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Family Background at Labour-Market Entry

Who Can Afford Early-Career Risk?

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Research Summary

Why was the research done?

This research was conducted to understand how socioeconomic disadvantage during childhood and early adulthood shapes young people's transition into the labour market. While previous research has mainly focused on adult earnings and educational attainment, much less is known about whether disadvantage affects the types of jobs and employment pathways young adults experience at the beginning of their careers, including exposure to insecure or precarious work. The study also examines whether family resources, such as wealth, savings, and informal financial support, can protect young adults from adverse labour-market outcomes. Using longitudinal Australian data, the paper investigates how the timing, persistence, and sequencing of hardship between ages 4 and 24 influence labour-market pathways between ages 25 and 30.

What were the key findings?

The study finds that both childhood hardship and early-adult labour-market experiences are highly diverse. Persistent socioeconomic disadvantage before age 25 is strongly associated with adverse labour-market pathways in early adulthood, including insecure employment, low earnings, and greater exposure to labour-market risk. The results also show that family resources can moderate these effects, but mainly through short-term financial insurance and support rather than broader measures of wealth. Overall, family resources appear to reduce the likelihood of sustained disadvantage rather than enabling young adults to use precarious employment as a temporary or strategic stage in their careers.

What does this mean for policy and practice?

The findings suggest that inequalities in labour-market outcomes begin well before labour-market entry and are shaped by long-term exposure to socioeconomic disadvantage. Policies aimed at reducing intergenerational inequality should therefore focus not only on education and later-life earnings, but also on supporting stable transitions from education into secure employment. The results also highlight the importance of family financial buffers in helping young adults manage labour-market insecurity, particularly in countries such as Australia, where welfare support for young adults is relatively targeted. This implies that public policies providing income support, housing assistance, employment protection, and transition support for young adults may help reduce inequalities that otherwise depend heavily on private family resources.

Citation

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We acknowledge the Traditional Custodians of the lands on which we work and live across Australia. We pay our respects to Elders past and present and recognise their continued connections to land, sea and community.

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Abstract

Using longitudinal data from the HILDA Survey, this paper examines how socioeconomic disadvantage before labour-market entry shapes early-career labour-market pathways and whether family resources moderate these associations. We model hardship dynamically over ages 4–24 and relate pre-adult trajectories to labour-market risk and precarious-employment pathways over ages 25–30. We identify substantial heterogeneity in both pre-adult hardship and early-adult labour-market experiences, revealing dimensions of inequality that static measures of family background and adult outcomes overlook. Persistent hardship is strongly associated with persistently adverse labour-market trajectories, while moving out of hardship, volatile hardship, and no hardship are linked to substantially lower risks of sustained disadvantage. Family resources partially moderate these associations, but the effects depend on resource type. Short-term insurance provides the clearest buffering role, reducing entry into high-persistent and worsening trajectories. Overall, family resources operate primarily as private insurance against sustained labour-market risk rather than as a mechanism supporting strategic tolerance of precarious work.

JEL classification: D31, I32, J62

Keywords: Intergenerational inequality; labour-market risk; precarious employment; family wealth; economic hardship; HILDA Survey.

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1. Introduction

Understanding how childhood socioeconomic disadvantage shapes labour-market entry is increasingly important as transitions from education to employment have become more fragmented across advanced economies. Structural changes in labour demand, the expansion of non-standard employment, and the decline of stable entry-level jobs have increased young adults' exposure to temporary work, underemployment, and contractual insecurity (Kalleberg, 2009). In Australia and across OECD countries, these forms of labour-market insecurity remain concentrated among younger workers, indicating that precarious employment has become a structural feature of labour-market entry rather than a short-lived phase.[1]

This shift matters because labour-market entry is a formative stage in the production of inequality. Adverse entry conditions can generate persistent earnings penalties, slower occupational progression, and delayed transitions to independent living, homeownership, and family formation. As a result, inequalities experienced during the transition to adulthood may accumulate across the life course and contribute to broader intergenerational disparities in income and wealth.

A large literature has shown that parental income, education, occupation, and wealth shape children's opportunities and contribute to the persistence of economic status across generations (Cholli and Durlauf, 2022; Solon, 1999; Black and Devereux, 2011; Corak, 2013). Yet this literature has focused primarily on later-life outcomes, particularly earnings and educational attainment. Much less is known about whether childhood disadvantage shapes the labour-market pathways young adults follow at the start of their careers, and whether family resources alter those relationships by buffering exposure to early-career risk.

These questions are especially relevant in institutional settings where public support is limited or tightly targeted. In such contexts, households may act as informal insurers, smoothing consumption, financing education, and supporting young adults through periods of unemployment or insecure work. This raises the possibility that family resources influence not only long-run mobility, but also who can absorb labour-market risk during the transition to adulthood.

[1] For example, in the European Union, 31.1% of employed individuals aged 15–29 were on temporary contracts in 2024, compared with 7.4% among those aged 30–54 (Eurostat). In Australia, the Australian Bureau of Statistics (ABS) reports that underemployment affected around 1.5 million workers in 2025, with rates highest among younger workers and those in part-time employment.

Australia provides a useful setting because it combines broad access to higher education through income-contingent loans with a targeted welfare system that leaves families central to supporting young adults during the transition to independence. High housing costs and substantial inequality in family wealth mean that parental resources may shape not only educational attainment but also the capacity to withstand insecure labour-market entry.

This paper asks two related questions. First, does socioeconomic disadvantage across the first 24 years of life shape the labour-market pathway young adults follow between ages 25 and 30? Second, do family resources beyond hardship status alter those relationships? We address these questions using longitudinal data from the Household, Income and Labour Dynamics in Australia Survey (HILDA). Rather than summarising childhood conditions with a single average measure, we model disadvantage across ages 4–24 as a dynamic process and relate distinct pre-adult hardship profiles to early-adult labour-market trajectories.

The focus on ages 4–24 reflects the broader transition to economic independence. This period captures not only childhood and adolescence, when family resources shape human-capital development, but also early adulthood, when many young people remain partly dependent on family support for housing, education, and income smoothing. In Australia, this overlaps closely with participation in higher education and delayed labour-market attachment, making family resources relevant beyond childhood itself.

Two gaps motivate this study. The first concerns outcomes. Research on intergenerational mobility has established that family background shapes adult earnings, income ranks, and educational attainment, but these measures capture only part of the transition into adulthood. Early careers are also defined by job quality, contract security, and the risk of unstable employment. Focusing only on later earnings may therefore overlook whether young adults enter stable employment, remain exposed to persistent labour-market vulnerability, or experience insecurity even while employed (Booth, Francesconi and Frank, 2002; De Witte, 1999).

The second gap concerns mechanisms. Research on youth transitions has shown that precarious work is not a uniform condition. For some young adults, insecure employment reflects limited opportunities and persistent disadvantage. For others, it may represent a temporary stage that can be tolerated while pursuing education, job search, or better employment matches. Whether labour-market insecurity can function in this way is likely to depend on resources outside the labour market, particularly family resources (Antonucci, 2018; MacDonald, 2011). This suggests that precarious employment may reflect not only

structural disadvantage but also unequal access to private forms of insurance. Distinguishing between these interpretations is central to understanding whether family wealth functions primarily as investment capital that supports experimentation, or as private insurance that protects against sustained labour-market scarring.

A life-course perspective is central to this distinction. Family disadvantage may matter not only in its average level but also in its timing, persistence, and sequencing (Cunha and Heckman, 2007; Duncan, Ziol-Guest, and Kalil, 2010; Carneiro et al., 2015). Conditions in early childhood may shape foundational skills, while disadvantage in adolescence and early adulthood may influence educational pathways, labour-market entry, and the capacity to absorb risk. For this reason, we treat pre-adult hardship as a dynamic exposure and distinguish trajectories that capture persistent, improving, worsening, and volatile patterns of disadvantage across ages 4–24. This perspective also speaks to the measurement of inequality, since summary indicators of family background may conceal substantial differences in the duration and sequencing of disadvantage that are consequential for later labour-market outcomes.

A related issue is whether socioeconomic hardship alone adequately captures the resources available to support young adults at labour-market entry. It may not. Families with similar income trajectories may differ substantially in wealth, liquidity, housing assets, and access to private transfers. These resources may relax financial constraints and make short periods of insecure employment more manageable (Deaton, 1991; Hurst and Stafford, 2004; Lusardi, Schneider and Tufano, 2011; Cox, 1990; Altonji, Hayashi and Kotlikoff, 1997; Schoeni and Ross, 2005). At the same time, their role may be narrower, operating mainly by reducing the likelihood of persistent high-risk pathways rather than transforming precarious work into a strategic or temporary stage. Distinguishing between these possibilities is important for understanding how family resources shape inequality at labour-market entry.

The paper makes three contributions. First, it extends the intergenerational mobility literature to outcomes that matter at labour-market entry, namely labour-market risk and precarious employment, rather than focusing primarily on later-life earnings or educational attainment. Second, it adopts a life-course perspective on disadvantage by modelling hardship as a dynamic process across ages 4–24, allowing the duration, timing, and sequencing of socioeconomic adversity to shape early-career outcomes. This moves beyond conventional point-in-time indicators and distinguishes persistent disadvantage from temporary exposure.

Third, it identifies the role of family resources as a form of private insurance, assessing whether wealth and liquidity mitigate the effects of early disadvantage by smoothing the transition from education into stable employment.

Our empirical strategy proceeds in two stages. We first estimate trajectories of pre-adult hardship and early-adult labour-market outcomes using group-based trajectory models. We then relate adult trajectory membership to hardship profiles and test whether family buffers moderate those associations. We distinguish three core buffering dimensions, overall wealth, short-term insurance, and informal insurance, while also examining borrowing capacity, long-term wealth, and government transfers as complementary sources of protection.

The distinction between the two adult outcomes is important. *Labour-market risk* is the broader measure of early-career vulnerability, since it incorporates non-employment alongside weak earnings and insecure employment. *Precarious employment* is narrower, focusing on insecurity among those who are employed, and is therefore the more relevant setting in which to assess the private-safety-net hypothesis.

The results point to three main conclusions. First, hardship before age 25 is far from uniform. Second, early-adult labour-market experiences are similarly heterogeneous. Third, persistent pre-adult hardship is strongly associated with persistently adverse early-career pathways. Short-term insurance emerges as the clearest moderator, while broader wealth measures are less consistently associated with favourable pathways. Overall, the findings suggest that family resources primarily reduce exposure to sustained disadvantage rather than systematically enabling young adults to use precarious employment as a temporary investment stage.

The remainder of the paper proceeds as follows. Section 2 reviews the related literature. Section 3 describes the data and key measures. Section 4 outlines the empirical strategy. Section 5 presents the main results, and Section 6 concludes.

2. Literature Review

A large body of literature in economics documents substantial persistence in economic outcomes across generations. Foundational work shows strong parent–child associations in earnings, employment, and education, reflecting the combined influence of family resources, human capital investments, neighbourhood effects, schools, and unequal access to opportunities (Solon, 1999; Black and Devereux, 2011). More recent contributions have

refined the measurement of intergenerational mobility through rank-based and spatial approaches, showing that adult outcomes are systematically patterned by family background and place (Chetty et al., 2014; Corak, 2013). However, this literature has primarily focused on adult earnings, income ranks, and educational attainment, paying limited attention to the quality and security of labour-market entry. This is a relevant omission because early adulthood is shaped not only by earnings levels but also by job stability, contract security, and exposure to labour-market risk.

A parallel literature in labour economics and sociology documents the growing prevalence of non-standard employment and the changing nature of youth transitions. This work highlights the expansion of temporary contracts, casual employment, and underemployment as defining features of contemporary labour markets (Kalleberg, 2009). A central question is whether precarious employment should be interpreted as a uniform condition of youth or as a more heterogeneous phenomenon with distinct implications across individuals. One strand of the literature emphasises the long-run costs of unstable entry jobs in terms of earnings progression, wellbeing, and mobility, while another highlights the possibility that such employment may serve as a stepping stone, a period of experimentation, or a flexible arrangement alongside education (Booth, Francesconi and Frank, 2002; Antonucci, 2018; MacDonald, 2011). In the Australian context, this debate is particularly relevant because relatively broad access to education coexists with substantial heterogeneity in family resources and intergenerational mobility prospects (Deutscher and Mazumder, 2020). This raises the possibility that similar forms of labour-market insecurity may reflect either structural constraint or a transitory stage that is more feasible when supported by family resources.

