.¹⁵

Future research might also investigate gender-based differences in intergenerational poverty. A replication of our decomposition framework by gender does not alter the U.S.'s performance relative to our other high-income countries (men and women alike experience stronger

¹⁵In the PSID, for example, detailed information on immigration status is not consistently available prior to the 1997/1997 refresher sample. Individuals added as part of the 1997/1999 sample cannot be included in our final U.S. sample, however, since they are either too young or observed too few times during childhood to meet our sample inclusion criteria.

poverty persistence); however, we do find that women experience higher intergenerational poverty persistence relative to men in the U.S. (0.47 versus 0.37), while the mechanism of single parenthood carries more weight among the sample of women. A proper assessment of these gender-based differences is beyond the scope of this paper, but should be a fruitful focus for future research.

While we emphasize cross-national comparisons, future work can apply our framework to, as one example, study within-country changes in intergenerational mobility over time, or across regions within a given country. Moreover, future work should continue to expand the set of countries for which comparable estimates of intergenerational poverty can be estimated. To facilitate this, the study's Supplemental Appendix includes a variable-construction codebook and full replication code to reproduce and extend our findings. As such, this study's data, conceptual, methodological, and substantive contributions offer a foundation for continued research on social processes that generate upward mobility from childhood poverty.

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Appendices

A Further Details on Decomposition Parameters

Benchmark Attainment and Benchmark Returns

As detailed in the manuscript, the role of mediating benchmarks (M) in influencing the intergenerational persistence of poverty in a country can be further decomposed into the product of two components: benchmark attainment effects, or the association of childhood poverty with attainment of benchmarks associated with reduced adult poverty; and benchmark returns, or the association of benchmarks with reduced poverty in adulthood. For simplicity, imagine a model with $k = 1$ benchmarks, (say, attainment of a college degree). We can estimate the attainment and returns effects as follows:

$$Benchmark = \nu_1 ChPov + \nu_2 Fam + \varepsilon \tag{A}$$

In Equation (A), ν_1 captures the relationship of child poverty exposure with the likelihood of attaining a given benchmark, a college degree in our example. It is likely that ν_1 will be negative: more childhood poverty is associated with a lower likelihood of completing college, though the magnitude of the coefficient will likely vary by country. For this benchmark to have consequences for intergenerational poverty, however, it must also carry rewards with respect to lower likelihood of poverty in adulthood. We measure pre-tax/transfer benchmark returns as:

$$Pov_{Pre} = \gamma_1 ChPov + \gamma_2 Fam + \gamma_3 Benchmark + \varepsilon \tag{B}$$

In Equation (B), γ_3 captures the conditional association of attainment of the benchmark (e.g. completing college) with the likelihood of pre-tax/transfer poverty in adulthood. Here, ν_3 should generally be negative, inferring that college completion is associated with lower likelihood of poverty, but again with variation across countries.

With $k = 1$ benchmarks, the total mediation effect (M) documented in Equation (3b) is equivalent to $(\nu_1 * \gamma_3)$ – or the benchmark attainment effect multiplied by the benchmark returns – from Equations (A) and (B), respectively. The multiplication term indicates the interdependency of the two indicators: if a benchmark were to be completely unassociated with childhood poverty ($\nu_1 = 0$), then the mediating effect (M) of the benchmark would also be zero, regardless of the value of the benchmark returns (γ_3). We plot ν_1 and γ_3 independently in the manuscript, while their product is captured in M .

With $k > 1$ benchmarks, M is simply the sum of the individual products – or $(\nu_1 * \gamma_3)_k$ – for each k included from a model in which Equation (B) includes each k .

Tax and Transfer Insurance Effect

As we note in the manuscript, the tax and transfer insurance effect is computed as:

$$T = (\beta_1 - \rho_1) - (\theta_1 - \gamma_1)$$

The first part of the equation $-(\beta_1 - \rho_1)$ captures the overall effect of taxes/transfers in reducing the association of childhood poverty with adult poverty. We then subtract from that the insurance effect against unobserved/unobservable benchmarks, computed as $\theta_1 - \gamma_1$ (see prior equations in main manuscript). The outcome provides us a direct estimate of how taxes/transfers provided to adults reduces the penalty associated with observable characteristics – such as low educational attainment or joblessness – that may also be linked to child poverty exposure.

Another way of conceptualizing the second half of the tax/transfer insurance effect equation is through the lens of omitted variable bias. In this example, we start with:

$$Pov_{pre} = \gamma_1 ChPov + \gamma_2 Fam + \gamma_3 Med + \epsilon_1$$

We then add τ to represent taxes (negative taxes = transfer). Post-tax/transfer poverty is equal to pre-tax poverty plus an extra probability of poverty due to higher τ assuming that τ is decreasing in Pov_{pre} (in other words, there is assistance to the individuals in poverty).

We can write this as:

$$Pov_{post} = Pov_{pre} + \lambda\tau = \theta_1 ChPov + \theta_2 Fam + \theta_3 Med + \epsilon_2$$

So that we have:

$$Pov_{pre} = \gamma_1 ChPov + \gamma_2 Fam + \gamma_3 Med + \epsilon_1 \tag{1}$$

$$Pov_{pre} = \theta_1 ChPov + \theta_2 Fam + \theta_3 Med - \lambda\tau + \epsilon_2 \tag{2}$$

Suppose that our goal is estimating θ_1 , but we only have a pre-tax/transfer poverty indicator (Pov_{pre}) and no information on taxes. In this case, γ_1 is a biased estimate of θ_1 due to the omission of τ . The second element of T in our decomposition, $(\theta_1 - \gamma_1)$, can thus be interpreted as the bias of omitting τ in the estimation of equation 2.

Suppose furthermore that $-\tau$ is positively associated with the residual of the regression of $ChPov$ on Fam and Med , \widetilde{ChPov} . That is, people who were in childhood poverty are more likely to receive transfers, even keeping constant the other controls (if, for example, there are unobservable benchmarks not attained by people with higher exposure

to childhood poverty that taxes insure against).

One can check that omitted variable bias would, in this case, imply that γ_1 is higher than θ_1 . In fact, we can express it as:

$$(\theta_1 - \gamma_1) = -\lambda \frac{\text{Cov}(-\tau, \widetilde{\text{ChPov}})}{V(\widetilde{\text{ChPov}})}$$

Now consider $(\beta_1 - \rho_1)$. With the same steps, we obtain:

$$(\beta_1 - \rho_1) = -\lambda \frac{\text{Cov}(-\tau, \text{ChPov})}{V(\text{ChPov})}$$

As such, $(\beta_1 - \rho_1) - (\theta_1 - \gamma_1)$ can be expressed as:

$$-\lambda \left(\frac{\text{Cov}(-\tau, \text{ChPov})}{V(\text{ChPov})} - \frac{\text{Cov}(-\tau, \widetilde{\text{ChPov}})}{V(\widetilde{\text{ChPov}})} \right) = -\lambda(\hat{\delta} - \hat{\sigma})$$

Where $\hat{\delta}$ is the estimate for the equation:

$$\tau = \delta \text{ChPov} + \epsilon_1$$

And $\hat{\sigma}$ is equivalent to the estimate for the equation:

$$\tau = \sigma \text{ChPov} + \sigma_2 \text{Fam} + \sigma_3 \text{Med} + \epsilon_2$$

Therefore, $(\hat{\delta} - \hat{\sigma})$ is precisely the part of the relationship between ChPov and τ that is explained away by family background and mediators. Multiplied by λ , which converts changes in τ to changes in adult poverty, we can see that $(\beta_1 - \rho_1) - (\theta_1 - \gamma_1)$, or T , can indeed be interpreted as the insurance effect of taxes/transfers against our *observed* mediators and background characteristics in our models.

