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**DOES MORE EDUCATION LOWER THE BARRIERS TO SOCIAL MOBILITY?
AN ANALYSIS OF THREE BIRTH COHORTS DURING A PERIOD OF EDUCATIONAL
EXPANSION IN BRAZIL**

Andre Salata

*Pontifical Catholic University of Rio Grande do Sul – Brazil
andresalata@gmail.com*

Sin Yi Cheung

*Cardiff University – United Kingdom
cheungsy@cardiff.ac.uk*

ABSTRACT

Research in social stratification has long posited that the direct effects of social origin on destination are diminished for individuals with higher education, positioning educational expansion as a potential equalizing force. However, recent studies have raised doubts about this claim, suggesting that the equalization hypothesis remains unresolved. In this study, we contribute to the ongoing debate by analyzing data from three birth cohorts in Brazil, spanning a period of rapid educational expansion. We investigate class mobility, status attainment, and the likelihood of entering non-manual occupations. Our findings indicate that achieving higher educational levels weakens the association between social origin and destination for both sexes in the older cohort. Conversely, in younger cohorts born after the educational expansion, mobility prospects for the highly educated are not significantly better than for those with lower levels of education. In other words, educational expansion in Brazil has not succeeded in weakening the direct link between origins and destinations for highly educated individuals. We argue that these results reflect the positionality of education, whereby the impact of a given credential diminishes as the educational system expands, thereby weakening the "composition effect."

KEYWORDS

social stratification; social mobility; educational expansion; compositional effect; positional good; selection process

1. INTRODUCTION

In two seminal papers, Hout (1984, 1988) demonstrated that obtaining a university degree in the United States significantly reduces the direct influence of social origin on occupational outcomes. The expansion of higher education increases university enrolment, leading to graduates whose life chances are less constrained by their social background. Similar findings have been observed in other countries such as Germany, Sweden, France, and the United Kingdom (Breen, 2010; Breen and Jonsson, 2007; Breen and Luijkx, 2007; Vallet, 2004). In social stratification literature, this is referred to as the “compositional effect”. As the population becomes more educated, the impact of family background on outcomes such as occupational class, earnings, or family income diminishes (Torche, 2011). Thus, although the equalization of educational opportunities remains a contested issue (Breen et al., 2009), there is substantial evidence supporting the “compositional effect” hypothesis, particularly for individuals with tertiary education (Karlson, 2019; Chetty et al., 2017; Bernardi and Ballarino, 2016; Pfeffer and Hertel, 2015; Torche, 2014). Potential explanations for this phenomenon include the role of the university environment in fostering shared knowledge, attitudes, social networks, and lifestyles, irrespective of social origin (Torche, 2011; Jackson, 2007). Furthermore, in the labor market, a college degree may mitigate the influence of social origin for less privileged individuals, reducing its adverse effects on employment prospects and economic outcomes (Breen and Jonsson, 2007; Baron et al., 2007).

However, other studies present conflicting findings. First, there is no conclusive evidence that a bachelor’s degree has a uniquely equalizing effect (Fiel, 2020). Second, inequalities rooted in social origin may persist even among college graduates (Witteveen and Attewell, 2017). Third, and most importantly, higher social mobility among college graduates could result from selectivity (Holm and Jaeger, 2011; Cameron and Heckman, 1998), rather than the formal training, social capital, or credentials associated with higher education (Zhou, 2019). According to the selectivity hypothesis, a college degree does not inherently promote mobility. Instead, university graduates are often selected for their socially valued cognitive and non-cognitive skills, which facilitate social mobility. However, as educational expansion continues, this selection process may weaken. In

sum, the evidence challenging the optimistic "compositional effect" hypothesis leaves the question unresolved.

While numerous empirical studies in advanced Western societies have examined the "compositional effect," less is known about its implications in late-industrializing countries, despite the significant educational expansion experienced (Jorrat et al., 2024; Fachelli et al., 2021; Torche and Ribeiro, 2010). In Brazil, during a period of intense industrialization and urbanization in the 20th century, combined with public policies aimed at expanding the educational system, access to university education has become far more widespread for younger generations. This is undoubtedly a positive development. However, our previous research indicates that despite this ambitious educational expansion, the direct and indirect effects of family background on occupational status remain largely unchanged. But "compositional effect" has not been fully explored by us, due to space limitations. Two key questions remain unresolved. First, are the effects of family background on occupational outcomes weaker for those with higher educational degrees? Second, is this pattern consistent over time? In other words, does the influence of social origin on occupational destinations decrease among cohorts born after the educational expansion as they ascend the educational ladder? If the answer to these questions is affirmative, then, as Hout (1988) suggested, educational expansion could indeed serve as a mechanism for promoting social mobility in Brazil.