A further strand of research emphasises that family background should be understood dynamically rather than as a fixed characteristic. Life-course and human-capital frameworks suggest that parental resources may matter differently depending on when they are available. Early childhood resources shape cognitive and socio-emotional development, while adolescent and early-adult resources influence educational choices, school-to-work transitions, and the capacity to absorb labour-market risk (Cunha and Heckman, 2007). Empirical evidence likewise shows that both the timing and persistence of disadvantage are crucial: longer exposure to low income or repeated hardship is more strongly associated with adverse later outcomes than short-lived shocks (Duncan et al., 2010; Carneiro et al., 2015). Related life-course perspectives emphasise cumulative disadvantage while recognising that the timing, duration, and sequencing of exposures across the life course

may generate distinct trajectories of risk, with potentially different implications for later outcomes (Ben-Shlomo and Kuh, 2002). In this context, summarising family background with a single average measure may obscure meaningful variation in both the sequencing and duration of disadvantage across childhood, adolescence, and early adulthood.

Research on family resources under uncertainty provides an additional mechanism linking early disadvantage to labour-market entry. Models of intergenerational transfers and liquidity constraints imply that parental support and family assets can smooth consumption, relax borrowing constraints, and influence decisions regarding education, job search, mobility, and labour supply (Cox, 1990; Altonji, Hayashi, and Kotlikoff, 1997; Deaton, 1991). In environments with incomplete insurance markets, access to wealth or private transfers may allow young adults to tolerate temporary spells of low earnings, unstable contracts, or extended job search in anticipation of better long-run outcomes. Empirical work supports the view that family wealth and transfers facilitate transitions into adulthood and shape risk-taking behaviour and labour-market choices (Hurst and Stafford, 2004; Lusardi, Schneider, and Tufano, 2011; Schoeni and Ross, 2005; Woodman, Maire, and Cook, 2024). This literature motivates the notion of the family as a private safety net at labour-market entry, although it remains unclear whether such resources primarily enable temporary exposure to insecurity or instead mainly prevent persistent disadvantage.

Despite these advances, three gaps remain. First, intergenerational mobility research has rarely treated job quality, contract insecurity, and labour-market risk as central outcomes, even though these dimensions are fundamental to opportunity at labour-market entry. Second, while life-course approaches emphasise timing and persistence in disadvantage, relatively little work connects these dynamics to heterogeneous early-career trajectories rather than to single outcome measures in adulthood. Third, although the literature on wealth, liquidity, and transfers highlights potential buffering mechanisms, there is limited direct evidence on whether such mechanisms alter the relationship between early disadvantage and early-career labour-market insecurity, and whether they operate differently for broad labour-market vulnerability and for precarious employment among those who are employed.

This paper addresses these gaps by integrating three perspectives. First, it extends intergenerational mobility research to early-adult outcomes, capturing not only labour-market attachment but also job quality and insecurity. Second, it adopts a life-course exposure approach that models disadvantage across ages 4–24 as dynamic rather than static, allowing timing, persistence, and sequencing to shape early-career outcomes. Third,

it incorporates family buffering capacity directly through wealth-, liquidity-, and transfer-related measures, enabling an assessment of whether family resources merely attenuate the effects of early disadvantage or instead allow some insecure pathways to be more temporary and absorbable. In doing so, the paper brings labour-market risk and precarious employment into the intergenerational mobility framework and clarifies the role of family resources in shaping inequality at labour-market entry, with particular relevance for Australia.

3. Data

3.1 Data Source and Sample Selection

The Household, Income and Labour Dynamics in Australia (HILDA) Survey provides a uniquely rich dataset for examining how family socioeconomic conditions shape early-career labour market outcomes in Australia. Commenced in 2001, HILDA is a nationally representative longitudinal study of Australian households. It collects annual information on household and family relationships, employment, education, income, wealth, health and wellbeing, and major life events (Summerfield et al., 2025). These features make HILDA particularly well suited to a life-course and intergenerational perspective, as they enable consistent measurement of family resources during upbringing and link these to individuals' labour market trajectories in adulthood.

Drawing on the first 24 waves of HILDA (2001–2024), we construct an analytic sample of individuals observed repeatedly during childhood, adolescence, early adulthood, and labour-market entry. Our design focuses on life-course pathways. Specifically, we first construct annual measures of pre-adult economic hardship over ages 4–24 and use these repeated observations to characterise hardship trajectories. The focus on these ages reflects the institutional timing of the transition to adulthood in Australia. This period overlaps closely with participation in higher education and vocational training, while many young adults continue to reside in the parental home or receive financial support from family members. In this sense, economic dependence may extend well beyond legal adulthood, making family resources relevant not only during childhood but also during the transition from education to work.

We then construct two distinct sets of early-adult outcomes over ages 25–30 (and, in extended analyses, ages 25–34): a broad measure of labour-market risk, capturing overall economic vulnerability, and a narrower measure of precarious employment among the employed only, capturing insecurity within employment.

In addition, we construct family-buffer measures, including wealth, liquidity, and related indicators, to examine whether resources beyond hardship status moderate the relationship between pre-adult disadvantage and adult trajectory membership. The approach is explicitly descriptive: while the longitudinal structure allows us to characterise timing and persistence of disadvantage, and to control for predetermined background characteristics, we do not interpret associations as causal effects given potential endogeneity in family resources and selection into observed trajectories.

For the construction of the working sample, we impose minimum observation requirements separately for the pre-adulthood and early-adulthood periods. In the baseline specification, individuals are required to be observed for at least 7 years between ages 4 and 24 and for at least 4 years between ages 25 and 30. Table 1 reports the resulting sample selection process and illustrates how the baseline sample is progressively reduced as these restrictions are imposed. The table shows the number of individuals, person-year observations, average age and gender composition at each stage of the selection.[2]

Table 1: Sample selection

	N	Person-year	Age	Female
Before any selection (baseline)	50,403	500,490	36.71 (22.93)	51%
Individuals in the age range 4-34	29,833	215,148	19.06 (8.97)	50%
At least observed for 7 years pre-adulthood (4-24)	8,791	133,475	15.98 (7.55)	50%
At least observed for 4 years in adulthood (25-30)	1,970	11,073	27.40 (1.67)	48%

Notes: Age is reported as mean (standard deviation).

3.2 Definition of Key Measures

3.2.1 Family economic hardship trajectories

Our empirical design treats family disadvantage as a life-course exposure rather than a single average measured at one point in childhood. This approach is consistent with life-course and human-capital frameworks that emphasise the timing, persistence, and

[2] Table A1 provides additional information on the underlying observation structure of the panel across the two age windows. It reports the distribution of the number of observed years within the pre-adulthood (ages 4–24) and adulthood (ages 25–30) periods, as well as the share of individuals meeting the minimum observation thresholds used in the baseline specification. On average, individuals contribute 8.67 observed years in pre-adulthood and 4.44 years in early adulthood, with median coverage of 7 and 6 years, respectively. The table shows that 52.8% of individuals satisfy the pre-adulthood requirement, while 69.1% meet the adulthood requirement. Robustness checks using relaxed/strict observation thresholds are provided upon request.

sequencing of family resources across childhood, adolescence, and early adulthood (Cunha and Heckman, 2007; Duncan et al., 2010; Carneiro et al., 2015). Using repeated annual information prior to adulthood, we construct measures of pre-adult economic hardship over ages 4–24 and use these to identify distinct hardship trajectories.

The hardship measure is based on equivalised real household disposable income, expressed in logs and standardised within wave. During the pre-adulthood period, the mean equivalised household income is approximately $55,061 (Table 2, Panel A).[3] This variable is reported every year and has no missing values. For each year, individuals are classified as experiencing *economic hardship* if their household income falls below the within-wave median (p50). Throughout the paper, we refer to this measure as income hardship, and to the bottom-quintile specification as *extreme income hardship*. This relative threshold captures time-varying socioeconomic position within each cohort and ensures sufficient variation in exposure over time.

This measure captures relative economic position within each year rather than absolute poverty and is commonly used in the intergenerational mobility literature as a rank-based indicator of socioeconomic disadvantage (Solon, 1999; Corak, 2013; Chetty et al., 2014). By construction, it assigns individuals to the lower half of the income distribution in each wave, ensuring comparability across cohorts while allowing the measure to vary with aggregate income dynamics. This approach is closely related to income-rank measures that emphasise relative position within the distribution rather than fixed absolute thresholds.

To assess robustness to more severe forms of disadvantage, we also construct an alternative indicator using the bottom quintile of the income distribution (p20). This specification captures extreme relative disadvantage and yields similar but more concentrated patterns of exposure.

On average, approximately 55% of individuals fall below the median-based hardship threshold during pre-adulthood, while around 23% fall below the bottom-quintile threshold (Figure 1). The use of income as the core time-varying measure of hardship aligns with the intergenerational mobility literature, which emphasises household economic resources as a central channel through which family background is transmitted across generations (Solon, 1999; Black and Devereux, 2011; Corak, 2013).

[3] All monetary measures in this paper are expressed in AU$.

To capture heterogeneity in the timing and persistence of disadvantage, we estimate group-based trajectory models (GBTM) following the approach in Wagmiller et al. (2006) and Willson and Shuey (2016). The preferred specification identifies five distinct pre-adult hardship trajectories: persistent hardship, no hardship, moving into hardship, moving out of hardship, and volatile hardship. These trajectories summarise differences not only in average exposure to disadvantage but also in its duration, timing, and direction of change across the life course. This framework, therefore, moves beyond static measures of family background and captures dynamic socioeconomic experiences spanning childhood, adolescence, and early adulthood.[4]

Table 2: Descriptive statistics

	Mean	Std.Dev.
Panel A: Monetary measures (pre-adulthood, 4-24)		
Eq. household annual disposable income (real)	$55,061	$27,142
Eq. household net worth (real)	$407,345	$570,149
Eq. household net liquidity (real)	$6,296	$54,821
Eq. household family support (real)	$1,300	$3,336
Eq. household total property equity (real)	$220,916	$335,638
Eq. household net investment wealth (real)	$157,163	$318,732
Eq. household government transfers (real)	$5,101	$5,456
Panel B: Components of outcomes (adulthood, 25-30)		
Employed	92%	
Unemployed	4%	
Casual	14%	
Fixed term	10%	
Underemployed	8%	
Low income	14%	

Notes: This table reports the mean values of the monetary measures (equivalised values, real terms) over the pre-adulthood period (ages 4–24) and the average share of labour-market risk and precarious employment components over the adulthood period (ages 25–30).

[4] Although our main hardship trajectories are income-based, parental education and occupation remain important dimensions of socioeconomic origin. However, because these characteristics are relatively time-invariant, including them directly in the trajectory estimation produces substantially flatter profiles and reduces the model's capacity to capture changes in economic circumstances over time. We therefore exclude parental education and occupation from the trajectory construction itself and instead use them, where relevant, as background covariates in subsequent analyses. This preserves the dynamic content of the hardship trajectories while still recognising that parental education and occupational status are central dimensions of family background (Black and Devereux, 2011; Corak, 2013).

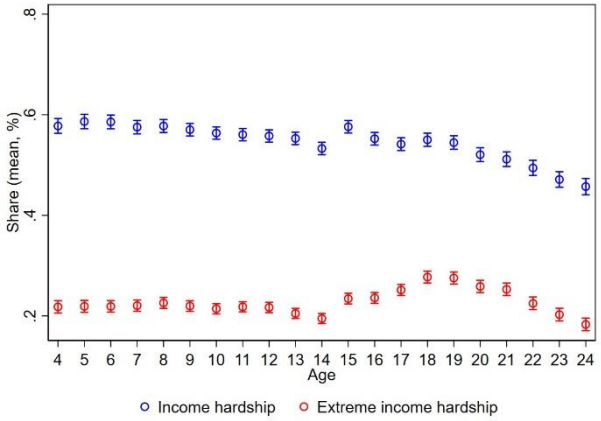

Figure 1: Families in income hardship and extreme income hardship in pre-adulthood (mean, %)

3.2.2 Family-buffer measures

Because economic hardship may not fully capture a family's capacity to protect young adults against labour-market risk, we complement the hardship trajectories with a set of family-buffer measures. These variables are intended to capture access to private resources that may smooth shocks, relax liquidity constraints, and allow young adults to tolerate short-run insecurity in pursuit of longer-run gains. This logic follows research on consumption smoothing, liquidity constraints, wealth, and intergenerational transfers, all of which suggest that family resources can shape education, job search, mobility, and the capacity to absorb income risk (Deaton, 1991; Hurst and Stafford, 2004; Lusardi, Schneider and Tufano, 2011; Cox, 1990; Altonji, Hayashi and Kotlikoff, 1997; Schoeni and Ross, 2005; Woodman, Maire and Cook, 2024).

