



THE IMPACT OF SOCIOECONOMIC BACKGROUND IN YOUTH ON ADULT WAGES IN PORTUGAL

A comprehensive understanding of how an individual's childhood socioeconomic circumstances affect adult wage outcomes is crucial to the study of intergenerational inequality and social mobility. While it is well established that early life circumstances, such as parental education, family structure and financial hardship, can shape future opportunities, the extent and persistence of these effects may vary by context. In Portugal, where income inequality has decreased yet remains relatively high, examining the impact of socioeconomic background on labour market outcomes can offer valuable insights into the underlying causes of persistent economic disparities.

Although a substantial body of research examines the determinants of adult earnings, much of it focuses on education and labour market experience as drivers of wage formation. Other studies explore intergenerational dynamics, particularly the role of parental education and household background in shaping income or attitudes. In fact, prior research suggests that the influence of family background on wages may operate through multiple channels. While parental education and income shape educational attainment, they may also affect non-cognitive traits such as achievement motivation, expectations, and preferences, which can persist into adulthood. This implies that childhood disadvantage may influence wages not only indirectly through schooling, but also directly through behavioural and social mechanisms. Examining whether background effects remain after controlling for individual education is therefore central to understanding the persistence of intergenerational inequality.

However, evidence directly linking childhood disadvantage to adult wage outcomes using microdata remains scarce in the Portuguese context. Existing studies on Portugal largely concentrate on income or educational mobility, without explicitly addressing wage



determination through causal or distributional approaches. Addressing this gap, this study asks: *To what extent does socioeconomic background in youth affect adult wage outcomes in Portugal?* Specifically, it examines whether parental education, household financial hardship, and unmet basic needs at age 14 systematically influence earnings and the probability of attaining higher wage levels in adulthood.

Serving as a foundational reference, Belzil and Hansen (2003)¹ offer crucial insights into how family background and individual abilities shape educational attainment and adult wage outcomes. Building on this, I connect human capital theory with insights into the intergenerational transmission of behaviours and preferences, to better understand how early-life socioeconomic conditions influence wage outcomes. This study contributes to the limited Portuguese literature on intergenerational inequality by focusing directly on wage outcomes in Portugal using recent microdata and applying identification strategies to address endogeneity.

The empirical analysis draws on microdata from the *Inquérito às Condições de Vida e Rendimento* (Survey on Income and Living Conditions – SILC), administered by Statistics Portugal (INE). This nationally representative dataset includes detailed information on income, living standards, education and employment. Notably, the 2023 wave includes a retrospective module capturing socioeconomic conditions at age 14, including parental education, housing quality, and household financial situation. These indicators are directly linked to current labour market outcomes, enabling intergenerational analysis.

The sample is restricted to working-age individuals with valid information on wages and key background variables. Net hourly earnings are computed from annual income and usual weekly working hours and subsequently transformed into logarithmic form to account for skewness in the wage distribution. Youth socioeconomic indicators are constructed directly from the

¹ Belzil, C., & Hansen, J. (2003). Structural estimates of the intergenerational education correlation. *Journal of Applied Econometrics*, 18(6), 679–696. <https://doi.org/10.1002/jae.716>



retrospective module, while demographic and labour market controls are currently being harmonized and cleaned. The final analytical sample will depend on the treatment of missing values in control variables, which is ongoing. Preliminary inspection confirms substantial variation in both wage outcomes and early-life socioeconomic indicators, supporting the feasibility of the proposed empirical strategy.

The empirical specification models the natural logarithm of net hourly wages as a function of parental education and early-life socioeconomic indicators measured at age 14, such as household financial hardship, unmet basic needs, family structure, housing conditions, and parental employment status. Individual-level controls include age, gender, own education, labour market experience, working hours, sector of employment, and occupation.

As a baseline specification, an Ordinary Least Squares (OLS) model is estimated to capture the conditional association between early-life conditions and adult wages. While informative, OLS estimates may suffer from omitted variable bias, particularly due to the potential endogeneity of parental education.

To address this concern, an Instrumental Variables (IV) approach is implemented using exposure to compulsory schooling reforms (based on parental birth cohort) as an instrument for parental education. The validity of this instrument relies on two key assumptions. First, compulsory schooling reforms must generate exogenous variation in parental educational attainment (relevance). Second, exposure to these reforms should affect children's adult wages only through parental education and not through alternative channels (exclusion restriction). These assumptions are plausible given that compulsory schooling reforms are determined by policy timing rather than individual family characteristics, though their credibility depends on accurate identification of parental birth cohorts. A potential limitation concerns the availability and precision of parental age information, which may affect the accurate classification of reform exposure. The model is estimated using Two-Stage Least Squares (2SLS). In the first stage,



parental education is regressed on reform exposure and control variables. In the second stage, predicted parental education is used to estimate its effect on adult wages. This strategy identifies a Local Average Treatment Effect (LATE), providing a more credible causal interpretation under standard IV assumptions.

Finally, to examine distributional implications, a logistic regression model is estimated using a binary indicator for high-wage status, defined as earning above the 30th percentile of the wage distribution. Average marginal effects are computed to assess how early-life conditions influence the probability of attaining relatively higher wage levels. This complementary approach allows for a policy-relevant assessment of upward mobility beyond average wage effects.

Understanding how early-life socioeconomic conditions shape adult wage outcomes is central to explaining persistent inequality in Portugal. By focusing directly on wage determination rather than solely on income or educational mobility, this study contributes new evidence on the mechanisms through which disadvantage is transmitted across generations. The combination of nationally representative microdata and a layered econometric strategy, incorporating OLS, IV, and logistic regression models, allows for both descriptive and causal insights into intergenerational wage dynamics.

Data preparation is currently being finalized, with demographic controls undergoing harmonization and validation. The next stage involves implementing the outlined models and conducting robustness and diagnostic checks to assess the credibility of the identification strategy. The findings are expected to provide a clearer understanding of whether early socioeconomic disadvantage continues to influence wage trajectories in adulthood, and through which channels these effects operate within the Portuguese labour market.