Nevertheless, the assertions that social barriers to mobility are lower for the more highly educated and that educational expansion will promote social mobility continue to face challenges, as previously noted. From a positional education perspective (Bills, 2016), a degree confers advantages on its holders not because of its intrinsic value, but due to its relative scarcity within society. In this context, the value of education is relative to how much education others possess (Hirsch, 1978). Therefore, the impact of a higher degree on social mobility is contingent on the number of individuals who attain that level of education (Shavit and Park, 2016). As already stated by Boudon (1974), even if educational expansion could make the chances of access to a degree less unequal, it would undermine the opportunity structure related to it.¹ Applying this perspective to the "compositional effect" discussion, we hypothesize that as educational expansion

occurs, the selection of socially valued abilities and motivation weakens, as does the signaling power of credentials to employers. Consequently, as more individuals achieve higher educational levels, the compositional effect is likely to diminish.

To properly evaluate the compositional effect, we examine the relationship between social origins and occupational destinations by analyzing data from three birth cohorts of Brazilian men and women, born between the late 1920s and the mid-1980s, covering the decades when most educational expansion occurred. Among the first birth cohort, composed of those born between 1928 and 1943, 83.9% had completed only the early years of elementary school, while 3.2% had entered university by adulthood. In contrast, for the third birth cohort, born between 1969 and 1984, which benefited most from educational reforms and expansion during the twentieth century, only 18.6% had not progressed beyond elementary education, while 20.6% had entered university. Thus, despite being relatively late and still deficient in quality (Sasaki et al., 2018), the Brazilian government's efforts to expand education over the past decades have yielded results. Our central question is to what extent has this expansion contributed to reducing social rigidity through the compositional effect. The data we use is derived from the National Household Sample Survey (PNAD), a cross-sectional, nationally representative survey conducted annually in Brazil. For each cohort of men and women, we regress respondents' occupational destinations on their social origins, mediated by educational levels. To measure social origin and destination, we utilize the EGP class scheme and the standard international socio-economic index of occupational status (ISEI).

This paper is structured as follows. In the next section, we provide a brief overview of the relevant literature before presenting the hypotheses to be tested. The third section describes the data and variables, as well as our analytical strategies. We then present the main results from the regression models, beginning with the log-linear and log-multiplicative models on class mobility, followed by the Ordinary Least Squares (OLS) models on occupational status, and finally the logit models for the likelihood of accessing non-manual classes. In the final section, we discuss the findings in relation to the hypotheses and explore the implications for future research.

2. BACKGROUND AND HYPOTHESIS

It is well established that advancing up the educational ladder generally confers significant advantages in the competition for the most desirable labor market positions and economic returns. In Brazil, the average labor income for those who completed high school is nearly 70% higher than for those without formal education, and a university degree increases average wages by 113%. In other words, the premium associated with higher education is substantial, enhancing individuals' chances of attaining higher occupational status and better-paid positions (Ribeiro, 2017; Menezes-Filho et al., 2007; Hasenbalg, 2003). However, the benefits of education extend beyond these economic advantages.

As Hout (1988) asserts, "origin affects destination status among workers who do not have bachelor's degrees, but college graduation cancels the effect of background status." Hout's analysis (1984) demonstrates that barriers to social mobility are weaker for those with higher educational degrees in the U.S., particularly at the baccalaureate level, where the effects of social origin are nearly negligible. He concluded that educational expansion has the potential to enhance social mobility: "This finding provides a new answer to the old question about overcoming disadvantaged origins: A college degree can do it" (Hout, 1988: 1391). Thus, despite the enduring social barriers to accessing higher education (Shavit and Arum, 2007), for those who achieve it, the influence of family background on their mobility prospects becomes almost negligible.

Torche (2011, 2014) corroborated the main conclusions of the equalization hypothesis originally proposed by Hout (1984, 1988). Expanding beyond simple cross-tabulations of fathers' and sons' occupations, Torche tested the hypothesis using U.S. data across four distinct measures of stratification: occupational status, social class, individual earnings, and total family income. Although the results varied depending on the measure used, she generally found a weaker association between social origin and destination for college graduates, which was not significantly different from zero. In her words, "the chances of achieving economic success are independent of social background for those who attain a BA" (Torche, 2011: 798). However, she did observe that the effect of social origin on economic well-being tends to be more pronounced for advanced degree-holders

compared to those with a BA degree, indicating a U-shaped relationship between origins and economic outcomes.