We consider three main domains in the core analysis: overall net wealth, short-term insurance, and informal insurance. *Overall net wealth* is measured as equivalised real household net worth (in logs), defined as total household assets minus total debts. *Short-term insurance* is measured as equivalised real household net liquidity (in logs), defined as liquid assets minus short-term liabilities. *Informal insurance* is proxied by equivalised real family support (in logs), defined as the sum of annual inter vivos transfers from parents to children and the value of bank account holdings for children under age 14 within the household. In Appendix E, we also consider borrowing capacity, measured using total property equity; long-term wealth, measured as net investment wealth; and public insurance, measured using Australian government transfers. Broader composite indicators and

parental-background measures are examined in supplementary specifications.[5] Table 2 (Panel A) describes the summary statistics of these measures in pre-adulthood.

Wealth-related variables are observed in HILDA at four-year intervals rather than annually. To align these measures with the annual life-course design, we interpolate equivalised log values across observed waves and carry values backward and forward at the boundaries.[6] The resulting series are standardised within wave to ensure comparability over time. For each buffer, we then construct a binary indicator equal to one if the respondent's family is above the within-wave median ("high buffer") and zero otherwise ("low buffer"). Finally, we define a time-invariant pre-adult measure by assigning an individual to the high-buffer category if they are observed with high buffers in more than half of the years observed during pre-adulthood.[7]

Figure 2 reports the average share of individuals with access to family buffers during the pre-adulthood period. On average, 40% of individuals have family net worth, 40% have net liquidity, and 64% receive informal family support. While these shares suggest that access to family resources is relatively widespread, the underlying magnitudes are more limited. As shown in Table 2, the mean household net worth over the pre-adulthood period is approximately $407,345, but liquid assets are substantially lower at around $6,296, and average informal transfers are about $1,300. This highlights that, although many individuals are exposed to some form of family buffering, the intensity of liquid and transfer-based support is comparatively modest.

[5] Supplementary measures include composite indices combining family-buffers (e.g. overall net wealth, short-term insurance, borrowing capacity, long-term wealth, and informal insurance) as well as parental education and occupation indices. These are omitted from the main presentation to reduce overlap across closely related measures, but are available from the authors upon request.

[6] Despite this interpolation, 3% of observations are missing; this number represents the share of observed pre-adulthood person-years for which the variable is missing and belongs to those who never reported wealth-related information.

[7] As a robustness check, we use the within-wave 25th and 75th percentiles to define "low" and "high" buffers instead of the median. The substantive findings remain unchanged under these alternative thresholds. Results are available from the authors upon request.

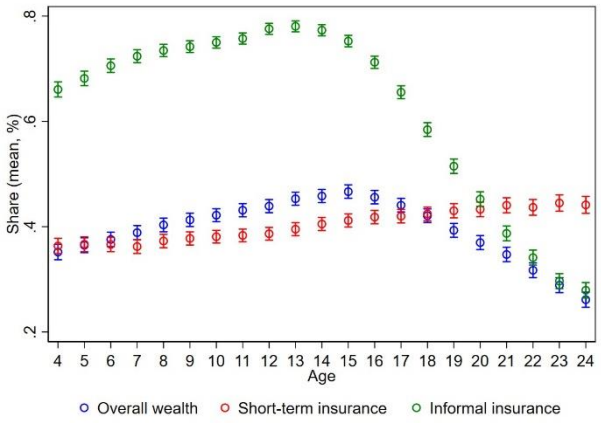

Figure 2: Having family-buffers in pre-adulthood (mean, %)

Notes: The share of families with informal insurance decreases mechanically when the individual reaches age 14 because, by definition, this measure includes financial transfers from parents to children and balances held in bank accounts belonging to children under age 14 who live in the household.

3.2.3 Adult labour market outcomes

We analyse two related but distinct early-adult outcomes over ages 25–30 (and, in extended analyses, ages 25–34): *precarious employment* and *labour-market risk*. The distinction is important. Precarious employment captures insecurity among those who are employed, whereas labour-market risk captures broader economic vulnerability by incorporating weak attachment to employment. This distinction is consistent with the broader literature, which treats insecure employment, low-quality jobs, and non-employment as related but conceptually distinct forms of labour-market disadvantage (Kalleberg, 2009; Booth, Francesconi and Frank, 2002; De Witte, 1999).

Precarious employment is defined annually as a binary indicator equal to one for employed individuals who meet at least one of the following conditions: (i) holding a casual or fixed-term contract, (ii) being underemployed (working part-time while preferring more hours), or (iii) earning relatively low pay, defined as individual income below the within-wave median. This measure excludes non-employment and is intended to capture insecurity within employment. In doing so, it builds on recent HILDA-based work on precarious employment and job quality in Australia (Ervin et al., 2023; Leach et al., 2010). As a robustness check, we use a more restrictive definition that requires individuals to satisfy at least two of these conditions. These checks are reported in Appendix Figure C1.

Labour-market risk extends this measure by additionally classifying non-employment as exposure, alongside low pay, insecure employment arrangements, and underemployment.

It therefore serves as our broader indicator of economic vulnerability at labour-market entry. While this broader measure captures overall exposure to disadvantage, the precarious-employment measure is more informative for evaluating whether family resources alter the consequences of insecure work among those already attached to the labour market.

Table 2 (Panel B) reports summary statistics for the components of both measures during adulthood. None of these constructed variables has missing values. On average, 92% of individuals are employed and 4% are unemployed, with the remaining share out of the labour force. Among those observed, 14% are employed on casual contracts and 10% on fixed-term contracts. Figure 3 shows the prevalence of both outcomes (precarious employment and labour-market risk) over adulthood. On average, 33% of individuals are classified as being in precarious employment and 36% in labour-market risk, with the difference reflecting the inclusion of non-employment in the latter measure.

For both outcomes, we estimate group-based trajectory models over ages 25–30. The preferred specification identifies four trajectories in each case: low, increasing, decreasing, and high persistent. These trajectories distinguish stable low-risk pathways from worsening, improving, and persistently adverse pathways. This distinction is central to the analysis, particularly in assessing whether family buffers reduce exposure to persistent disadvantage or instead make transitional forms of insecurity more manageable.

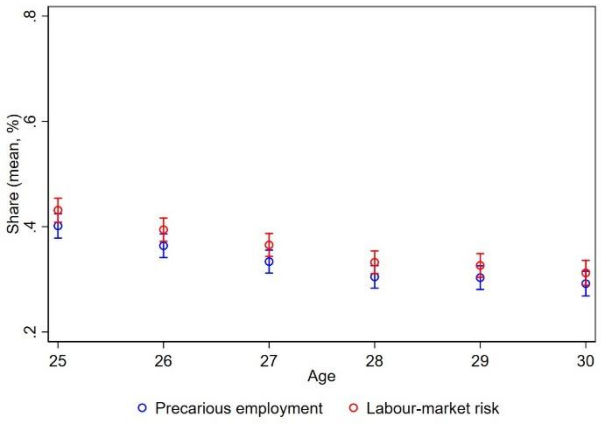

Figure 3: Labour-market outcomes in adulthood (mean, %)

4. Methods

4.1 Group-based trajectory models

Our empirical strategy proceeds in two stages. First, we use group-based trajectory models (GBTMs) to identify distinct patterns of pre-adult economic hardship and early-adult labour market outcomes. Second, we relate adult trajectory membership to pre-adult

hardship trajectories and assess whether family-buffer measures moderate these associations. The analysis is descriptive rather than causal. Although the longitudinal structure of the HILDA Survey allows us to characterise timing, persistence, and heterogeneity in disadvantage, the results should not be interpreted as causal effects given potential endogeneity in family resources and selection into observed trajectories (Solon, 2015).

We first estimate hardship trajectories over ages 4–24 using annual indicators of below-median household income. Let H_{it} denote hardship status for individual i at age t, where $t = 4, \ldots, 24$. The annual hardship indicator equals 1 if equivalised real household disposable income falls below the within-wave median, and 0 otherwise. The binary GBTM assumes that the population consists of a finite number of latent groups, each characterised by a distinct age profile:

$$Pr(H_{it} = 1 \mid G_i = g) = \Lambda\left(\beta_{0g} + \beta_{1g} a_{it} + \beta_{2g} a_{it}^2\right), \qquad g = 1, \ldots, G$$

where $\Lambda(\cdot)$ is the logistic cumulative distribution function. Polynomial order may vary across groups.

Trajectory diagnostics: Model selection follows standard criteria in the trajectory-modelling literature (Nagin, 2005). We assess model fit using the Bayesian Information Criterion (BIC) and Akaike Information Criterion (AIC), and classification quality using the average posterior probability (APP), the odds of correct classification (OCC) and entropy. APP measures the average probability that individuals assigned to a given group belong to that trajectory, with values above 0.70 generally considered acceptable. OCC compares classification accuracy relative to random assignment and is defined as $OCC = \frac{APP/(1-APP)}{P/(1-P)}$, where P denotes the group share; values above 5 indicate strong classification quality. Entropy captures the overall certainty of class assignment based on posterior membership probabilities, with values above 0.80 indicating good separation of trajectory groups, values between 0.60 and 0.80 indicating moderate classification quality, and values below 0.60 indicating weak separation. Diagnostic statistics are reported in Appendix Table A2.

Based on these criteria, the preferred specification identifies five hardship trajectories: persistent hardship, moving into hardship, moving out of hardship, volatile hardship, and no hardship.

We then estimate separate trajectory models for two adult outcomes observed over ages 25–30 (and, in supplementary analyses, ages 25–34): precarious employment and labour-market risk. Let Y_{it}^{P} denote outcome $k \in \{P, R\}$, where P refers to precarious employment and R to labour-market risk. Conditional on the latent class c, the probability of observing outcome k at age t is:

$$\Pr\left(Y_{it}^{k} = 1 \mid C_i^k = c\right) = \Lambda\left(\alpha_{0c}^{k} + \alpha_{1c}^{k} a_{it} + \alpha_{2c}^{k} a_{it}^{2}\right), \qquad c = 1, \ldots, C$$

Model selection again relies on the BIC, AIC, minimum group size, and classification diagnostics (Appendix Table A2). The preferred specification identifies four trajectories for each adult outcome: low, increasing, decreasing, and high persistent. For the second-stage analysis, individuals are assigned to the trajectory group with the highest posterior membership probability, and these assigned classes are treated as the categorical adult outcome in the multinomial models. Although this assignment approach does not fully propagate first-stage classification uncertainty, the diagnostics reported in Appendix Table A2 indicate acceptable classification quality across groups.

This trajectory framework allows early-career disadvantage to vary not only in level but also in persistence and timing. The distinction between decreasing and high-persistent trajectories is particularly relevant, as it separates potentially transitional insecurity from more entrenched disadvantage.

4.2 Multinomial models of trajectory membership

In the second stage, we relate adult trajectory membership to pre-adult hardship trajectories using multinomial logit models. Let C_i^k denote the estimated adult trajectory membership for individual i, with the low trajectory as the omitted category. The baseline specification is:

$$\log\left(\frac{\Pr\left(C_i^k = c\right)}{\Pr\left(C_i^k = 0\right)}\right) = \gamma_{0c}^{k} + H_i' \gamma_{1c}^{k} + X_i' \gamma_{2c}^{k}, \qquad c = 1, \ldots, C-1$$

where H_i is the vector of hardship-trajectory indicators and X_i includes predetermined controls: gender, Australian-born status, age, and state of residence.[8]

[8] We therefore exclude variables such as respondents' own educational attainment, marital status, and family type, as these are observed after exposure to hardship and may themselves be influenced by it, as well as by buffering processes, implying that they could act as mediators rather than exogenous confounders. This choice avoids conditioning on post-treatment variables that could bias the estimated associations of interest. Family composition is also not included separately, as all outcome variables are equivalised by household size. Cohort (year of birth) is omitted due to its collinearity with age, while parental education and occupation are used as part of the set of family background buffers in alternative analyses.