B Summary Statistics

Table B1: Summary statistics for our final dataset

		US	UK	AU	DE	DK
Variables of interest						
Poverty rate	Mean	0.179	0.116	0.092	0.098	0.080
	Std Dev.	0.299	0.241	0.236	0.232	0.182
	N	9138	799	1557	1683	1801813
Share of ch. in poverty	Mean	0.186	0.156	0.103	0.047	0.054
	Std Dev.	0.289	0.255	0.204	0.128	0.123
	N	9138	799	1557	1683	1801813
Basic covariates						
Maximum age observed	Mean	32.382	31.238	28.025	29.985	33.175
	Std Dev.	3.229	3.403	2.237	3.856	3.113
	N	9138	799	1557	1683	1801813
Female share	Mean	0.500	0.515	0.483	0.468	0.487
	Std Dev.	0.500	0.500	0.500	0.499	0.489
	N	9132	799	1557	1683	1801813
First age observed	Mean	3.542	9.134	9.478	6.743	3.568
	Std Dev.	3.998	3.435	2.229	4.559	4.487
	N	9138	799	1557	1683	1801813
Share of years observed ages 0-5	Mean	0.559	0.080	0.000	0.284	0.650
	Std Dev.	0.394	0.203	0.000	0.370	0.557
	N	9138	799	1557	1683	1801813
Share of years observed ages 6-10	Mean	0.749	0.374	0.366	0.568	0.857
	Std Dev.	0.348	0.413	0.353	0.447	0.488
	N	9138	799	1557	1683	1801813
Share of years observed ages 11-17	Mean	0.723	0.819	0.812	0.826	0.912
	Std Dev.	0.195	0.105	0.098	0.091	0.284
	N	9138	799	1557	1683	1801813
Share of adulthood living with ch. head	Mean	0.090	0.210	0.188	0.331	0.051
	Std Dev.	0.251	0.359	0.355	0.430	0.178
	N	9127	799	1556	1683	1801813

Table B1: Summary statistics for our final dataset (continued)

Covariates		US	UK	AU	DE	DK
Share of ch. with no male in HH	Mean	0.141	0.161	0.153	0.077	0.119
	Std Dev.	0.266	0.316	0.304	0.216	0.233
	N	9138	799	1557	1683	1801813
Share of childhood with no female in HH	Mean	0.012	0.017	0.029	0.009	0.021
	Std Dev.	0.064	0.103	0.126	0.067	0.09
	N	9138	799	1557	1683	1801813
Share of years in ch. with mom employed	Mean	0.638	0.713	0.642	0.579	0.767
	Std Dev.	0.330	0.364	0.386	0.386	0.306
	N	9126	795	1541	1681	1801813
Maximum edu. attain- ment by mom during ch.	Mean	2.208	1.849	2.019	1.943	2.633
	Std Dev.	0.735	0.743	0.808	0.619	0.553
	N	9103	793	1535	1618	1801813
Share of childhood un- der unique adult	Mean	0.137	0.157	0.161	0.077	0.126
	Std Dev.	0.247	0.301	0.298	0.212	0.231
	N	9138	799	1557	1683	1801813
Average n. of children in HH during ch.	Mean	2.569	2.162	2.361	1.965	2.070
	Std Dev.	0.984	0.859	0.927	0.833	0.684
	N	9138	799	1557	1683	1801813
Age of mom at birth	Mean	27.166	27.345	28.876	27.214	26.551
	Std Dev.	5.572	5.103	5.052	5.348	4.889
	N	8138	776	1487	1588	1747596
Mediators						
Completed high school	Mean	0.920	0.897	0.863	0.918	0.839
	Std Dev.	0.272	0.305	0.343	0.274	0.367
	N	9099	766	1496	1496	1801813
Education beyond high school	Mean	0.603	0.389	0.409	0.282	0.436
	Std Dev.	0.489	0.488	0.492	0.450	0.496
	N	9099	766	1496	1496	1801813
Single parent	Mean	0.140	0.097	0.052	0.039	0.107
	Std Dev.	0.347	0.296	0.222	0.194	0.31
	N	9138	799	1557	1683	1801813
Works more than 30 hours per week	Mean	0.660	0.765	0.621	0.497	0.548
	Std Dev.	0.364	0.347	0.423	0.418	0.357
	N	9115	697	1476	1683	1801813
Employed	Mean	0.849	0.774	0.753	0.721	0.841
	Std Dev.	0.274	0.335	0.378	0.375	0.274
	N	9138	777	1557	1683	1801813
Married/partnered	Mean	0.443	0.338	0.465	0.203	0.618
	Std Dev.	0.420	0.392	0.445	0.343	0.374
	N	9133	799	1496	1559	1801813
Partner has more than high school degree	Mean	0.599	0.336	0.454	0.225	0.349
	Std Dev.	0.490	0.473	0.498	0.418	0.477
	N	5183	258	766	615	1800593
Other person employed in HH	Mean	0.814	0.817	0.796	0.862	0.930
	Std Dev.	0.389	0.387	0.403	0.345	0.256
	N	9138	799	1557	1683	1801813

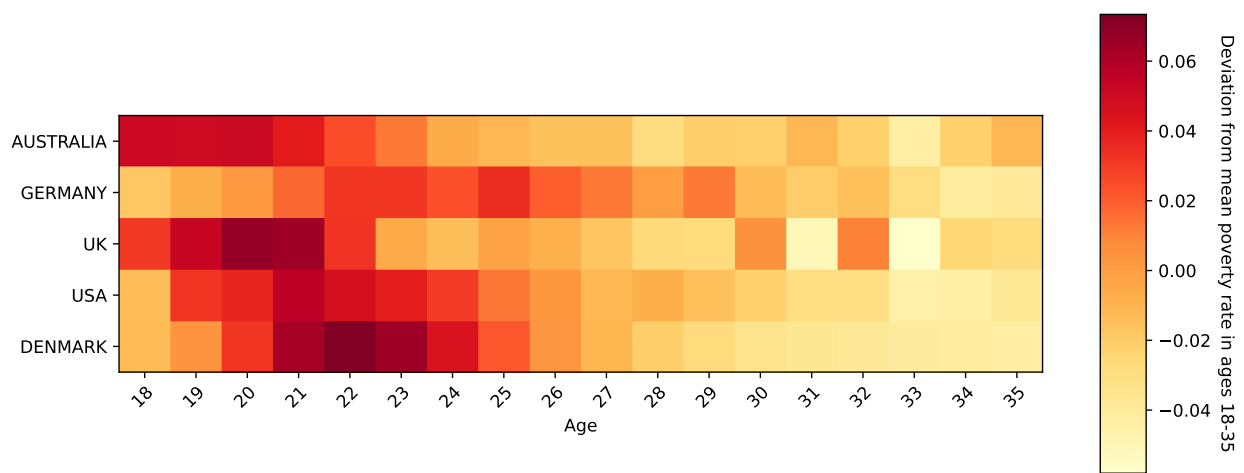
All calculations were estimated using average childhood weights. Mom is proxied by female head or partner in the household. Adult outcomes are sample averages of individual variable averages/maximums from ages 25 to 35.