Pfeffer and Hertel (2015) also found that the 'compositional effect' contributed to a moderate but consistent increase in intergenerational mobility among men in the U.S. across six birth cohorts. Their findings confirm a weaker association between fathers' and sons' occupational classes at higher educational levels. Applying the decomposition method developed by Breen (2010), they concluded that the observed trend of increasing mobility across cohorts in the U.S. can be attributed to a progressively more educated population.

Similar results have been observed not only in the United States but also in countries such as the United Kingdom, France, Sweden, and Germany. In these nations, the effect of social origin on outcomes weakens at higher educational levels, suggesting that an increasingly educated population serves as a "levelling up" force that promotes social mobility (Breen, 2010; Breen and Jonsson, 2007; Breen and Luijkx, 2007; Vallet, 2004).

Despite the merit of these empirical studies, recent research has raised doubts about the levelling-up conclusion, indicating that the equalization hypothesis remains unresolved. For example, Witteveen and Attewell (2017) present evidence that challenges the notion that the influence of family background on socio-economic outcomes diminishes to near zero among those with a bachelor's degree. Using data from the Baccalaureate and Beyond Longitudinal Study of U.S. college graduates from 1993 and 2008, they found significant income disparities among graduates four to ten years after graduation, which can be attributed to family background, even after controlling for college selectivity, major, and academic performance. In short, inequalities based on social origin persist even among college graduates.

In a study on intergenerational income mobility, Zhou (2019) critically examined the assumption that completing college has a causal effect on social mobility. This assumption lies at the heart of the equalization hypothesis, which posits that extended time in the educational system diminishes the importance of social-origin-based cultural

capital in shaping occupational trajectories (Torche, 2011; Jackson, 2007). According to this hypothesis, attending college provides formal training, professional socialization and opportunities to build social connections, which could explain the compositional effect of education. Additionally, in the hiring process, a college degree may send such a strong signal to employers that ascriptive characteristics like class of origin become less relevant. Moreover, the labor market for college graduates is expected to be more bureaucratized, limiting discretion and subjective decisions, and thereby becoming more meritocratic (Breen and Jonsson, 2007; Baron et al., 2007). Thus, according to the equalization hypothesis, higher educational degrees should lead to more equitable opportunities.

However, this optimistic view is far from universally accepted. The selectivity hypothesis suggests that there is no causal relationship between college completion and social mobility (Karlson, 2019; Holm and Jaeger, 2011; Cameron and Heckman, 1998). Instead, higher educational levels may involve a more stringent selection of students based on abilities and motivation. The lower social barriers to mobility among university graduates might simply reflect the degree of selection within the educational system. Zhou (2019) tested this by analyzing data from the National Longitudinal Survey of Youth for the 1979 cohort in the U.S. and found that "once selection processes are adjusted for, intergenerational income mobility among college graduates is very close to that among non-graduates. This finding suggests that expanding the pool of college graduates per se is unlikely to boost intergenerational income mobility" (ibid: 459). This implies that the higher mobility chances observed among bachelor's degree holders are likely driven by the selection process within the educational system rather than by any equalizing causal effect of higher education on social mobility.

Data from the same survey was analysed by Karlson (2019) in a study examining compositional effects on occupational status transitions. He measured cognitive ability using the American Forces Qualification Test, administered when participants were 15–17 years old. By applying inverse probability weighting (IPW), he accounted for the non-random selection of individuals with varying cognitive abilities into the sample of college graduates. The results contradicted the selectivity hypothesis, suggesting that college

does indeed function as an equalizer. In summary, while Zhou (2019) supports the selectivity hypothesis, Karlson's (2019) findings reject it.

Fiel (2020), in turn, posed a similar question: does higher education truly enhance mobility, or does it merely select those already predisposed to it? Analyzing data from three longitudinal surveys on intergenerational income mobility in the U.S., Fiel addressed two common biases: measurement error in parental income and non-random selection across educational levels. His findings support the hypothesis that higher educational qualifications increase mobility, but there was no evidence that a bachelor's degree has a unique equalizing effect. Instead, high school completion appeared to be the tipping point where income mobility becomes more likely. In short, Fiel found evidence of an equalizing effect, but one concentrated at the high school level, not at the college level as often claimed.

Thus, the evidence on the equalization hypothesis remains inconclusive. While there is some consensus that social mobility (measured through occupational status, class, or income) increases with higher education, it is unclear whether higher degrees cause more mobility or simply select individuals predisposed to it. This distinction is critical, as it challenges the expectation that educational expansion can eliminate social barriers to mobility. If education primarily selects those already inclined to advance, rather than causing mobility, then expansion alone will not promote greater mobility. Consequently, there is a significant leap from observing greater mobility at higher educational levels to asserting that educational expansion will enhance meritocracy.