To examine whether family resources modify these relationships, we extend the model to include interactions between hardship trajectories and each family-buffer measure:

$$\log\left(\frac{\Pr(C_i^k = c)}{\Pr(C_i^k = 0)}\right) = \delta_{0c}^k + H_i'\delta_{1c}^k + B_i\delta_{2c}^k + (H_i \times B_i)'\delta_{3c}^k + X_i'\delta_{4c}^k, \qquad c = 1, \dots, C-1$$

where B_i denotes the relevant family-buffer measure. To preserve interpretability and avoid overlap across closely related dimensions of family resources, buffer measures are introduced separately rather than jointly. The core measures are overall wealth, short-term insurance, and informal insurance; supplementary analyses additionally consider borrowing capacity, long-term wealth, and government transfers.

4.3 Moderation and interpretation

The moderation analysis is interpreted through average predicted probabilities rather than raw interaction coefficients, which are difficult to interpret in nonlinear models. For each adult outcome, we estimate predicted probabilities of belonging to the low, increasing, decreasing, and high-persistent trajectories for substantively relevant combinations of hardship background and family-buffer status.

The interpretation distinguishes between two possible roles of family resources. The first is *risk mitigation*, whereby buffers reduce the probability of persistently adverse or worsening pathways. The second is *private insurance*, whereby buffers allow some forms of early-career insecurity to function as a temporary or strategic phase by increasing the probability of improving pathways. This distinction is particularly relevant for precarious employment, where insecurity arises within employment itself and is therefore the outcome for which the private-safety-net mechanism is most plausibly evaluated.

The analysis, therefore, focuses on whether family buffers lower the probability of high-persistent labour-market risk or precarious employment and whether they increase the probability of decreasing trajectories. In practice, the results provide stronger evidence for the first mechanism. Family resources, particularly short-term insurance, are more consistently associated with lower exposure to persistent disadvantage than with a systematic shift into transitional forms of insecurity.

Potential post-exposure variables, most notably respondents' own educational attainment, are treated as mediators rather than baseline controls and are therefore excluded from the core specifications.

5. Results

5.1 Pre-adult hardship trajectories

We begin by identifying distinct patterns of economic hardship over the pre-adult life course. Figure 4 presents the preferred group-based trajectory model, together with 95% confidence intervals, for hardship between ages 4 and 24, based on annual household income relative to the within-wave median. The preferred specification identifies five trajectory groups, indicating substantial heterogeneity in family economic circumstances before labour-market entry. Diagnostic statistics reported in Appendix Table A2 (Panels A and B) show good classification quality across all groups, with APP values above 0.79 (for income hardship) and 0.76 (for extreme income hardship), and OCC and entropy values above conventional thresholds (Nagin, 2005).

Five substantively distinct trajectories emerge. The largest group, **persistent hardship** (29.8%), experiences a consistently high probability of income hardship throughout childhood, adolescence, and early adulthood. At the opposite end, the **no hardship** group (22.5%) remains persistently unlikely to experience income hardship over the same period. Between these two extremes, three dynamic patterns capture transitions in economic circumstances over the life course. The **moving into hardship** group (14.7%) begins with relatively low exposure but experiences a marked increase from adolescence onward. The **moving out of hardship** group (12.4%) follows the reverse pattern, with high hardship in early childhood that declines steadily across later years. The **volatile hardship** group (20.7%) experiences elevated hardship through childhood and adolescence, followed by a pronounced decline during early adulthood.

These patterns suggest that pre-adult disadvantage is not adequately captured by a single cross-sectional measure of socioeconomic status. Individuals with similar observed circumstances at a given age may have experienced very different economic histories in terms of timing, persistence, and transitions into or out of hardship. This distinction is central to the analysis, as the accumulation and sequencing of disadvantage may shape labour-market entry differently from temporary exposure.

Figure 4 also reports trajectories based on a more restrictive definition of hardship, where individuals are classified as experiencing **extreme income hardship** if household income falls below the within-wave bottom quintile. The preferred specification again identifies five groups, but the distribution is more concentrated. Nearly half of individuals (49.0%) belong

to the **no hardship** group, reflecting that persistent exposure to extreme disadvantage is less common than income hardship defined relative to the median. At the other end, a smaller but distinct **persistent hardship** group (9.4%) experiences consistently high exposure to extreme disadvantage across the pre-adult period.

The remaining groups capture dynamic exposure to severe hardship. The **moving into hardship** group (18.2%) experiences a gradual rise in extreme disadvantage from adolescence into early adulthood, while the **moving out of hardship** group (14.5%) shows the opposite pattern, with exposure concentrated earlier in life. A fifth group, **moving out of extreme hardship** (8.9%), begins with very high exposure in early childhood and exits rapidly during adolescence. Compared with the median-based measure, these trajectories highlight that severe disadvantage is less persistent for most individuals but remains strongly concentrated for a smaller subgroup. This supports the interpretation that both the intensity and timing of hardship may matter for later labour-market outcomes.

To assess robustness, Appendix Figure B1 reports an alternative classification based on the duration of exposure to income hardship within each life stage. Although this rule-based grouping does not replicate the latent trajectories exactly, it yields broadly similar patterns. This supports the interpretation that the main results reflect meaningful differences in pre-adult exposure to disadvantage rather than the specific grouping method used.

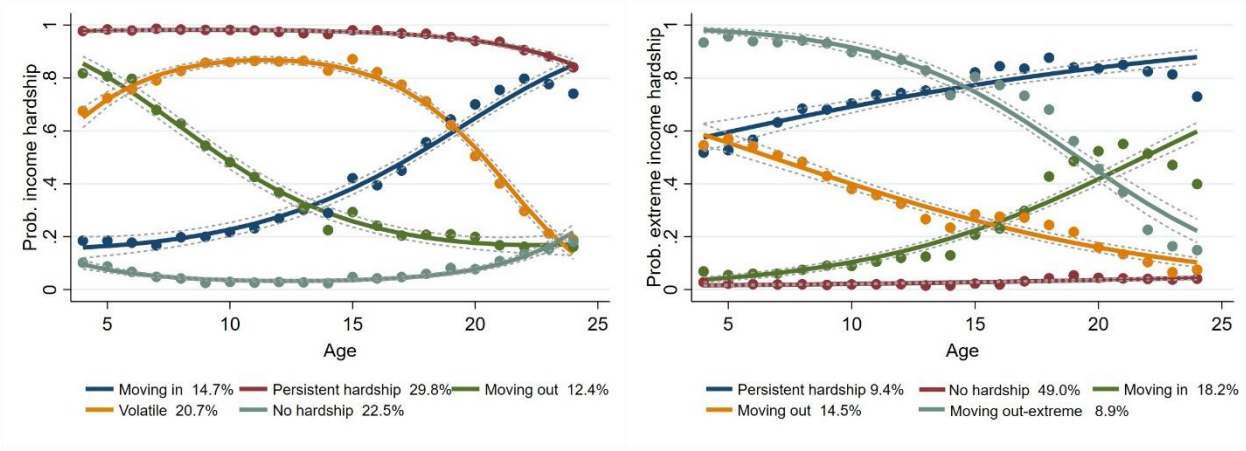

Figure 4: Trajectories of income hardship and extreme income hardship in pre-adulthood

5.2 Early-adult trajectories of precarious employment and labour-market risk

We next estimate separate trajectory models for two adult outcomes over ages 25–30 and, as an extension, ages 25–34: precarious employment, defined among the employed

only, and labour-market risk, which extends precariousness by incorporating non-employment and therefore captures broader economic vulnerability. Figure 5 presents the preferred four-group specification for both outcomes, together with 95% confidence intervals. Appendix Figure B2 shows that these patterns are robust to an alternative duration-based classification of adult labour-market exposure. Diagnostic statistics reported in Appendix Table A2 (Panels C and D) indicate good classification quality across all groups, with APP values above 0.73 for precarious employment and 0.76 for labour-market risk, and OCC and entropy values above conventional thresholds (Nagin, 2005).

Across both outcomes over ages 25–30, four pathways emerge: low, increasing, decreasing, and high persistent. Around 45% of individuals belong to the **low** group, characterised by a consistently low probability of exposure throughout early adulthood. A smaller group (around 9%) follows an **increasing** trajectory, with exposure rising sharply between ages 26 and 29. Approximately one-quarter follow a **decreasing** trajectory, entering adulthood with elevated exposure but improving steadily over time. The remaining one-fifth experience a **high-persistent** pathway, with consistently high exposure throughout the period.

Extending the observation window to ages 25–34 yields broadly similar patterns, while revealing greater persistence in some transitional pathways. The low and decreasing groups remain highly stable, both in size and shape. By contrast, the increasing trajectory becomes more prominent, rising from around 9% to 15% of the sample in both outcomes, suggesting that for a non-negligible share of young adults, labour-market vulnerability intensifies beyond age 30 rather than resolving during the late twenties. The high-persistent group correspondingly becomes smaller, indicating that some individuals initially classified as persistently exposed over ages 25–30 transition into more differentiated pathways once the observation window is extended. This highlights that part of what appears persistent over a shorter horizon may reflect delayed adjustment rather than permanent disadvantage.

Despite the conceptual distinction between the two measures, the trajectory structures are remarkably similar. This likely reflects the relatively small share of unemployed individuals in the sample, around 4% over ages 25–30, as shown in Table 2 and Figure 3, meaning that the addition of non-employment changes the prevalence of labour-market risk only modestly relative to precarious employment. The close alignment suggests that early labour-market experiences are structured along comparable dimensions of stability, deterioration, recovery, and persistence.

The distinction between the two outcomes nevertheless remains substantively important. Labour-market risk provides the broader measure of vulnerability because it captures weak labour-market attachment alongside insecure employment. Precarious employment, by contrast, isolates insecurity among those already employed and is therefore the more relevant outcome for evaluating the private-safety-net hypothesis. If family resources allow young adults to tolerate insecure jobs as a temporary stage, this should be most visible in transitions between the high-persistent and decreasing precarious-employment trajectories rather than in the broader labour-market-risk measure. This interpretation is reinforced by robustness checks using a stricter definition of precarious employment that requires the presence of at least two dimensions of precariousness within employment, which yield substantively similar patterns.

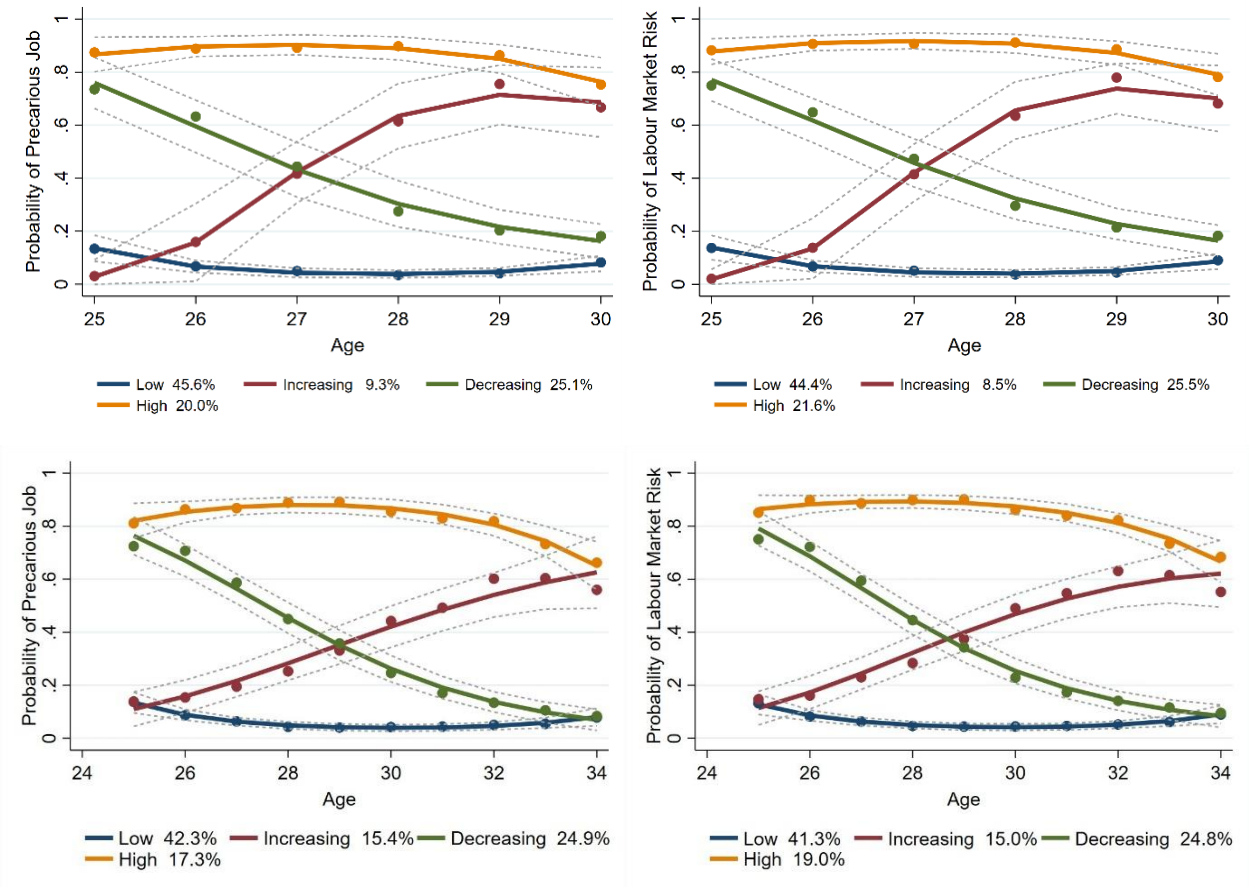

Figure 5: Trajectories of Precarious Employment and Labour-Market Risk in Adulthood (25-30 and 25-34)