C Data Validation & Sensitivity Tests

C.1 Cross-National Variation in Life-Cycle Bias

Life-cycle bias is a common concern in intergenerational mobility studies: the age at which a respondent's adult circumstances are measured may affect the estimated strength of intergenerational mobility, particularly if extracted from a single year of data. We partially side-step this concern by averaging poverty status over all observed ages from 25 to 35 (or highest observed age in that range). Here, we further verify that cross-national variation in life-cycle bias is unlikely to meaningfully affect our findings.

Figure C1: Cross-national variation in deviations from country mean poverty rates across adult age distribution



Note: A value of 0 in the figure implies that at that specific age the poverty rate equals the average poverty rate for people between 18 and 35. Cross-national variation in life-cycle bias could affect our findings if (1) the likelihood of poverty varies meaningfully across age of early adulthood and (2) if our results were to capture temporary rather than 'permanent' economic status. Figure C1 shows that the largest variation in age-specific poverty rates occurs between ages 18 and 24, an age range that we do not include in our analyses. From ages 25 to 35, country-specific variation in poverty across the age distribution is less volatile. Given that our analyses focus on the age 25 to 35 range, and that we average adult poverty status over all years observed during this age range, it is unlikely that cross-national variation in life-cycle bias meaningfully affects our conclusions.

C.2 Selective Attrition

We address the possibility of variation in selective attrition across our datasets. In our case, selective attrition could bias our cross-national comparisons if, in a certain country, more disadvantaged members of the sample were more likely to drop out of the sample before reaching age 25 (the point at which we would observe the adults in our sample given the restrictions we impose). Our use of Danish register data practically certifies that we will observe less attrition for Denmark than for other countries. Among the remaining countries, however, we do not find strong evidence that selective attrition is likely to bias our cross-national comparisons. The tables below present evidence that (1) respondents in the U.S. are not more likely to selectively attrit than in our other survey-based countries, (2) reweighting to partially account for selective attrition does not meaningfully affect our findings, and (3) estimations of intergenerational poverty on eventual attriters versus non-attriters aged 21-24 do not meaningfully vary.

Table C1: Characteristics of attrition sample and non-attrition sample by country

	Full sample	N full sample	Non- attriters	N non- attriter
Balance - full sample vs non-attriters				
<i>USA</i>				
Poverty rate	0.182	13641	0.179	8385
Childhood poverty rate	0.179	13641	0.178	8385
Share of ch. with no male in HH	0.133	13641	0.132	8385
Age of mom at birth	26.940	13641	26.944	8385
Number of people		16,053		9,507
		100.0%		61.5%
<i>UK</i>				
Poverty rate	0.164	2671	0.148	620
Childhood poverty rate	0.167	2671	0.163	620
Share of ch. with no male in HH	0.159	2671	0.161	620
Age of mom at birth	26.925	2671	26.893	620
Number of people		2,786		641
		100.0%		23.2%
<i>AUSTRALIA</i>				
Poverty rate	0.110	2037	0.112	1493
Childhood poverty rate	0.100	2037	0.100	1493
Share of ch. with no male in HH	0.151	2037	0.151	1493
Age of mom at birth	28.807	2037	28.801	1493
Number of people		2,150		1,563
		100.0%		73.3%
<i>GERMANY</i>				
Poverty rate	0.076	4451	0.078	1612
Childhood poverty rate	0.067	4451	0.068	1612
Share of ch. with no male in HH	0.093	4451	0.091	1612
Age of mom at birth	27.379	4451	27.406	1612
Number of people		4,829		1,708
		100.0%		36.2%

Note: full sample refers to all the individuals observed during childhood in our sample that could have turned 25 by the last year we have data for each country, but did not due to attrition. Non-attriters refers to people who make it to our final sample - differences in the number of individuals registered here is due to a different treatment of missings.

Table C2: Association of childhood poverty with young adult poverty by country: baseline versus using attrition weights

Dependent Variable:		
Post-Tax/Transfer Adult Poverty		
	Baseline	Attrition Weights
United States (n=9138)		
Child Poverty	0.424*** (0.010)	0.440*** (0.011)
United Kingdom (n=798)		
Child Poverty	0.147*** (0.033)	0.165*** (0.043)
Australia (n=1557)		
Child Poverty	0.198*** (0.029)	0.208*** (0.031)
Germany (n=1683)		
Child Poverty	0.105** (0.044)	0.050 (0.036)
Gender, Age and Year Effects	✓	✓

Models run separately for each country. Attriter is defined as someone who could have turned 25 by the last year we observe in each country, but does not show up in the data. Attrition weights constructed so that non-attriters (our final sample) matches the full sample (with both attriters and non-attriters) summary statistics across childhood poverty, mother's age of birth, and maternal education.

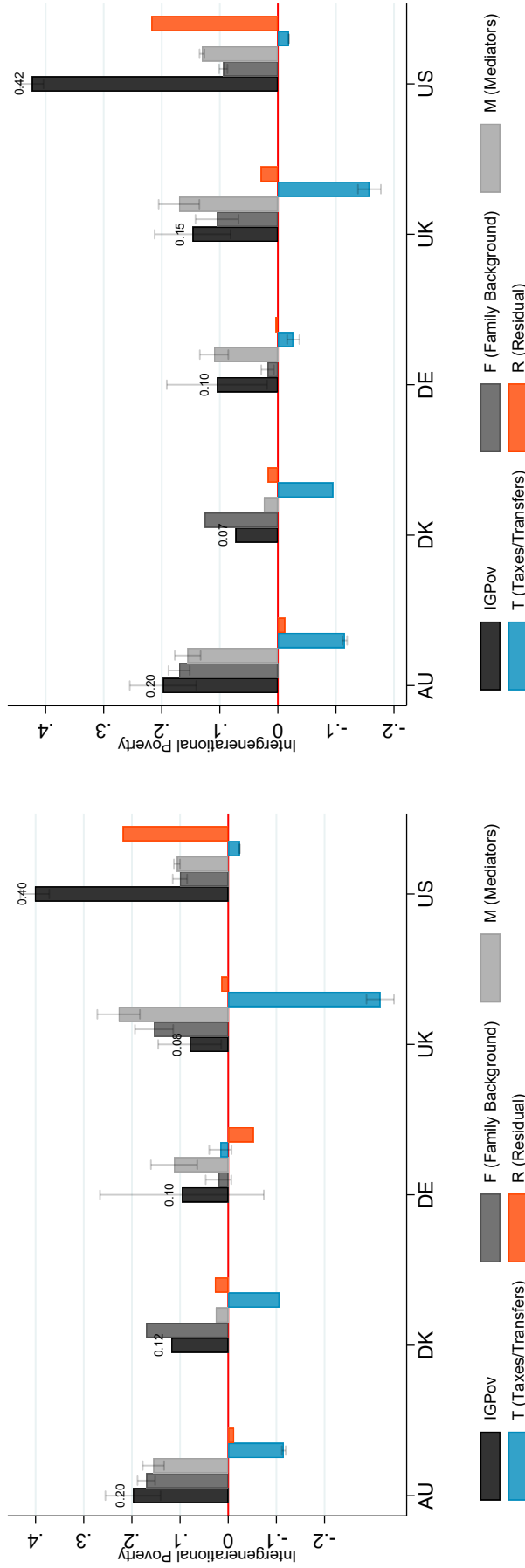
Table C3: Association of ch. pov. with young adult pov. (21-24 y.o.) by attrition status