2.1 Educational expansion in Brazil

Until the 1930s, when the Ministry of Education and Public Health Affairs was established, Brazil's educational system was underdeveloped. Subsequent institutional reforms led to rapid expansion. Key reforms included the 1942 mandate for compulsory primary education, the 1961 policy allowing government funds for private schools, and the 1971 law making education mandatory for children aged 7 to 14. The 1982 elections,

which marked the first direct elections since the military regime, and the creation of the FUNDEF fund in 1996 to support elementary education, were also crucial.

Economic development, urbanization, and increased state involvement through these reforms significantly expanded Brazil's education system throughout the 20th century (Ribeiro, 2011). From the 1980s onward, during the democratization process, growing public and private investments in education led to a substantial increase in enrolment at the elementary and high school levels. By the end of the century, school attendance for children aged 7 to 14 was nearly universal.

Elementary school enrolment more than doubled in the last three decades of the 20th century. Early childhood education enrolment grew more than thirteenfold, and secondary education enrolment rose from just over 1 million in 1970 to nearly 7 million by the late 1990s. Tertiary enrolment also increased nearly fivefold (Silva, 2003; Castro, 1994). Consequently, the percentage of people aged 25 and over with less than four years of schooling dropped from 75% to 42% between 1960 and 1991, and the illiteracy rate among those 15 and older fell from 34% in 1970 to 13% in 1999 (Silva and Hasenbalg, 2000).

In Brazil, the Constitution mandates that the State must provide free education for all children. Families are legally required to ensure their children are enrolled. The education system is organized into four levels: pre-school, elementary school, high school, and higher education.² The legal minimum school-leaving age is 17, which corresponds to the completion of high school. While vocational education is available either concurrently with or following high school, the overwhelming majority - over 90% of high school students - opt for general, non-vocational courses. Consequently, Brazil's education system is relatively unstratified, featuring a universalistic over a vocational model.

Although Brazil's educational level still lags developed and some Latin American countries, the expansion during the second half of the 20th century was significant. Researchers have explored its impact on social mobility, generally agreeing that educational opportunities increased, reducing class inequalities at the initial

educational thresholds (Ribeiro, 2009; Silva, 2003) and making returns to education in the labor market decline (Ribeiro, 2012; Menezes-Filho et al., 2007). Salata and Cheung (2022), however, suggest that the relationship between origin, education, and labor market outcomes remains stable when considering education's positional nature, raising doubts about the effectiveness of educational expansion in reducing the indirect effects of social origins on destinations.

Our primary interest here is how the direct link between social origins and destinations has changed since the educational expansion. While some evidence suggests that the reduction in the direct effect of class origin contributed to increased social fluidity throughout the 20th century, this trend appears to have reversed for cohorts born later in the century (Ribeiro, 2012). Additionally, the "compositional effect" in Brazil was found to be negligible despite significant educational expansion, indicating that "the influence of social origins on class destination is not weaker among highly educated workers in Brazil" (Torche and Ribeiro, 2010: 300, 304). In a more recent paper, however, Ribeiro (2023) states that compositional effect has been key to increasing social mobility over younger cohorts in Brazil. Thus, the debate on this regard remains unresolved.

2.2 Hypotheses

As the discussion above highlights, previous research has left some questions unanswered. Building on the literature on the compositional effect, we hypothesize that the origin-destination link is weaker among those who entered university before the expansion of education. After the expansion, we expect the impact of higher education on social mobility to diminish. In other words, we propose two hypotheses:

- 1. For the older cohort, the direct effect of social origin on destination was significantly weaker among those who reached higher levels of education.*
- 2. For the younger cohorts, the direct effect of social origin on destination was similar across all educational levels.*

These hypotheses are based on the idea that higher education does not directly cause greater mobility. Instead, it selects students with abilities and motivations that predispose them to mobility. With the expansion of education, this selection process becomes less effective, making those who achieve higher degrees less homogeneous in unmeasured characteristics—such as abilities and motivation—which are relevant for mobility. As a result, lower-class students who reach higher degrees will resemble their original social group more closely in these traits, reinforcing the influence of social background on their outcomes.