5.3 Pre-adult hardship and adult trajectory membership

Table 3 reports multinomial logit estimates linking pre-adult hardship trajectories to labour-market-risk trajectories in early adulthood, with the low-risk trajectory as the omitted adult category and persistent hardship as the reference pre-adult group. We begin with

labour-market risk as the broader indicator of early-career vulnerability and then turn to *precarious employment*, which isolates insecurity among the employed and is therefore more directly informative for assessing the private-safety-net hypothesis.

Across specifications, the results reveal a clear and highly robust structural gradient: relative to persistent hardship, individuals with more favourable or improving pre-adult hardship profiles are substantially less likely to follow persistently adverse labour-market trajectories in early adulthood. This pattern is not only strong in magnitude but also remarkably stable across model specifications and age windows.

Model 1 establishes the baseline relationship using the main hardship trajectories (ages 25–30). The clearest and most consistent differences emerge for the high-risk trajectory. Compared with persistent hardship, individuals who moved out of hardship, experienced volatile hardship, or experienced no hardship have significantly lower odds of belonging to the high-risk group (OR = 0.258, 0.272, and 0.243, respectively). Even those who move into hardship later in childhood are less likely to enter the high-risk trajectory (OR = 0.699), although the effect is more modest. A similar but slightly weaker pattern is observed for the decreasing-risk trajectory, where all non-persistent hardship profiles are again associated with lower odds of adverse trajectories.

By contrast, pre-adult hardship trajectories are generally unrelated to membership in the increasing-risk trajectory. This suggests that late-emerging deterioration in labour-market outcomes is less strongly anchored in childhood income histories than persistent disadvantage is. Substantively, Model 1 indicates that the key divide is not between any exposure to hardship versus none, but between persistent hardship and all other trajectories, particularly in relation to sustained high labour-market risk.

Importantly, this core pattern is not confined to the 25–30 window. The 25–34 extension (Appendix Table D1) shows an even clearer and more persistent gradient. Over the longer horizon, the protective association of favourable childhood trajectories strengthens: volatile hardship, moving out of hardship, and no hardship are all associated with even lower odds of high-risk membership (OR = 0.214, 0.242, and 0.216, respectively), and the effects for decreasing-risk trajectories also become more pronounced. This indicates that the role of pre-adult disadvantage is not transitory but continues to structure labour-market risk well into the early thirties. At the same time, the weak link with increasing-risk trajectories

persists, reinforcing the idea that upward risk mobility in adulthood is less tightly pre-determined by early-life conditions.

Model 2 replaces the baseline hardship trajectories with extreme hardship trajectories to assess whether the relationship is driven by severity at the bottom of the distribution. The results show that the association is indeed strongest when hardship is both persistent and extreme. Relative to persistent extreme hardship, all other extreme-hardship profiles are associated with substantially lower odds of high-risk membership (e.g. OR = 0.260 for moving into extreme hardship, 0.145 for moving out, 0.142 for moving out of extreme hardship, and 0.098 for no hardship). This sharpening of effects suggests that it is not merely exposure to hardship that matters, but entrenched and severe deprivation, which is most strongly associated with persistent labour-market risk.

The 25–34 extension (Appendix Table D1, Model 2) reinforces this conclusion and shows an even more pronounced divergence at the bottom of the distribution. In the longer window, the probability of belonging to the high-risk trajectory is extremely low for individuals with no hardship or who transition out of extreme hardship (OR as low as 0.06–0.11). This suggests that extreme and persistent childhood disadvantage has long-lasting consequences that are still visible nearly a decade into adulthood, whereas recovery or absence of hardship is associated with sharply reduced exposure to sustained labour-market risk.

Model 3 re-estimates the baseline specification with demographic controls. The inclusion of covariates has little impact on the magnitude or pattern of the key coefficients. For the high-risk trajectory, the odds ratios remain very stable: moving out of hardship (OR = 0.254), volatile hardship (OR = 0.266), and no hardship (OR = 0.242) all remain strongly protective, while moving into hardship remains negatively associated (OR = 0.686). Similar stability is observed for the decreasing-risk trajectory.

Among covariates, women are more likely to be in all non-low-risk trajectories, while age, state of residence, and being Australian-born are generally not statistically significant. The 25–34 extension again confirms the robustness of these findings: in Appendix Table D1 (Model 3), the coefficients remain stable and, if anything, slightly stronger for volatile hardship and no hardship in relation to the high-risk trajectory (OR ≈ 0.20–0.21). This indicates that the hardship gradient is not explained by basic demographic composition differences and remains stable over time.

Table 3: Multinomial logistic model with trajectories (*labour-market risk*)

Low Risk Trajectory (baseline)	Increasing Risk Trajectory (25-30)		Decreasing Risk Trajectory (25-30)		High Risk Trajectory (25-30)	
	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio
Model 1: Income hardship trajectories						
Intercept	-1.773***		-0.315***		0.0125	
	(0.208)		(0.122)		(0.112)	
Moving in	-0.386	0.679	0.00166	1.002	-0.358**	0.699**
	(0.343)	(0.233)	(0.182)	(0.182)	(0.176)	(0.123)
Moving out	0.206	1.229	-0.601***	0.548***	-1.356***	0.258***
	(0.306)	(0.376)	(0.213)	(0.117)	(0.234)	(0.0602)
Volatile hardship	0.187	1.206	-0.549***	0.577***	-1.301***	0.272***
	(0.258)	(0.311)	(0.168)	(0.0970)	(0.175)	(0.0477)
No hardship	-0.269	0.765	-0.895***	0.409***	-1.416***	0.243***
	(0.272)	(0.208)	(0.174)	(0.0710)	(0.174)	(0.0422)
Model 2: Extreme income hardship trajectories						
Intercept	-1.179***		-0.860**		1.086***	
	(0.404)		(0.360)		(0.227)	
Moving in	-0.604	0.546	0.758**	2.134**	-1.347***	0.260***
	(0.474)	(0.259)	(0.385)	(0.821)	(0.268)	(0.0697)
Moving out	-0.0741	0.929	0.404	1.498	-1.933***	0.145***
	(0.451)	(0.419)	(0.390)	(0.585)	(0.285)	(0.0412)
Moving out-extreme	-0.176	0.839	-0.146	0.864	-1.955***	0.142***
	(0.465)	(0.390)	(0.412)	(0.356)	(0.296)	(0.0420)
No hardship	-0.620	0.538	-0.220	0.802	-2.320***	0.0982***
	(0.419)	(0.225)	(0.369)	(0.296)	(0.243)	(0.0238)
Model 3: Income hardship trajectories with covariates						
Intercept	-1.587		-0.717		-1.614	
	(1.485)		(0.951)		(1.033)	
Moving in	-0.455	0.634	-0.0216	0.979	-0.376**	0.686**
	(0.344)	(0.218)	(0.183)	(0.179)	(0.178)	(0.122)
Moving out	0.160	1.174	-0.619***	0.539***	-1.370***	0.254***
	(0.306)	(0.360)	(0.215)	(0.116)	(0.235)	(0.0598)
Volatile hardship	0.126	1.135	-0.575***	0.562***	-1.325***	0.266***
	(0.258)	(0.293)	(0.169)	(0.0951)	(0.176)	(0.0467)
No hardship	-0.355	0.701	-0.928***	0.395***	-1.421***	0.242***
	(0.276)	(0.193)	(0.176)	(0.0696)	(0.176)	(0.0425)
Female	0.509***	1.664***	0.347***	1.414***	0.332***	1.394***
	(0.177)	(0.294)	(0.117)	(0.165)	(0.121)	(0.169)
Australian	1.123**	3.074**	0.211	1.235	0.282	1.326
	(0.519)	(1.596)	(0.239)	(0.295)	(0.250)	(0.332)
Age	-0.0545	0.947	-0.000903	0.999	0.0382	1.039
	(0.0526)	(0.0498)	(0.0337)	(0.0336)	(0.0361)	(0.0375)
State	0.00960	1.010	0.0319	1.032	0.0641*	1.066*
	(0.0523)	(0.0528)	(0.0343)	(0.0354)	(0.0337)	(0.0359)

Notes: "Moving out-extreme" refers to individuals whose trajectory moves from a very high probability of extreme income hardship in early life to a much lower probability later on. "Moving out" refers to individuals whose trajectory moves from a moderately high probability of extreme income hardship to a low probability

later on. The omitted adult category is the low-risk trajectory, and the omitted hardship category is persistent hardship.

Turning to precarious employment (Table 4 and Appendix Table D2), the same overall pattern emerges and remains visible when the observation window is extended to ages 25–34, with an even clearer separation between persistent hardship and the more favourable hardship trajectories. In the 25–30 window, all non-persistent hardship trajectories are associated with significantly lower odds of belonging to the high precarious trajectory, with effects strengthening in the extreme hardship specification. Importantly, the 25–34 results show an even clearer separation: individuals with no hardship or who move out of hardship are about 70–85% less likely to follow high precarious trajectories over the longer horizon (ORs generally between 0.21 and 0.29 in Model 3). This suggests that childhood hardship not only predicts overall labour-market risk but also shapes the stability of employment trajectories well into established early adulthood.

Across both outcomes and both age windows, a consistent message emerges: persistent and severe pre-adult hardship is the strongest predictor of sustained labour-market disadvantage, while transient or resolved hardship is associated with substantially improved long-run outcomes. The extension to ages 25–34 strengthens rather than attenuates this conclusion, indicating that early-life disadvantage has long-lasting effects on both labour-market risk and employment precariousness well into the early thirties.