Dependent Variable: Post-Tax/Transfer Adult Poverty	
United States (n=10414)	
Child poverty	0.407*** (0.012)
Attriter	0.023 (0.015)
Child poverty \times Attriter	0.045 (0.037)
United Kingdom (n=1432)	
Child poverty	0.104*** (0.037)
Attriter	-0.008 (0.030)
Child poverty \times Attriter	0.092 (0.087)
Australia (n=2666)	
Child poverty	0.240*** (0.027)
Attriter	-0.023 (0.023)
Child poverty \times Attriter	-0.073 (0.085)
Germany (n=3086)	
Child poverty	0.167*** (0.038)
Attriter	-0.008 (0.013)
Child poverty \times Attriter	0.077 (0.060)
Gender, Age and Year Effects	✓

Models run separately for each country. Attriter is defined as someone who could have turned 25 by the last year we observe in each country, but does not show up in the data.

C.3 Equalizing Sample Years

Figure C2: Decomposition of intergenerational persistence of poverty when restricting sample years to 2013 and later



(a) With restricted sample

(b) Original figure

Note: In Australia, we only observe people that make it to our final sample in their adult years (25 and beyond) from 2013. We cannot impose the same restriction to other countries (i.e. only allow for people who turned 24 after 2013), since this would bring our sample size down to a couple hundred observations in Germany and it would be likewise insufficient in the other countries. Instead, we opt for dropping people for which our age bracket of interest (25-35) occurred entirely before 2013. The restriction thus requires that there is some time overlap between the adulthoods of a subset of people in any two pair of countries.

C.4 Intra- versus Inter-generational Poverty

One could argue that our results focus on *intragenerational* poverty, rather than *intergenerational* poverty, given that we compare children’s own poverty status to their poverty in adulthood. Here, we document that family income and poverty status prior to the child’s birth is very strongly correlated with family income after the child’s birth; as such, measuring family resources during childhood is an appropriate measure of parental circumstances and can be reliably applied in an analysis of intergenerational poverty.

Table C4: Link between pre- and post-child birth economic status

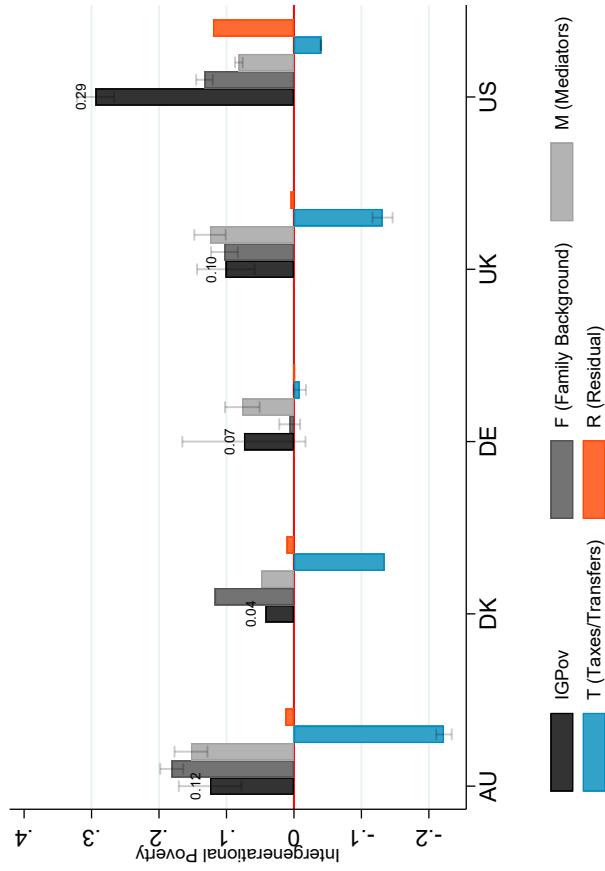
	Panel 1		Panel 2	
		Income after child		Poverty after child
Australia	Inc. before ch.	0.908*** (0.004)	Pov. before ch.	0.615*** (0.010)
		R ² = 0.881		R ² = 0.411
Germany	Inc. before ch.	0.927*** (0.004)	Pov. before ch.	0.497*** (0.009)
		R ² = 0.899		R ² = 0.275
United Kingdom	Inc. before ch.	0.881*** (0.005)	Pov. before ch.	0.452*** (0.008)
		R ² = 0.757		R ² = 0.254
United States	Inc. before ch.	0.997*** (0.005)	Pov. before ch.	0.680*** (0.005)
		R ² = 0.773		R ² = 0.565
Denmark	Inc. before ch.	1.157*** (0.007)	Pov. before ch.	0.400*** (0.006)
		R ² = 0.641		R ² = 0.194

For each birth of a child observed in the data (i.e. someone appearing in the dataset with age equal 0), we construct an event, which we treat as an observation in a new dataset. For each event, we recover the equivalized household income data of the household head the around the date of the event. We then construct average household head income for the 5 years before child birth and for the 17 years after birth, and collapse the dataset in two periods, one before child birth and one after. We then regress, omitting the constant, post-child income on pre-child income. We make incomes in different years and countries comparable by adjusting for PPP and inflation (we adjust for PPP and then US inflation instead of getting each country’s inflation rate series). We perform the same exercise in panel 2, with our usual measure of poverty averaged before and after child birth. The correlation between pre- and post-child incomes allows us to argue that persistence of poverty from childhood to adulthood and intergenerational transmission of poverty are basically the same phenomenon. One has to be careful in interpreting the coefficients of such a regression, as big drops or increases in income distort the results heavily - we dropped the 38 higher incomes in the sample as they were enough to cut the UK’s coefficient by half.

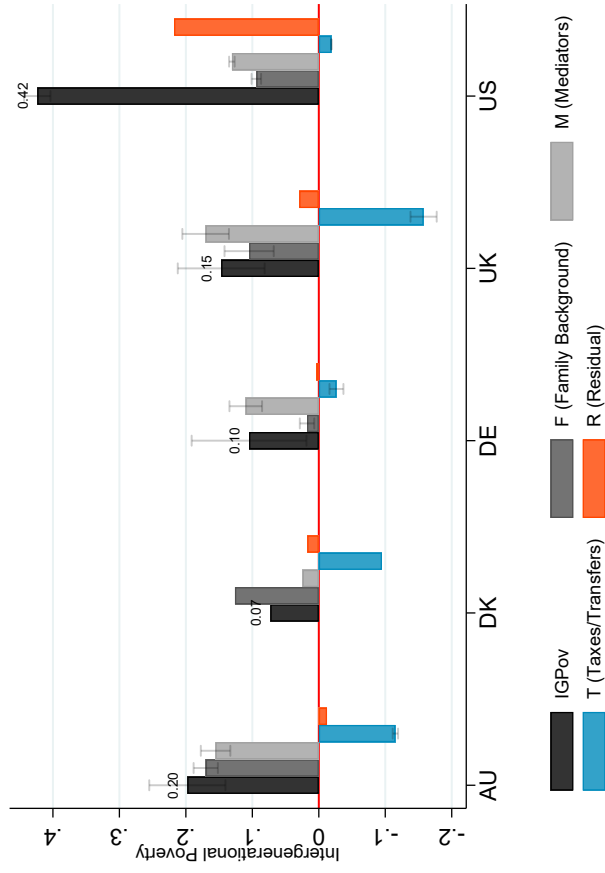
D Alternative Poverty Measures

D.1 Absolute Poverty

Figure D1: Intergenerational persistence of poverty when applying an absolute poverty threshold