This phenomenon is a well-known aspect of educational stratification. Since Mare's seminal work (1981), unmeasured cognitive and non-cognitive abilities have been used to explain why social background effects tend to weaken at higher educational transitions. When studying educational opportunities, the implication is that educational expansion does not necessarily erase the effects of social origin but simply shifts them to higher educational levels or horizontal distinctions (Gerber and Cheung, 2008; Lucas, 2001; Raftery and Hout, 1993).³ When analysing the compositional effect, however, this means that the influence of social background will become more uniform across all levels of education after expansion. Additionally, as more people attain higher education, it becomes harder for degrees to signal desirable cognitive and non-cognitive abilities or trainability to employers (Thurow, 1975; Spence, 1973). Consequently, educational expansion could nullify the compositional effects of higher degrees.

If this is the case, enabling more people to achieve higher education may not be an effective way to promote social mobility. This perspective aligns with the view that treats education as a positional good (Shavit and Park, 2016; Bills, 2016). The ability of education to reduce social barriers to mobility depends on the proportion of the population with the same or higher degree. As more people obtain higher degrees, the advantage of holding such a degree diminishes. The concept of positional education has been used to analyze the effects of social background on educational attainment and the returns to education in the labor market. However, the positionality of education has not been articulated to the discussion on compositional effect. This paper aims to make an original contribution to this area of social mobility research.

3. DATA, METHODS AND CONTEXT

We use data from the National Household Sample Survey (PNAD), a cross-sectional, nationally representative survey conducted annually by the Brazilian Institute of Geography and Statistics (IBGE). We selected data from 1973, 1996, and 2014, which include questions on social mobility, allowing us to measure social origin based on the occupation of the respondent's father when the respondent was fifteen years old. To create three birth cohorts born between 1928 and 1984, we selected individuals aged 30 to 45 at each data point. The 30-45 age range was chosen to avoid overlap between the cohorts and to ensure that most individuals had completed their university degrees, typically finished by age 24-25 in Brazil. This age range also allows us to examine occupational attainment during the early to mid-career stages.⁴

In short, as shown in Table 1, we use three cross-sectional surveys (1973, 1996 and 2014). Within each of them, we select individuals between 30-45 years old. This way, each survey corresponds to a specific cohort: 1928-1943, 1951-1966, 1969-1984.

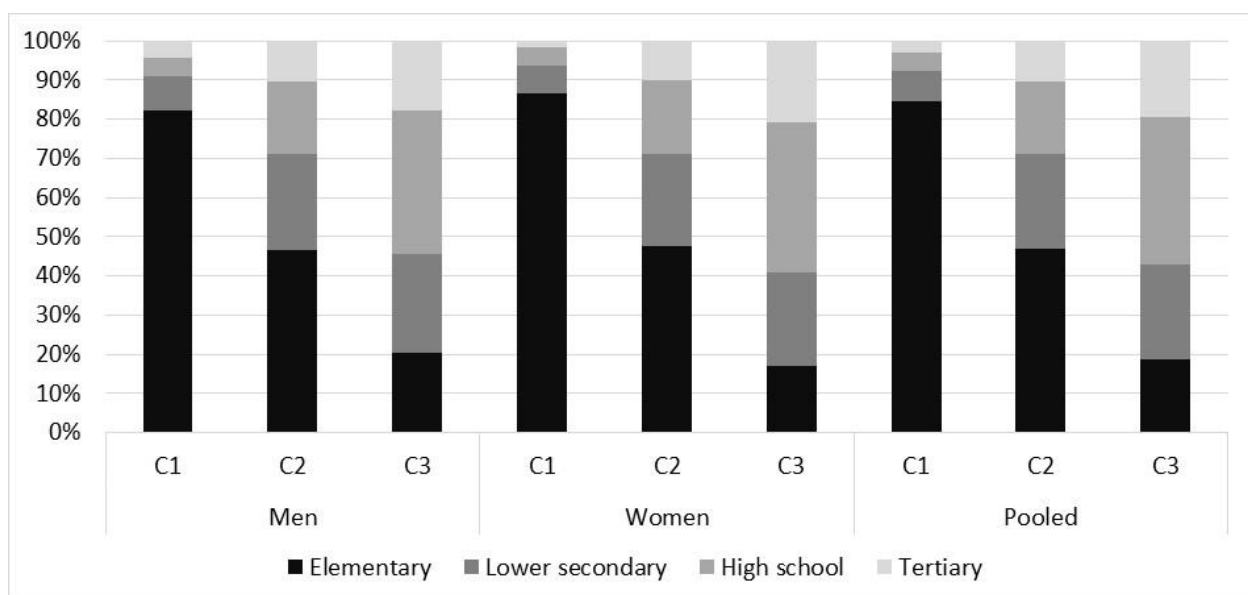
Table 1 – Birth Cohorts

Birth Cohorts	Birth Years		30-45 years old (When data collected)
	From	To	
First (C1)	1928	1943	1973
Second (C2)	1951	1966	1996
Third (C3)	1969	1984	2014