Table 4: Multinomial logistic model (*precarious employment*)

Low Precarious Trajectory (baseline)	Increasing Precarious Trajectory (25-30)		Decreasing Precarious Trajectory (25-30)		High Precarious Trajectory (25-30)	
	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio
Model 1: Income hardship trajectories						
Intercept	-1.674***		-0.470***		-0.201*	
	(0.190)		(0.122)		(0.112)	
Moving in	-0.353	0.703	0.245	1.278	-0.240	0.786
	(0.320)	(0.225)	(0.180)	(0.229)	(0.180)	(0.142)
Moving out	0.153	1.165	-0.698***	0.497***	-1.082***	0.339***
	(0.288)	(0.335)	(0.224)	(0.111)	(0.227)	(0.0768)
Volatile hardship	-0.0421	0.959	-0.492***	0.611***	-1.197***	0.302***
	(0.246)	(0.236)	(0.168)	(0.103)	(0.178)	(0.0537)
No hardship	-0.339	0.712	-0.825***	0.438***	-1.286***	0.276***
	(0.255)	(0.182)	(0.175)	(0.0768)	(0.177)	(0.0488)
Model 2: Extreme income hardship trajectories						
Intercept	-0.693**		-0.486		0.947***	
	(0.340)		(0.318)		(0.231)	
Moving in	-0.720*	0.487*	0.356	1.427	-1.348***	0.260***
	(0.400)	(0.195)	(0.346)	(0.494)	(0.274)	(0.0712)
Moving out	-0.626	0.534	-0.0340	0.967	-1.850***	0.157***
	(0.395)	(0.211)	(0.352)	(0.341)	(0.289)	(0.0454)
Moving out-extreme	-0.613	0.542	-0.747*	0.474*	-1.822***	0.162***
	(0.405)	(0.220)	(0.384)	(0.182)	(0.298)	(0.0482)
No hardship	-0.965***	0.381***	-0.709**	0.492**	-2.310***	0.0992***
	(0.354)	(0.135)	(0.329)	(0.162)	(0.248)	(0.0246)
Model 3: Income hardship trajectories with covariates						
Intercept	-0.808		-0.751		-1.522	
	(1.468)		(0.955)		(1.048)	
Moving in	-0.429	0.651	0.217	1.242	-0.271	0.763
	(0.321)	(0.209)	(0.181)	(0.224)	(0.182)	(0.139)
Moving out	0.109	1.115	-0.708***	0.492***	-1.098***	0.333***
	(0.288)	(0.321)	(0.226)	(0.111)	(0.228)	(0.0762)
Volatile hardship	-0.108	0.897	-0.512***	0.599***	-1.229***	0.293***
	(0.246)	(0.221)	(0.170)	(0.102)	(0.178)	(0.0520)
No hardship	-0.434*	0.648*	-0.852***	0.426***	-1.299***	0.273***
	(0.259)	(0.168)	(0.177)	(0.0755)	(0.180)	(0.0491)
Female	0.630***	1.878***	0.325***	1.384***	0.456***	1.578***
	(0.173)	(0.324)	(0.118)	(0.163)	(0.124)	(0.195)
Australian	0.910*	2.485*	0.0255	1.026	0.268	1.307
	(0.468)	(1.163)	(0.233)	(0.239)	(0.258)	(0.338)
Age	-0.0742	0.928	0.000770	1.001	0.0245	1.025
	(0.0519)	(0.0482)	(0.0338)	(0.0338)	(0.0366)	(0.0375)
State	0.00850	1.009	0.0370	1.038	0.0728**	1.075**
	(0.0505)	(0.0509)	(0.0345)	(0.0358)	(0.0339)	(0.0364)

Notes: "Moving out-extreme" refers to individuals whose trajectory moves from a very high probability of extreme income hardship in early life to a much lower probability later on. "Moving out" refers to individuals whose trajectory moves from a moderately high probability of extreme income hardship to a low probability

later on. The omitted adult category is the low-precariousn trajectory, and the omitted hardship category is persistent hardship.

5.4 Do family buffers moderate the hardship gradient?

As described in Section 4.2, we examine whether family resources modify the relationship between pre-adult hardship trajectories and adult labour-market trajectories. To do so, we estimate interaction models between hardship trajectories and each family-buffer measure and calculate average predicted probabilities by hardship group and buffer level. Tables 5 and 6 present the difference in predicted probabilities between individuals with high versus low family buffers within each hardship trajectory. We begin with precarious employment (Table 5), as this outcome most directly captures whether family resources function as a private safety net during labour-market entry, and then assess whether the same patterns extend to the broader labour-market-risk outcome (Table 6).

Table 5: Difference in predicted probabilities by family-buffer status *(precarious employment)*

Hardship trajectory	Overall wealth		Short-term insurance		Informal insurance	
	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)
Panel A: Low precarious employment						
Moving in	0.022	0.058	0.043	0.054	-0.059	0.058
Persistent	-0.037	0.072	0.062	0.050	0.023	0.045
Moving out	0.074	0.068	0.021	0.068	0.050	0.072
Volatile	0.042	0.050	0.120**	0.047	-0.026	0.046
No hardship	0.078	0.050	0.082*	0.045	0.012	0.047
Panel B: Increasing precarious employment						
Moving in	-0.005	0.026	-0.019	0.024	-0.023	0.028
Persistent	-0.057**	0.024	-0.026	0.024	0.001	0.024
Moving out	0.029	0.045	0.036	0.046	0.100**	0.040
Volatile	0.009	0.031	-0.006	0.028	-0.055*	0.028
No hardship	-0.006	0.028	-0.002	0.025	-0.009	0.026
Panel C: Decreasing precarious employment						
Moving in	-0.004	0.055	-0.036	0.051	0.022	0.054
Persistent	0.054	0.068	0.049	0.045	-0.006	0.040
Moving out	-0.088*	0.051	-0.035	0.051	-0.092	0.057
Volatile	-0.040	0.040	-0.105***	0.036	0.021	0.037
No hardship	0.005	0.037	-0.012	0.034	-0.001	0.036
Panel D: High precarious employment						
Moving in	-0.014	0.051	0.012	0.048	0.059	0.049
Persistent	0.040	0.072	-0.085*	0.046	-0.018	0.043
Moving out	-0.015	0.049	-0.021	0.049	-0.058	0.054
Volatile	-0.011	0.035	-0.009	0.033	0.061**	0.031

No hardship	-0.077**	0.038	-0.069**	0.032	-0.002	0.033

Notes: Entries show the difference in predicted probabilities between respondents with high and low family buffers within each hardship trajectory (high − low). High family buffer is defined as above the within-wave median. Adjacent columns report standard errors. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The results show that family resources do moderate the hardship gradient, but the extent of moderation depends strongly on the type of resource considered. Across all measures, **short-term insurance**, our proxy for liquid and immediately deployable household resources, shows the clearest and most consistent buffering role. This pattern is especially visible for the transition from persistent hardship into high-persistent precarious employment. Among those from persistent hardship backgrounds, having high short-term insurance increases the probability of belonging to the low-precarious trajectory by 6.2 percentage points and reduces the probability of belonging to the high-precarious trajectory by 8.5 percentage points (Table 5, Panels A and D). Similar shifts are observed for the corresponding labour-market-risk outcome in Table 6, where high short-term insurance raises the probability of low risk by 9.2 percentage points and lowers high risk by 11.6 percentage points for the persistent-hardship group.

These associations indicate that even among individuals exposed to prolonged economic disadvantage in childhood, access to family resources that can be mobilised quickly substantially lowers the probability of following persistently adverse employment pathways. This is consistent with the interpretation that liquid family support acts as a private insurance mechanism during labour-market entry, reducing the likelihood that early disadvantage translates into entrenched instability.

The buffering effect is not confined to the persistent-hardship group. In both Tables 5 and 6, short-term insurance is also associated with a higher probability of belonging to the low-risk or low-precariousness trajectory among individuals from volatile hardship and no-hardship backgrounds. For example, among those with volatile hardship, high short-term insurance increases the probability of low precariousness by 12.0 percentage points and low labour-market risk by 13.4 percentage points. The fact that these gains appear across several hardship backgrounds suggests that family liquidity operates broadly as a cushion against labour-market instability, not only as a compensatory mechanism for the most disadvantaged.

A second pattern is that buffers sometimes reduce the probability of increasing trajectories, but this evidence is weaker and less systematic. Some reductions are visible, particularly for overall wealth among the persistent-hardship group, but these are generally smaller and

less stable across hardship categories. This suggests that family resources may help prevent deterioration over time, but this is not their primary mechanism.

Table 6: Difference in predicted probabilities by family-buffer status *(labour-market risk)*

Hardship trajectory	Overall wealth		Short-term insurance		Informal insurance	
	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)
Panel A: Low labour-market risk						
Moving in	0.032	0.058	0.049	0.054	-0.026	0.058
Persistent	0.004	0.072	0.092*	0.050	0.050	0.044
Moving out	0.091	0.068	0.034	0.069	0.063	0.072
Volatile	0.058	0.051	0.134***	0.047	-0.031	0.046
No hardship	0.087*	0.050	0.079*	0.045	0.007	0.047
Panel B: Increasing labour-market risk						
Moving in	0.004	0.025	-0.021	0.022	-0.017	0.026
Persistent	-0.042*	0.023	-0.007	0.023	-0.014	0.022
Moving out	0.028	0.043	0.014	0.044	0.086**	0.040
Volatile	-0.002	0.032	-0.010	0.029	-0.066**	0.029
No hardship	-0.022	0.028	0.024	0.024	-0.006	0.026
Panel C: Decreasing labour-market risk						
Moving in	0.003	0.054	-0.029	0.050	0.001	0.053
Persistent	-0.006	0.065	0.031	0.045	-0.016	0.040
Moving out	-0.094*	0.055	0.006	0.057	-0.091	0.061
Volatile	-0.055	0.041	-0.112***	0.037	0.022	0.038
No hardship	0.010	0.038	-0.025	0.035	0.006	0.036
Panel D: High labour-market risk						
Moving in	-0.039	0.052	-0.000	0.049	0.043	0.052
Persistent	0.045	0.073	-0.116**	0.047	-0.020	0.044
Moving out	-0.026	0.047	-0.054	0.046	-0.058	0.052
Volatile	-0.001	0.036	-0.012	0.033	0.075**	0.031
No hardship	-0.075**	0.038	-0.078**	0.032	-0.007	0.034

Notes: Entries show the difference in predicted probabilities between respondents with high and low family buffers within each hardship trajectory (high − low). High family buffer is defined as above the within-wave median. Adjacent columns report standard errors. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

There is even less evidence that buffers consistently increase the probability of decreasing trajectories. This distinction is important for interpretation. If family resources mainly operated as an investment mechanism, allowing young adults to tolerate initially insecure jobs in exchange for later returns, one would expect buffered individuals to be systematically more likely to follow decreasing trajectories, that is, trajectories characterised by high initial insecurity followed by improvement. The tables provide little support for this. Across both outcomes, differences in the decreasing trajectories are small, often statistically insignificant, and inconsistent across hardship groups.

This distinction is central to interpreting the role of family wealth in light of the broader literature. Studies of intergenerational transfers often emphasise parental wealth as a form of investment capital, enabling prolonged education, occupational experimentation, or acceptance of lower-paid but high-return career paths. By contrast, our results align more closely with the literature that views family resources as insurance against short-run shocks. The strongest associations are concentrated in reducing entry into persistently high-risk trajectories and increasing the likelihood of low-risk trajectories, rather than facilitating transitional insecurity that later improves. In other words, family buffers appear to protect against sustained labour-market scarring rather than subsidise strategic risk-taking.

The contrast across resource types reinforces this interpretation. **Overall net wealth** is notably less consistent than short-term insurance. In some cases, it is associated with more favourable outcomes; for example, among those with no hardship, it lowers the probability of high-precariousness by 7.7 percentage points, but these effects are irregular and often absent for the persistent-hardship group, where the private-safety-net hypothesis is most relevant. **Informal insurance**, by contrast, displays even weaker and more fragmented patterns, with some statistically significant estimates but no stable directional relationship across outcomes or hardship backgrounds.

Appendix Tables E1 and E2 extend the analysis to three additional family resources: borrowing capacity, long-term wealth, and government transfers. These supplementary results further underscore the importance of liquidity. Borrowing capacity and long-term wealth occasionally show associations with more favourable trajectories, but the effects are less consistent than those observed for short-term insurance. Government transfers show the weakest pattern overall and, in some cases, move in the opposite direction. For example, among the moving-out hardship group, high government transfers are associated with a lower probability of low-precariousness and low labour-market risk. This likely reflects the fact that transfer receipt partly proxies ongoing economic need rather than autonomous family support.

Taken together, the moderation results provide partial but targeted support for the private-safety-net hypothesis. Family resources do alter how pre-adult hardship translates into adult labour-market pathways, but the effect is concentrated in specific forms of wealth. What matters most is not family wealth in the broad balance-sheet sense, nor access to public transfers, but access to liquid and immediately deployable private resources. These buffers primarily reduce the probability of persistent disadvantage and increase the likelihood of

stable labour-market entry. They do not consistently convert insecure beginnings into temporary investment phases. The evidence, therefore, suggests that family wealth functions less as a platform for strategic experimentation and more as a shield against long-run labour-market scarring.