(a) Using absolute poverty measure

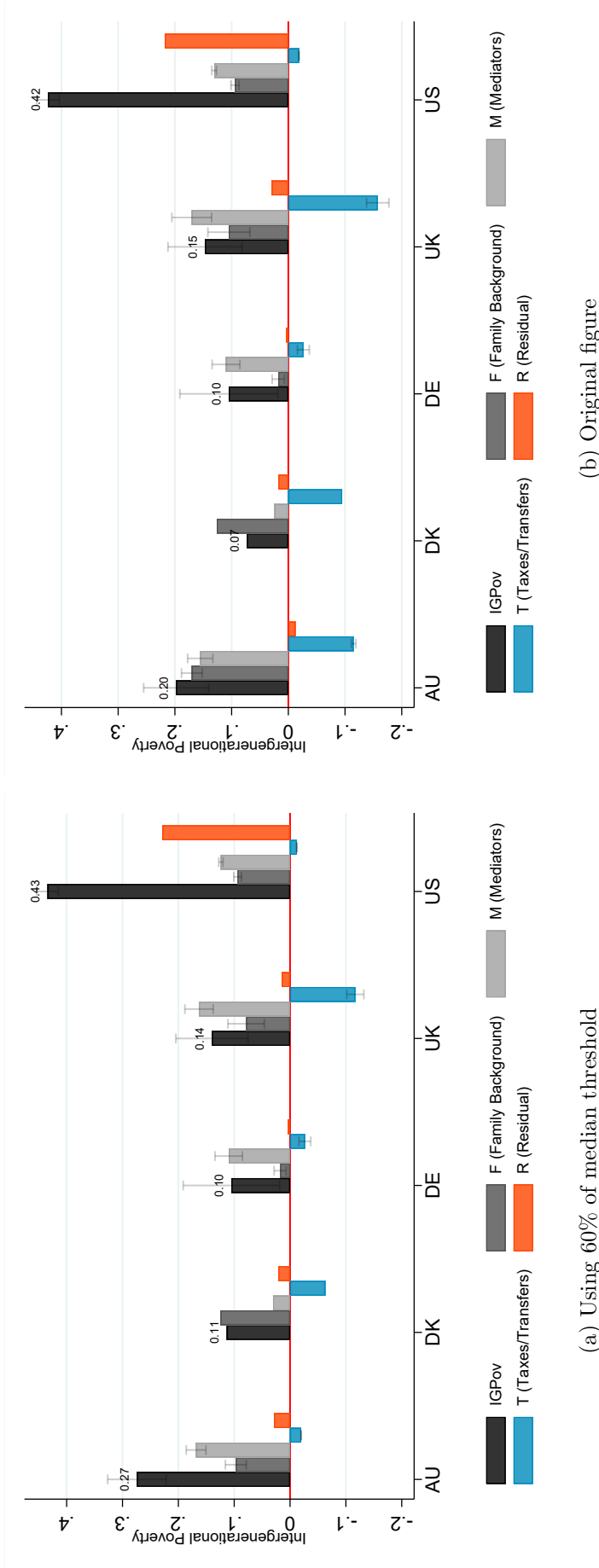


(b) Original figure

Note: We define absolute poverty as having an annual income below 8 thousand 1990 dollars, and construct absolute income measures adjusting for PPP and inflation. The average share of childhood spent in poverty using the absolute poverty measure is 10% in Australia, 7% in Germany, 12% in Denmark, 33% in the UK and 19% in the US (all rounded to the nearest digit). The average year for observations in childhood varies in our final sample. In the UK, US, and Germany we have most people experiencing their childhood years in the mid 1990s, and mid 2000s in Australia. This is reflected by substantial increases in childhood poverty rates in Germany and UK, which is dampened in the US due to higher incomes (experiencing childhood earlier on means doing so in a poorer country, as income growth rates were positive in the observed period).

D.2 Threshold at 60% of the median income

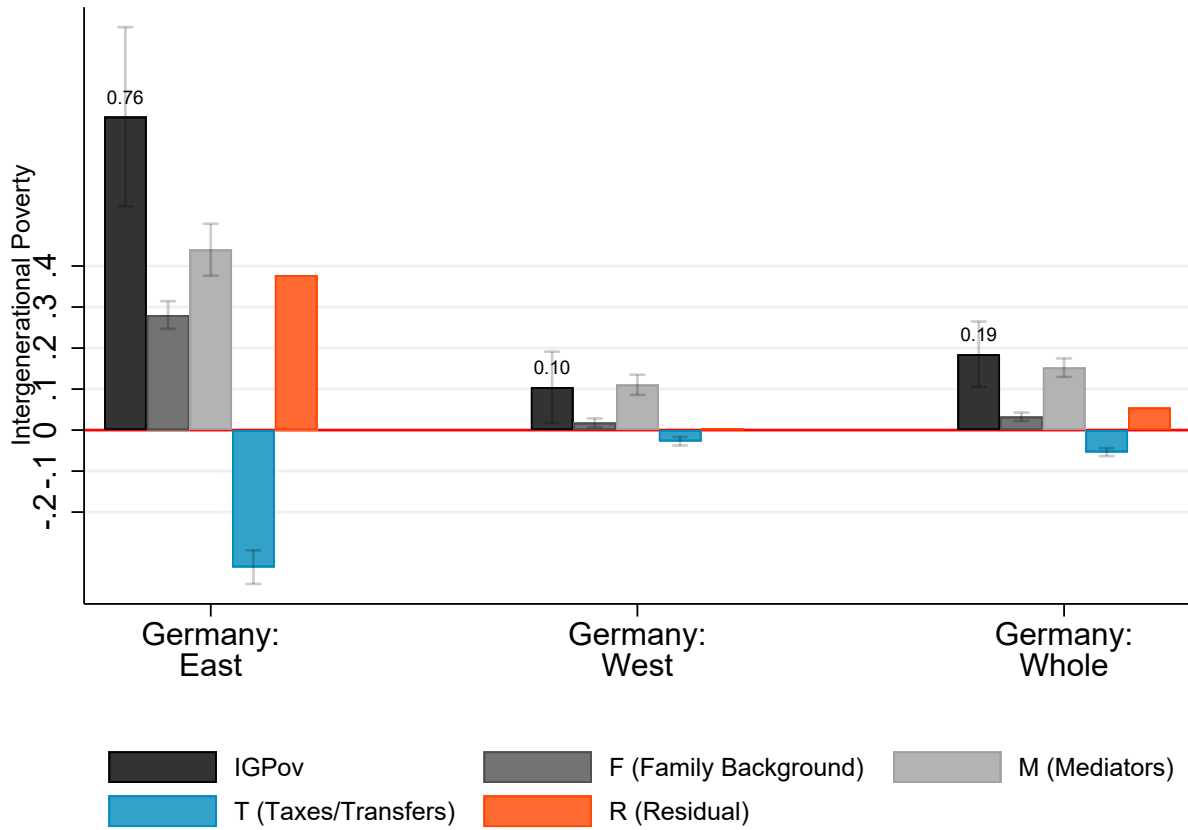
Figure D2: Intergenerational persistence of poverty when applying a 60 percent of median poverty threshold



Note: This is a simple variation of our original figure, setting the poverty threshold at 60% instead of 50% of yearly median equivalized household income. The average share of childhood spent in poverty using the 60% threshold is 17% in Australia, 9% in Germany, 13% in Denmark, 23% in the UK and 26% in the US (all rounded to the nearest digit).