The first cohort (C1), born between 1928 and 1943, reached high school age before the major educational reforms of the 1960s. The second cohort (C2) benefited from most of the reforms in the 1960s and 1970s, while the third cohort (C3), born between 1969 and 1984, fully experienced these reforms, as well as the educational expansion driven by the transition to democracy in Brazil. As shown in Figure 1, the educational distribution changed significantly across these cohorts. We use a four-category educational classification that represents key transition points in the Brazilian educational system, based on years of schooling completed: elementary (0-4 years), lower secondary (5-8 years), high school (9-11 years), and complete or incomplete tertiary level (12 years or more).⁵

Figure 1 presents educational levels by birth cohort in Brazil, with data split by gender. In the pooled sample, 84.5% of C1 completed only elementary school. This percentage dropped sharply to 47.1% for C2 and 18.7% for C3. In contrast, only 4.6% of C1 completed high school, compared to 37.5% of C3. Similarly, the proportion completing at least one year of tertiary education increased from 3% in C1 to 19.4% in C3. These trends are consistent across both genders, indicating that educational expansion raised schooling levels for men and women alike.

Figure 1: Educational Levels by Birth Cohorts in Brazil



Source: National Household Sample Survey (PNAD)

To test our hypothesis, we measure social origins and destinations in two ways: social classes and occupational socioeconomic status. Both are widely recognized as reliable indicators of life-long socioeconomic positions, as they tend to be more stable than other economic variables like income, particularly after the mid-thirties (Breen, 2004). Social classes group individuals with similar labor market positions and work situations. These classes are related to the assets individuals' control, such as property, control of the means of production, credentials, and skills. These factors place individuals in different economic positions and create varying opportunities for their offspring. Social class reflects a multidimensional, and not always strictly vertical, form of stratification. To operationalize it, we use a six-category version of the well-known EGP class scheme

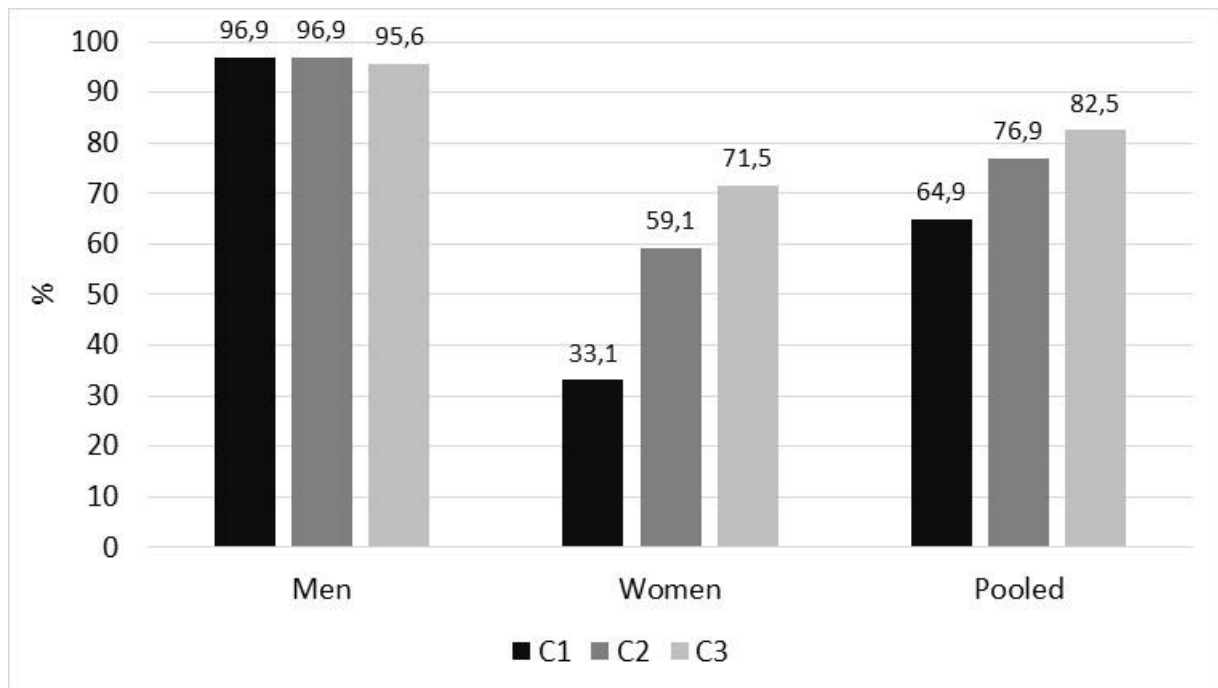
(Erikson et al., 1979).⁶ Below we list the aggregate categories we use, along with the number of the original EGP categories we combine to reduce it to a six-category scheme (in brackets):⁷