These findings are robust to alternative rule-based trajectory classifications, stricter outcome definitions, a longer adult observation window extending to age 34, and the inclusion of supplementary family-buffer measures. Across these checks, the central pattern remains unchanged: persistent pre-adult hardship is strongly associated with persistently adverse early-career trajectories, while short-term family resources most consistently operate as a buffer against sustained disadvantage.

6. Conclusion

This paper examined how economic hardship before labour-market entry shapes early-adult labour-market trajectories, and whether family resources moderate these associations. Using longitudinal data from the HILDA Survey, we identified distinct pathways of household economic hardship between ages 4 and 24 and linked them to trajectories of precarious employment and labour-market risk during ages 25–30, with extensions to age 34.

Three main findings emerge. First, economic disadvantage before labour-market entry is highly heterogeneous. Rather than following a single persistent pattern, individuals experience distinct pathways of hardship characterised by persistence, entry into hardship, exit from hardship, and volatility over the pre-adult life course. This demonstrates that family background is not adequately captured by a single point-in-time or average measure: the timing, persistence, and sequencing of disadvantage contain additional information that matters for later outcomes.

Second, early-adult labour-market experiences are also strongly heterogeneous. For both precarious employment and labour-market risk, we identify four distinct pathways: low, increasing, decreasing, and high-persistent exposure. These patterns show that labour-market inequality in early adulthood is not only reflected in average employment outcomes but in the persistence and dynamics of insecurity over time. A trajectory perspective, therefore, reveals dimensions of inequality that conventional cross-sectional indicators of employment status may obscure.

Third, pre-adult hardship trajectories are strongly associated with early-career outcomes. Persistent hardship before age 25 is consistently linked to substantially higher probabilities of belonging to high-persistent labour-market-risk and precarious-employment trajectories. By contrast, individuals who experience temporary hardship or move out of hardship display markedly lower probabilities of sustained disadvantage. The fact that these associations remain strong when the adult observation window is extended to age 34 suggests that the influence of early-life disadvantage does not dissipate quickly but continues to structure labour-market trajectories well into established adulthood.

These findings contribute to the literature on intergenerational inequality in two ways. First, they extend the focus beyond earnings, education, and occupational status to labour-market quality itself, specifically, exposure to unstable, insecure, or weakly attached employment. This broadens the understanding of how economic advantage is transmitted across generations. Second, they show that the persistence and timing of hardship matter independently of average childhood socioeconomic status, highlighting the value of a life-course approach to the measurement of inequality of opportunity.

The analysis also provides new evidence on the role of family resources as a private safety net during labour-market entry. Family buffers do moderate the relationship between pre-adult hardship and adult outcomes, but the effects depend strongly on the type of resource. Among the measures considered, short-term insurance, capturing liquid and readily deployable family resources, shows the most consistent buffering pattern. Across several hardship backgrounds, higher short-term insurance is associated with lower probabilities of entering high-persistent precariousness and labour-market-risk trajectories, and with correspondingly higher probabilities of low-risk trajectories. By contrast, broader wealth measures, borrowing capacity, and government transfers display weaker and less systematic patterns.

This distinction is substantively important. If family resources mainly enabled strategic career investment, allowing young adults to accept insecure jobs as a temporary stepping stone, one would expect stronger evidence that buffered individuals are more likely to transition into decreasing trajectories, characterised by early insecurity followed by improvement. We find limited support for this pattern. Instead, the evidence suggests that family resources operate primarily through risk mitigation: they reduce the probability of sustained labour-market scarring rather than systematically enabling strategic tolerance of

early insecurity. In this sense, family wealth appears to function less as investment capital and more as a form of private insurance against adverse labour-market shocks.

Several limitations should be acknowledged. The analysis is descriptive and does not establish causal pathways. Some family-buffer measures require interpolation because wealth modules in the HILDA Survey are not collected annually, and the available indicators cannot capture all dimensions of occupational quality, career preferences, or unobserved family support. Nevertheless, these limitations do not alter the central empirical pattern: both the trajectory of pre-adult hardship and the availability of family resources are strongly associated with the structure of labour-market entry.

The broader implication is that labour-market insecurity may itself be an important mechanism through which inequality is reproduced across generations. As transitions into stable employment become longer and more uncertain, unequal access to family resources creates unequal capacity to absorb risk at the start of working life. Young adults from persistently disadvantaged families are not only more likely to encounter insecure pathways but are also less protected from those pathways becoming entrenched. This suggests that intergenerational inequality should be understood not only in terms of who attains higher earnings later in life, but also in terms of who can withstand labour-market risk during the transition to adulthood. For research and policy alike, this points to the importance of considering employment stability and private family insurance as central components of inequality of opportunity. More broadly, the results illustrate how trajectory-based measures can enrich the study of intergenerational inequality by capturing persistence and timing in both family disadvantage and labour-market outcomes, dimensions that conventional summary indicators overlook.

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Online Appendix A: Additional information

Table A1: Observation frequency by age window

	Pre-adulthood (4-24)	Adulthood (25-30)
Mean years observed	8.67	4.44
Median years observed	7.00	6.00
p25	3.00	3.00
p75	14.00	6.00
Share meeting minimum threshold	52.76	69.12

Note: This table summarises respondents' observation frequency within the two age windows used in the analysis: pre-adulthood (ages 4–24) and adulthood (ages 25–30). Reported statistics include the mean, median, 25th percentile (p25), and 75th percentile (p75) of observed years. The final row reports the proportion of respondents satisfying the minimum observation thresholds for inclusion in the baseline sample: at least 7 observed years during pre-adulthood and at least 4 observed years during adulthood.

Table A2: Trajectories diagnostics

	N	APP	%	OCC	BIC	AIC	Entropy
Panel A: Income hardship trajectories							
Moving in	1,208	0.83	0.14	30.24	-50,722	-50,655	0.78
Persistent hardship	2,733	0.90	0.31	19.74	-50,722	-50,655	0.78
Moving out	991	0.79	0.11	30.15	-50,722	-50,655	0.78
Volatile	1,746	0.83	0.20	19.05	-50,722	-50,655	0.78
No hardship	2,113	0.87	0.24	21.35	-50,722	-50,655	0.78
Panel B: Extreme income hardship trajectories							
Persistent hardship	826	0.80	0.09	39.13	-44,244	-44,195	0.73
No hardship	4,727	0.87	0.54	5.67	-44,244	-44,195	0.73
Moving in	1,325	0.76	0.15	18.21	-44,244	-44,195	0.73
Moving out	1,134	0.76	0.13	21.15	-44,244	-44,195	0.73
Moving out-ext	779	0.80	0.09	41.99	-44,244	-44,195	0.73
Panel C: Labour-market risk trajectories							
Low	943	0.87	0.48	7.28	-5,705	-5,630	0.71
Increasing	155	0.76	0.08	37.67	-5,705	-5,630	0.71
Decreasing	449	0.79	0.23	12.70	-5,705	-5,630	0.71
High	423	0.88	0.21	26.03	-5,705	-5,630	0.71
Panel D: Precarious employment trajectories							
Low	983	0.85	0.50	5.81	-5,452	-5,377	0.67
Increasing	163	0.73	0.08	30.44	-5,452	-5,377	0.67
Decreasing	432	0.76	0.22	11.31	-5,452	-5,377	0.67
High	392	0.84	0.20	21.55	-5,452	-5,377	0.67

Notes: N denotes the number of individuals assigned to each trajectory group. *APP* denotes the average posterior probability of group membership and measures classification quality. % denotes the estimated group share, expressed as the proportion of individuals assigned to each trajectory relative to the full sample. *OCC* denotes the odds of correct classification. Entropy summarises the overall certainty of class assignment based on posterior membership probabilities, with higher values indicating clearer separation between trajectory groups..

Online Appendix B: Trajectories using duration-based trajectory classification

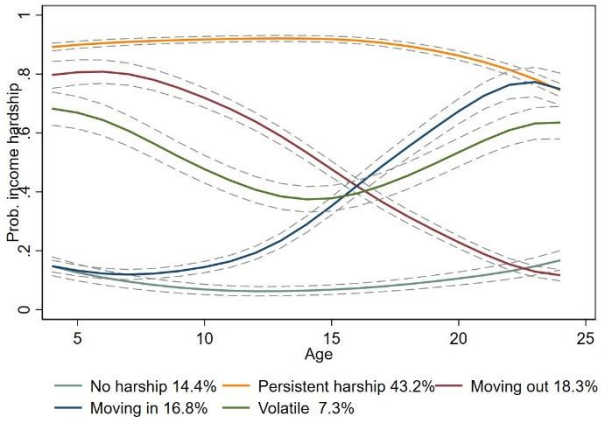

Figure B1: Trajectories of income hardship in pre-Adulthood
Notes: Dash lines represent 95% confidence intervals.

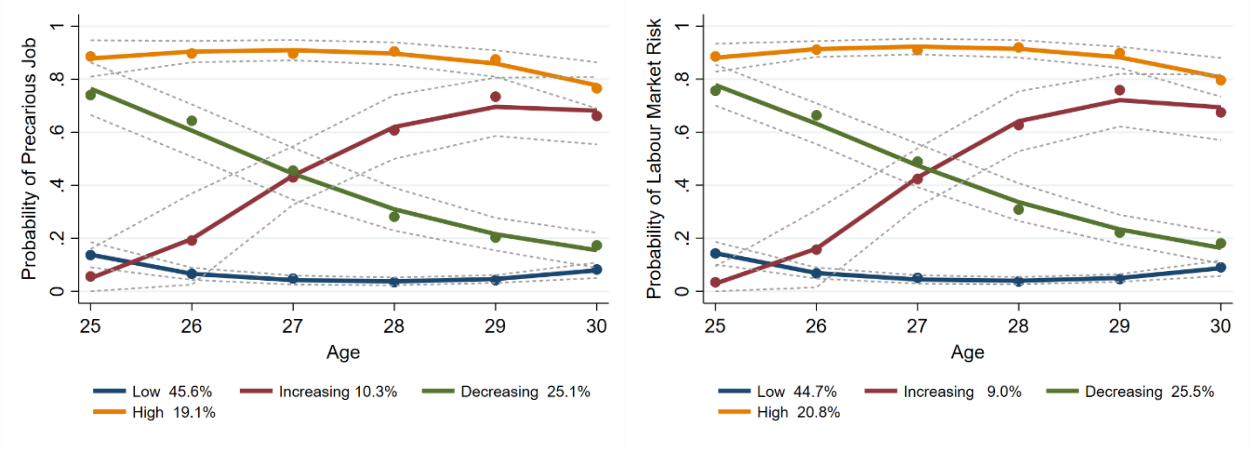

Figure B2: Trajectories of Precarious Employment and Labour-Market Risk in Adulthood
Notes: Dash lines represent 95% confidence intervals.

Online Appendix C: Robustness checks

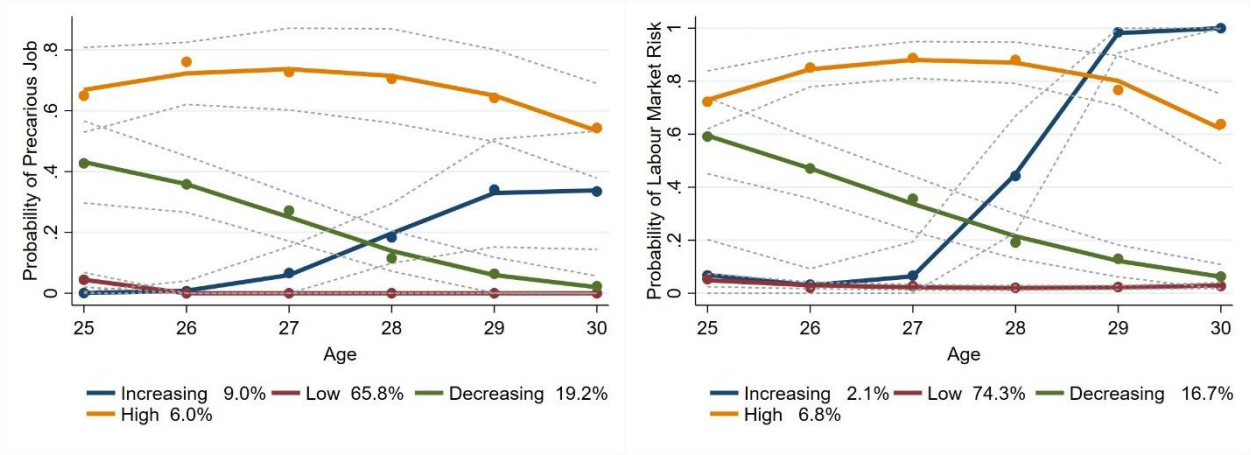

Figure C1: Alternative definitions of precarious employment and labour-market risk

Notes: Precarious employment is a binary indicator equal to one for employed individuals who satisfy *at least two* of the following: casual or fixed-term employment, underemployment, or low pay. Labour-market risk broadens this measure by also including non-employment. Dash lines represent 95% confidence intervals.