E Germany: Sensitivity Tests

Figure E1: Decomposition of intergenerational persistence of poverty:
by East and West Germany



Note: We assign people to East or West Germany by where they spent most of their childhood. Models are run separately. East Germany results should be interpreted with caution due to sample framing and size, but are indicative of much higher poverty persistence in the region relative to West Germany.

F United States: Sensitivity Tests

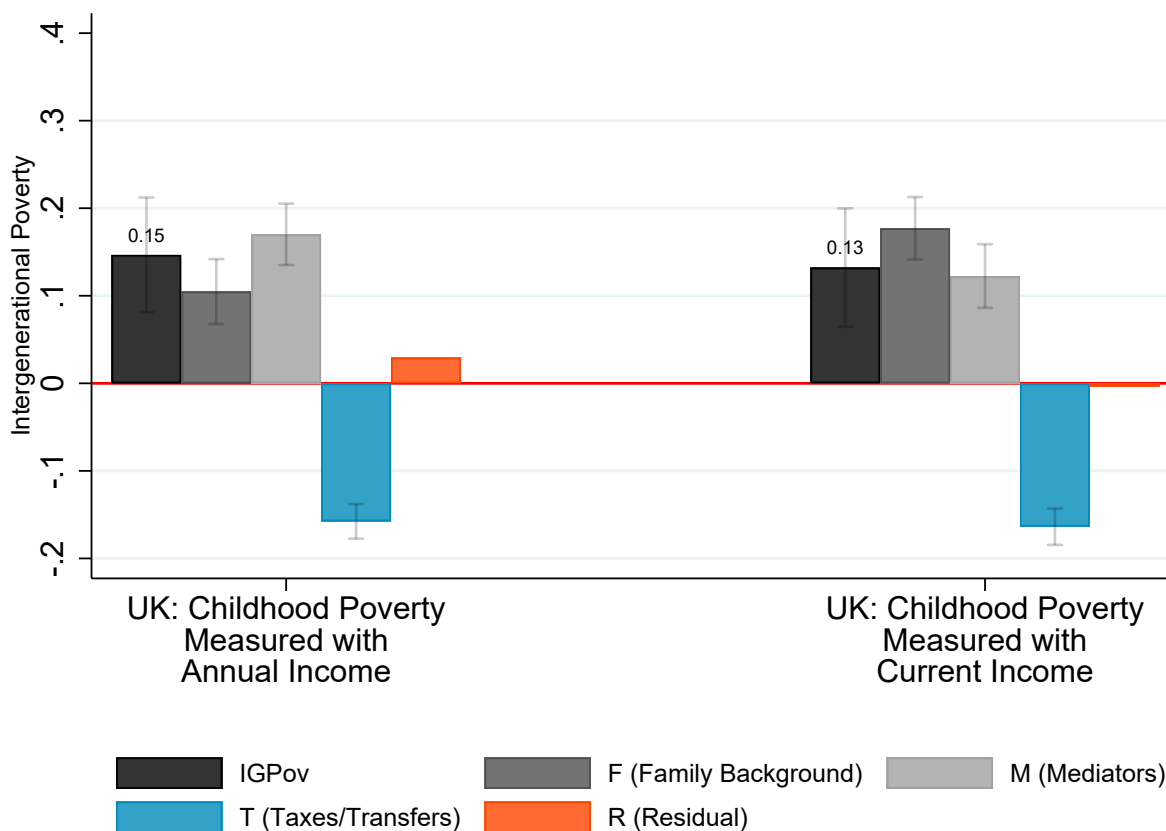
Table F1: Association of childhood poverty with young adult poverty and food insecurity in the U.S.

Dependent Variable: Post-Tax/Transfer Adult Poverty (Ages 25-35)			
	M1	M2	M3
Child Poverty	0.424*** (0.010)	0.218*** (0.012)	0.197*** (0.012)
Dependent Variable: Food Insecurity (Ages 25-35)			
	M1	M2	M3
Child Poverty	0.146*** (0.008)	0.076*** (0.011)	0.055*** (0.011)
Gender, Age and Year Effects	✓	✓	✓
Family Background and Mediators		✓	✓
Extended Mediators			✓

'Family background controls' include mother's age at birth, mean number of children in household during childhood, share of childhood in single-parent household, share of childhood with no adult woman in household, share of childhood with no adult man in household, educational attainment of mother, and mother's mean employment rate during childhood. 'Mediators' include high school degree, studies beyond a high school degree, single parenthood, employed, full-time employed, married, partner with education beyond high-school degree, and others in the household are employed. 'Extended mediators' include university degree, union membership, household wealth decile, self-reported health, asthma and/or high blood pressure, incarcerated in past, and home ownership.

G United Kingdom: Sensitivity Tests

Figure G1: Comparison of UK results when measuring childhood poverty with current or annual income



Note: Contrary to the BHPS, in the UKHLS, the income components used in the CNEF's calculations are estimated based on respondents' reported current income in the prior month. The resulting CNEF variable has a yearly frequency in before 2008 (included), and a monthly frequency after 2008 (when the UKHLS started). In our primary analyses, we simply multiply the monthly income figure by 12 so that it is comparable with the annual one.

This figure compares the UK's intergenerational persistence of poverty when measuring childhood poverty with annual income (baseline) versus current income (i.e. using a monthly income measure also for the BHPS). The results do not meaningfully vary - though family background grows in importance. This is consistent with evidence from Jenkins, 2011, who notes that current and annual income distributions in the UK are strongly, positively correlated.