1. *Professionals and administrators* [I, II]
2. *Routine non-manual* [IIIa, IIIb]
3. *Self-employed and small employers* [IVa, IVb]
4. *Skilled manual workers* [V, VI]
5. *Unskilled manual workers* [VIIa]
6. *Rural workers* [VIIb, IVc]

In contrast, occupational status scales assume a unidimensional and vertical structure of stratification. Occupations are ranked along a continuous scale based on the prestige attributed to them, or on the average income and education levels of those employed in each occupation. In this paper, we use the International Socio-Economic Index of Occupational Status (ISEI), a widely adopted measure in social stratification research. Developed by Ganzeboom et al., 1992, the ISEI captures the extent to which occupational attributes mediate the conversion of education into income and is strongly correlated with both average income and education attainment.

Using multiple measures of stratification allows us to test whether our results are sensitive to different conceptualizations and operationalizations of social classification. Additionally, each measure requires a different statistical technique, enabling us to compare results across methods. Specifically, for each birth cohort, we estimate whether the association between origins and destinations varies significantly across educational levels. We use log-linear and log-multiplicative models for social class and traditional Ordinary Least Squares (OLS) models for ISEI, with respondents' occupation as the dependent variable. These analyses are followed by logit models to assess the likelihood of reaching non-manual classes.

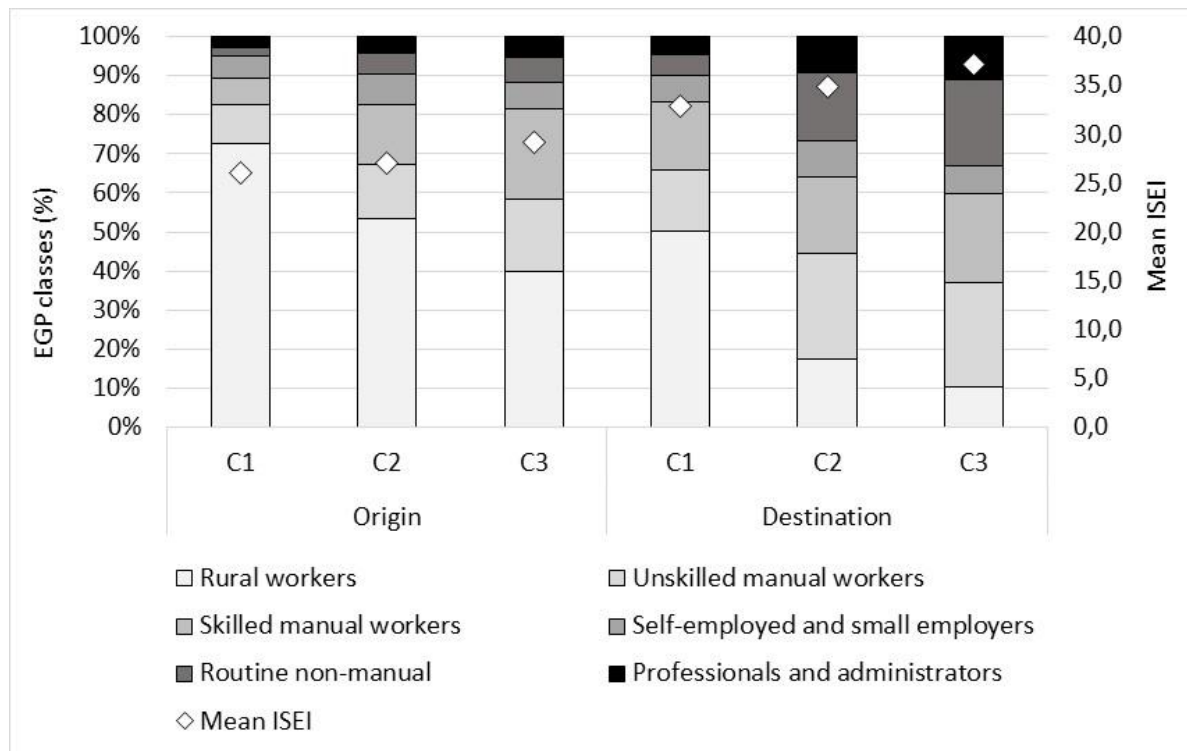
Figure 2: Labor Market Participation by Birth Cohorts in Brazil