Online Appendix D: Extension to ages 25-34

Table D1: Multinomial logistic model with trajectories (labour-market risk)

Low Risk Trajectory (baseline)	Increasing Risk Trajectory (25-34)		Decreasing Risk Trajectory (25-34)		High Risk Trajectory (25-34)	
	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio
Model 1: Income hardship trajectories						
Intercept	-0.895***		0.112		0.204	
	(0.193)		(0.143)		(0.140)	
Moving in	-0.0383	0.962	-0.194	0.824	-0.488**	0.614**
	(0.277)	(0.267)	(0.209)	(0.172)	(0.214)	(0.131)
Moving out	-0.167	0.846	-1.139***	0.320***	-1.420***	0.242***
	(0.292)	(0.247)	(0.259)	(0.0830)	(0.271)	(0.0656)
Volatile hardship	-0.465*	0.628*	-0.877***	0.416***	-1.543***	0.214***
	(0.252)	(0.158)	(0.193)	(0.0803)	(0.213)	(0.0455)
No hardship	-0.376	0.687	-1.059***	0.347***	-1.530***	0.216***
	(0.246)	(0.169)	(0.197)	(0.0682)	(0.209)	(0.0453)
Model 2: Extreme income hardship trajectories						
Intercept	-0		0.693*		1.609***	
	(0.472)		(0.408)		(0.365)	
Moving in	-1.061**	0.346**	-0.607	0.545	-1.906***	0.149***
	(0.522)	(0.181)	(0.437)	(0.238)	(0.404)	(0.0601)
Moving out	-0.430	0.651	-0.885**	0.413**	-2.226***	0.108***
	(0.513)	(0.334)	(0.449)	(0.185)	(0.423)	(0.0456)
Moving out-extreme	-0.744	0.475	-1.249***	0.287***	-2.224***	0.108***
	(0.523)	(0.249)	(0.460)	(0.132)	(0.424)	(0.0459)
No hardship	-1.208**	0.299**	-1.563***	0.209***	-2.817***	0.0598***
	(0.482)	(0.144)	(0.418)	(0.0875)	(0.379)	(0.0227)
Model 3: Income hardship trajectories with covariates						
Intercept	-1.470		-0.404		-0.976	
	(0.998)		(0.765)		(0.840)	
Moving in	-0.114	0.892	-0.239	0.788	-0.542**	0.581**
	(0.282)	(0.251)	(0.211)	(0.166)	(0.217)	(0.126)
Moving out	-0.215	0.806	-1.167***	0.311***	-1.440***	0.237***
	(0.291)	(0.235)	(0.264)	(0.0821)	(0.272)	(0.0645)
Volatile hardship	-0.528**	0.589**	-0.920***	0.399***	-1.596***	0.203***
	(0.253)	(0.149)	(0.195)	(0.0779)	(0.217)	(0.0439)
No hardship	-0.432*	0.649*	-1.092***	0.336***	-1.559***	0.210***
	(0.251)	(0.163)	(0.199)	(0.0668)	(0.215)	(0.0452)
Female	0.806***	2.239***	0.437***	1.547***	0.667***	1.948***
	(0.165)	(0.370)	(0.134)	(0.207)	(0.146)	(0.284)
Australian	0.287	1.333	0.316	1.371	0.203	1.225
	(0.331)	(0.441)	(0.266)	(0.365)	(0.287)	(0.352)
Age	0.00217	1.002	-0.00105	0.999	0.0211	1.021
	(0.0314)	(0.0315)	(0.0243)	(0.0243)	(0.0269)	(0.0275)
State	-0.0401	0.961	0.0307	1.031	0.0327	1.033
	(0.0500)	(0.0480)	(0.0384)	(0.0396)	(0.0409)	(0.0423)

Notes: "Moving out-extreme" refers to individuals whose trajectory moves from a very high probability of extreme income hardship in early life to a much lower probability later on. "Moving out" refers to individuals

whose trajectory moves from a moderately high probability of extreme income hardship to a low probability later on. The omitted adult category is the low-risk trajectory, and the omitted hardship category is persistent hardship.

Table D2: Multinomial logistic model with trajectories (precarious employment)

Low Precarious Trajectory (baseline)	Increasing Precarious Trajectory (25-34)		Decreasing Precarious Trajectory (25-34)		High Precarious Trajectory (25-34)	
	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio	Coefficient (SE)	Odd Ratio
Model 1: Income hardship trajectories						
Intercept	-0.737***		0.244*		-0.0435	
	(0.181)		(0.138)		(0.148)	
Moving in	-0.351	0.704	-0.277	0.758	-0.367*	0.693*
	(0.276)	(0.194)	(0.203)	(0.154)	(0.221)	(0.153)
Moving out	-0.483*	0.617*	-1.586***	0.205***	-1.215***	0.297***
	(0.288)	(0.178)	(0.272)	(0.0556)	(0.270)	(0.0803)
Volatile hardship	-0.580**	0.560**	-1.105***	0.331***	-1.463***	0.232***
	(0.239)	(0.134)	(0.191)	(0.0631)	(0.224)	(0.0519)
No hardship	-0.591**	0.554**	-1.199***	0.302***	-1.363***	0.256***
	(0.238)	(0.132)	(0.192)	(0.0580)	(0.217)	(0.0556)
Model 2: Extreme income hardship trajectories						
Intercept	0.486		0.811*		1.658***	
	(0.450)		(0.425)		(0.386)	
Moving in	-1.597***	0.203***	-0.681	0.506	-2.057***	0.128***
	(0.503)	(0.102)	(0.452)	(0.229)	(0.425)	(0.0543)
Moving out	-0.971**	0.379**	-1.073**	0.342**	-2.277***	0.103***
	(0.492)	(0.186)	(0.465)	(0.159)	(0.439)	(0.0450)
Moving out-extreme	-1.361***	0.256***	-1.168**	0.311**	-2.319***	0.0984***
	(0.509)	(0.130)	(0.470)	(0.146)	(0.445)	(0.0438)
No hardship	-1.786***	0.168***	-1.692***	0.184***	-2.951***	0.0523***
	(0.461)	(0.0773)	(0.434)	(0.0799)	(0.399)	(0.0209)
Model 3: Income hardship trajectories with covariates						
Intercept	-1.972**		-0.685		-1.384	
	(0.987)		(0.763)		(0.876)	
Moving in	-0.448	0.639	-0.334	0.716	-0.427*	0.652*
	(0.281)	(0.179)	(0.205)	(0.147)	(0.226)	(0.147)
Moving out	-0.535*	0.586*	-1.621***	0.198***	-1.237***	0.290***
	(0.288)	(0.169)	(0.277)	(0.0547)	(0.273)	(0.0792)
Volatile hardship	-0.656***	0.519***	-1.159***	0.314***	-1.523***	0.218***
	(0.242)	(0.126)	(0.193)	(0.0606)	(0.228)	(0.0497)
No hardship	-0.670***	0.512***	-1.238***	0.290***	-1.400***	0.247***
	(0.243)	(0.124)	(0.195)	(0.0566)	(0.224)	(0.0552)
Female	0.885***	2.424***	0.438***	1.550***	0.815***	2.260***
	(0.164)	(0.399)	(0.133)	(0.206)	(0.152)	(0.343)
Australian	0.266	1.305	0.487*	1.627*	0.0903	1.095
	(0.317)	(0.414)	(0.271)	(0.441)	(0.286)	(0.313)
Age	0.0283	1.029	0.00704	1.007	0.0284	1.029
	(0.0312)	(0.0321)	(0.0243)	(0.0244)	(0.0280)	(0.0288)
State	-0.0831	0.920	0.0399	1.041	0.0249	1.025
	(0.0532)	(0.0490)	(0.0378)	(0.0393)	(0.0420)	(0.0431)

Notes: "Moving out-extreme" refers to individuals whose trajectory moves from a very high probability of extreme income hardship in early life to a much lower probability later on. "Moving out" refers to individuals whose trajectory moves from a moderately high probability of extreme income hardship to a low probability

later on. The omitted adult category is the low-precariousness trajectory, and the omitted hardship category is persistent hardship.

Online Appendix E: Additional family-buffers

Table E1: Difference in predicted probabilities by family-buffer status *(precarious employment)*

Hardship trajectory	Borrowing capacity		Long-term wealth		Government transfers	
	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)
Panel A: Low precarious employment						
Moving in	0.020	0.057	0.109*	0.056	-0.075	0.057
Persistent	-0.078	0.062	0.036	0.073	0.014	0.061
Moving out	0.089	0.068	0.017	0.069	-0.281***	0.093
Volatile	-0.048	0.049	-0.004	0.049	-0.049	0.046
No hardship	0.037	0.047	0.064	0.058	-0.093	0.084
Panel B: Increasing precarious employment						
Moving in	-0.007	0.025	0.011	0.026	-0.031	0.023
Persistent	0.004	0.035	0.052	0.047	0.007	0.031
Moving out	0.022	0.045	-0.036	0.046	0.179**	0.086
Volatile	-0.011	0.029	0.070**	0.033	0.014	0.028
No hardship	0.008	0.026	-0.008	0.033	0.026	0.051
Panel C: Decreasing precarious employment						
Moving in	0.011	0.055	-0.029	0.052	-0.005	0.055
Persistent	-0.016	0.055	-0.047	0.059	0.001	0.053
Moving out	-0.072	0.051	0.054	0.051	0.080	0.084
Volatile	0.057	0.041	-0.034	0.039	-0.003	0.037
No hardship	0.032	0.035	-0.064	0.047	0.075	0.071
Panel D: High precarious employment						
Moving in	-0.024	0.050	-0.091*	0.047	0.110**	0.054
Persistent	0.090	0.064	-0.041	0.067	-0.021	0.059
Moving out	-0.038	0.049	-0.036	0.050	0.022	0.075
Volatile	0.002	0.034	-0.033	0.032	0.039	0.032
No hardship	-0.077**	0.035	0.008	0.040	-0.007	0.057

Table E2: Difference in predicted probabilities by family-buffer status *(labour-market risk)*

Hardship trajectory	Borrowing capacity		Long-term wealth		Government transfers	
	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)	Diff (High - Low)	Diff (SE)
Panel A: Low labour-market risk						
Moving in	0.015	0.057	0.131**	0.056	-0.122**	0.056
Persistent	-0.053	0.061	0.055	0.072	0.002	0.060
Moving out	0.086	0.068	0.004	0.069	-0.260***	0.093
Volatile	-0.028	0.049	-0.003	0.049	-0.059	0.046
No hardship	0.051	0.047	0.073	0.058	-0.077	0.084
Panel B: Increasing labour-market risk						
Moving in	0.002	0.025	0.008	0.024	-0.051***	0.019

Persistent	0.037	0.037	0.067	0.046	0.007	0.028
Moving out	0.039	0.044	-0.052	0.045	0.190**	0.086
Volatile	-0.023	0.029	0.068**	0.033	0.016	0.029
No hardship	-0.007	0.026	-0.026	0.034	0.030	0.051
Panel C: Decreasing labour-market risk						
Moving in	0.047	0.054	-0.044	0.051	0.016	0.054
Persistent	-0.066	0.053	-0.039	0.061	0.016	0.054
Moving out	-0.112**	0.055	0.070	0.055	0.072	0.088
Volatile	0.042	0.042	-0.039	0.040	0.020	0.038
No hardship	0.030	0.036	-0.051	0.047	0.064	0.071
Panel D: High labour-market risk						
Moving in	-0.064	0.051	-0.095*	0.049	0.157***	0.056
Persistent	0.082	0.065	-0.082	0.067	-0.025	0.060
Moving out	-0.013	0.047	-0.022	0.048	-0.002	0.069
Volatile	0.009	0.035	-0.025	0.034	0.024	0.032
No hardship	-0.074**	0.036	0.005	0.041	-0.016	0.057