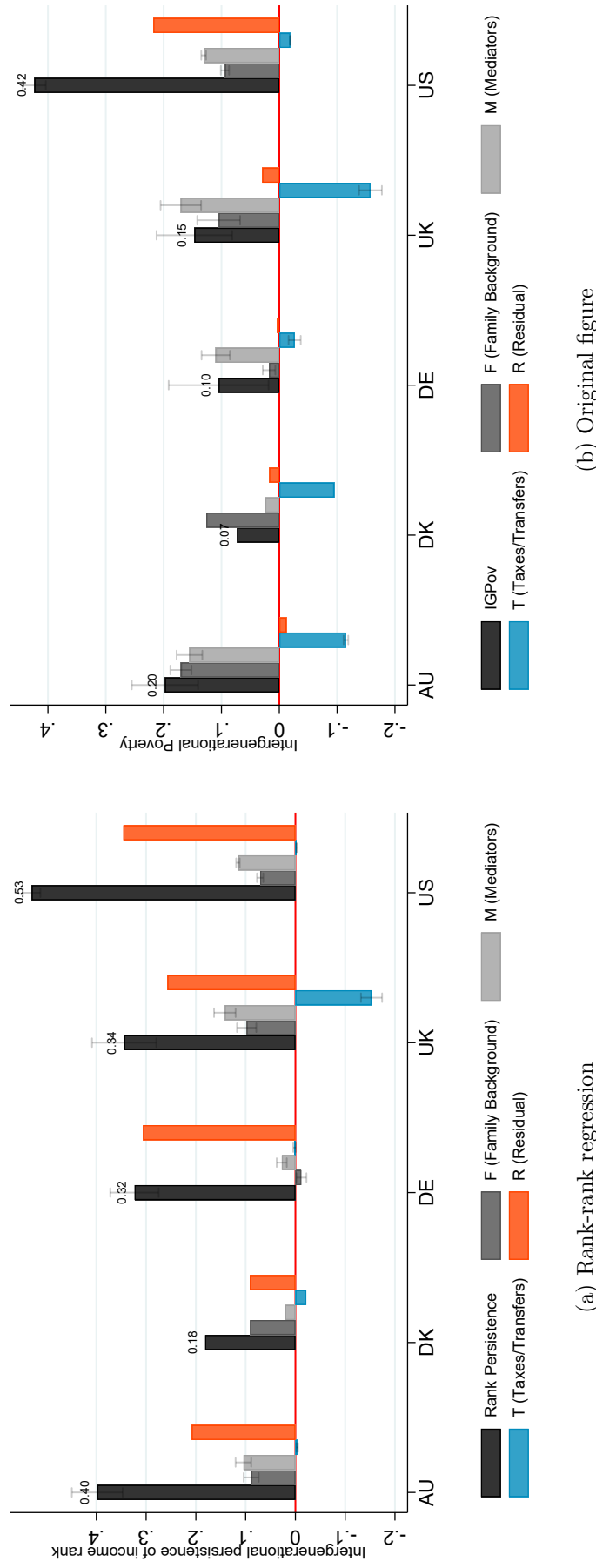
Figure G2: Comparison of UK results when excluding the UK Household Longitudinal Study (2009-2017)



Note: During the transition from the British Household Panel Survey (BHPS) to the UK Household Longitudinal Study (UKHLS) in 2009, survey administrators altered the wording of many questions, including those related to several income components. As a result, the income concepts between the two studies are comparable but not identical. We assess the extent to which excluding the UKHLS, and effectively eliminating inconsistencies in income measurement, affects our UK findings. The country’s intergenerational persistence of poverty increases slightly, though becomes less precise and remains below US levels. The mechanisms driving intergenerational poverty are similar across the two figures. We rule out that the transition from the BHPS to the UKHLS meaningfully affects this study’s conclusions.

H Replication using rank-rank regression

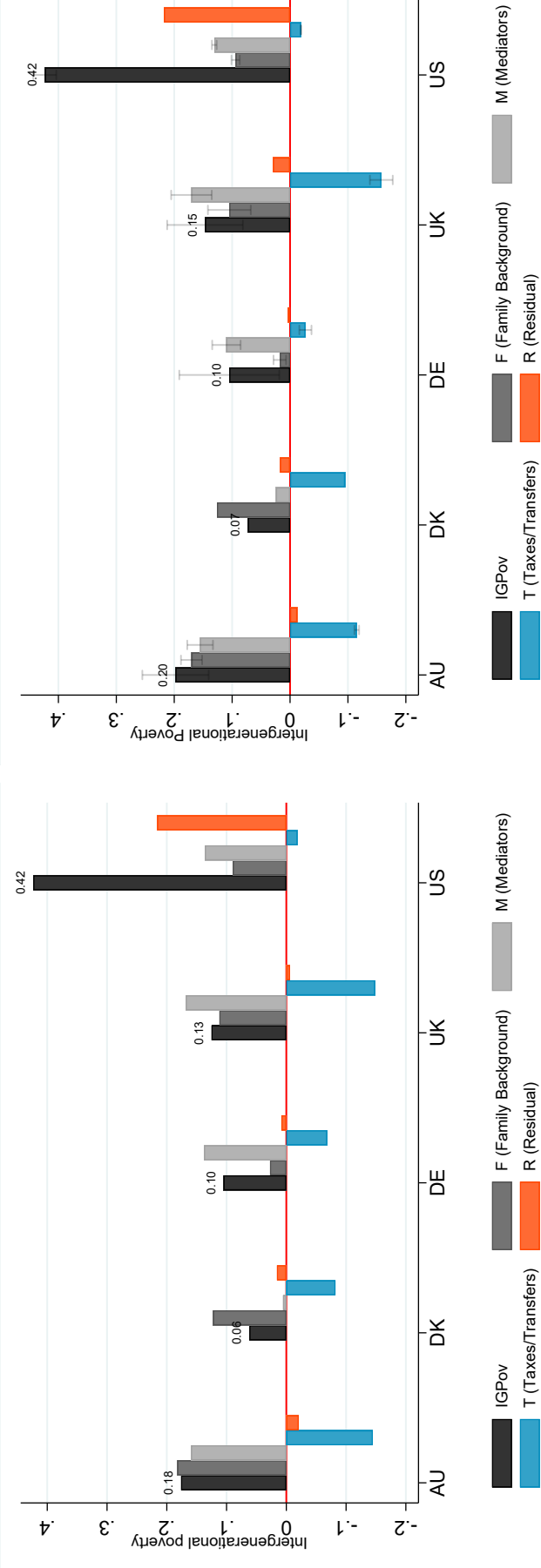
Figure H1: Intergenerational income mobility versus the intergenerational persistence of poverty



Note: We drop all respondents in East Germany before creating income ranks for each year. In panel (a), we analyze the relationship between average adult income rank and average childhood income rank, following the approach of Chetty et al., 2019. This allows us to compare our results with those obtained using a broader “social mobility” framework. Our focus on poverty in particular is justified because the patterns and causes of poverty persistence across countries are different from those of income persistence.

I Replication with equivalent childhood poverty rates

Figure 11: Decomposition of intergenerational persistence of poverty when child poverty levels are set at 60%



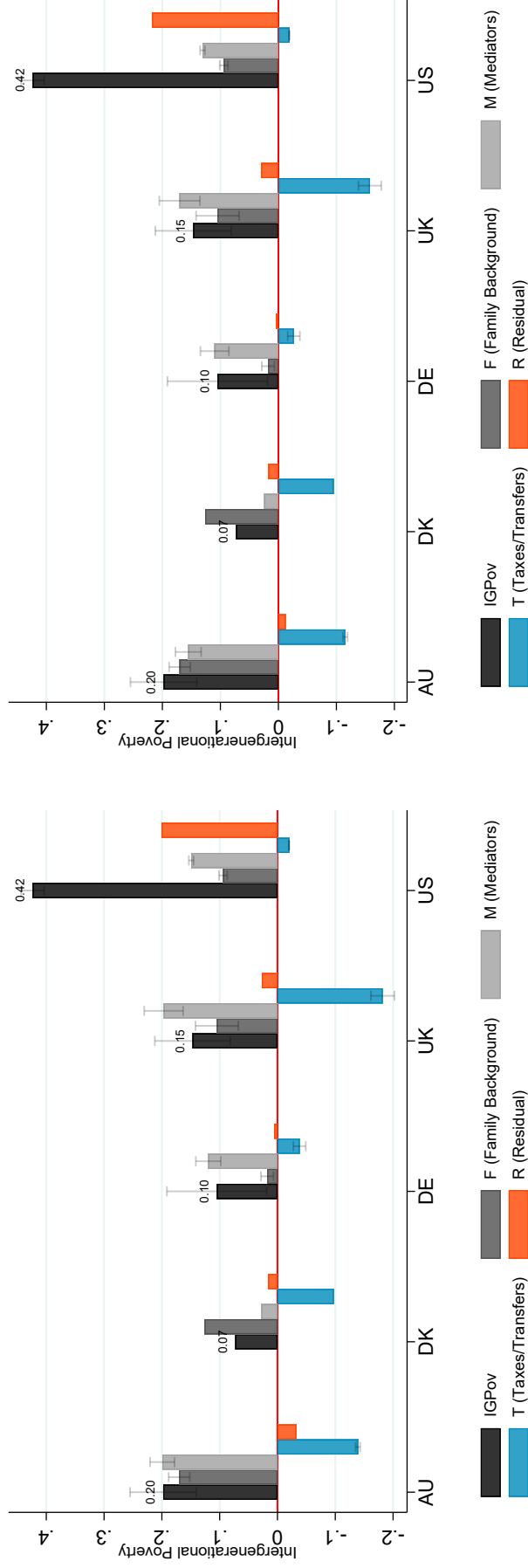
(a) Equivalent poverty rates

(b) Original figure

Note: In panel (a), we first drop observations with no childhood poverty until the mean childhood poverty (weighted with average childhood weights) is 60% in every country. We run this procedure 100 times and plot the average measures for each country. Results vary remarkably little relative to baseline. The consequences are twofold: (1) we do not see evidence that poverty levels mechanically affect poverty transmission; (2) whatever bias that might arise from omitted interactions between poverty status and our mediator/background measures - a bias that should depend on poverty level - is likely small in magnitude.

J Replication with added interactions between F and M

Figure J1: Decomposition of intergenerational persistence of poverty when F and M are interacted



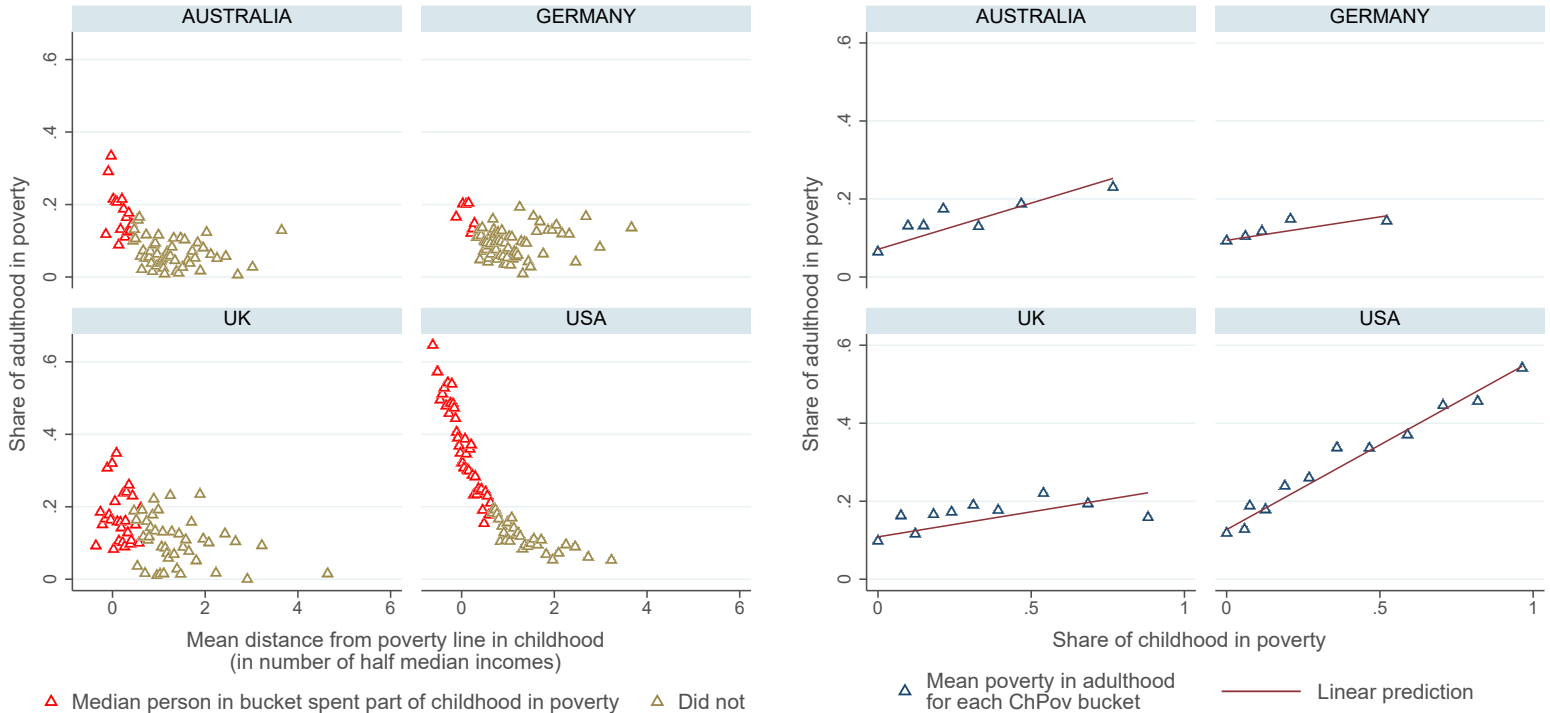
(a) Added interactions

(b) Original figure

Note: In panel (a), we take three indicators from our family background measures most strongly associated with childhood disadvantage (single parenthood, maternal education and maternal employment), and interact each with all of our mediators. These interactions are added to the mediator list - thus any changes stemming from this exercise should be mainly captured by M - with downstream adjustments to T and R . Adding such interactions increases M in every country by a slight margin, but does not affect our main conclusions.

K Linear and non-linear effects

Figure K1: Non-linearities between groups and linearities within groups



Note: In both panels, we construct equally sized (in number of observations) bins for each country, and represent each with a data point. All measures presented here are thus mean values within a bin. In the left-side panel, we plot the share of adulthood spent in poverty on the mean distance from the poverty threshold during childhood. In red, we highlight the buckets for which the median person in the bin spent part of childhood in poverty. Across all observed countries, we see a notable shift for those experiencing at least some poverty in childhood: for them, (1) average poverty in adulthood is substantially higher than for those slightly more distant (in means) from poverty in childhood and (2) small decreases in income are associated with a much larger poverty risk in adulthood. This discontinuity in levels and slopes characterizes, as highlighted in previous work, poverty as a distinct economic state. Nonetheless, our choice of modelling poverty persistence as a linear function is justified by the right-side panel. Non-parametric estimates (means for each bin) show that the share of adulthood spent in poverty is roughly linear in the share of childhood spent in poverty. While we model poverty with a continuous measure, *ChPov*, this does not exclude non-linearities and potential discontinuities such as those in the left-side panel. The main reason is that, whereas we observe non-linearities between groups (exposed and non-exposed to poverty in childhood), we do not find the same pattern within groups; poverty risk in adulthood is roughly flat in the distance from the threshold for the non-exposed, and roughly linear for the exposed. This translates to a linear relationship in the right-panel, as all the non-exposed are bunched together at zero *ChPov*.