Source: National Household Sample Survey (PNAD)

We conduct separate analyses for men and women because social stratification is deeply gendered, with the labor market being both vertically and horizontally segregated. Additionally, the gender composition of the economically active population has changed across cohorts, with more women entering the labor market over time. In C1, only 28% of the economically active population were women, increasing to 45% in C3. This shift reflects a significant rise in women's labor market participation, as shown in Figure 2: only 33.1% of women in C1 were in the labor market, compared to 71.5% in C3. However, this change requires caution when analyzing the results for women, as the observed differences might be influenced by variations in the unobserved characteristics of the women in the labor market sample. In addition to running models separately for men and women, we also analyze a pooled sample—combining men and women—to provide a more general overview of the phenomenon.

Figure 3: EGP Classes and Mean ISEI by Birth Cohorts in Brazil



Source: National Household Sample Survey (PNAD)

Figure 3 illustrates the significant transformation in Brazil's economic and occupational structure over the past decades, using EGP categories and the average ISEI for men and women in each cohort. From the middle of the 20th century until the end of the 1970`s, Brazil faced a radical process of urbanization and industrialization, which is responsible for the significant change in the class structure from the first to the third cohort - as represented by the three bars more to the right at Figure 3 - , when employment as rural workers dropped from 50% to 10%. Most of those who were migrating from rural areas – see the three bars more to the left at Figure 3 – found jobs as unskilled and skilled manual workers in the expanding cities, making those classes (manual workers) represent almost 50% of the workforce in the third cohort. This process was also accompanied by a growing service sector, in a way that, for the youngest cohort, non-manual occupations (Professionals & Administrators and Routine non-manual) correspond to approximately one third of the workforce. Nevertheless, as is typical of other late-industrialized countries, particularly in Latin America (Solís and Boado, 2016), the class structure in

Brazil is characterized by a disproportionately large share of both skilled and, especially, unskilled manual workers.

The fast urbanization and industrialization opened a large space for upward mobility (Ribeiro, 2023; Ribeiro, 2012; Torche and Ribeiro, 2010), as can be inferred from Figure 3. Nevertheless, it also boosted economic inequalities, increasing distances and hierarchies between classes (Fachelli et al., 2021; Salata, 2016). As observed by Ishida (2005), late-industrialization tend to generate greater social inequality, putting up higher barriers to social mobility.⁸ We aim to test if, in the case of Brazil, one of the most unequal countries in the world, educational expansion has been able to lower those barriers through compositional effect.

4. MAIN RESULTS

4.1 Intergenerational Mobility: The OED Associations

For each cohort, we model the three-way associations between class of origin (O), class of destination (D), and education (E). We run three different log-linear models for each cohort, separately for men, women, and the pooled sample. Model 1 is the independence model, which assumes that the class of destination is independent of the class of origin, controlling for marginal distributions. Model 2 is the constant social fluidity model, which assumes a consistent association between origins and destinations across different educational levels. Model 3 is the log-multiplicative layer effect model, also known as the uniform difference model, or Unidiff. This model, using a set of parameters (one for each level of education), allows the OD association to vary across educational levels (Powers and Xie, 2008). Model 3 is crucial for addressing the main objectives of this analysis.

Table 2 presents the fit statistics for the models across the three cohorts. We begin by discussing the results for men. As expected, for all three cohorts, Model 2 provides a much better fit compared to the independence model (Model 1). For example, in C1, it improves the fit (rG^2) by more than 96%. For C2 and C3, the fit of the constant fluidity

model is 95% and 84% better, respectively, than that of the independence model. Additionally, the BIC statistics, which accounts for model parsimony, becomes negative between Models 1 and 2, further suggesting a better fit. However, the improvement in fit between Models 2 and 3 is modest, indicating that mobility probabilities do not vary significantly across educational levels. Nevertheless, Model 3 does significantly improve the fit for C1 among men (see P values in the last column of Table 2). For C2 and C3, however, the improvement is not statistically significant.

For women, the results generally follow a similar pattern but are more complex. Model 2 significantly improves the fit for all three cohorts, as expected. However, like for men, Model 3 offers only a slight improvement in fit. This improvement is statistically significant for C2 but not for C1 or C3. The results for the pooled data are similar to those for men but are slightly less pronounced: Model 2 fits better for all three cohorts, and Model 3 fits significantly better only for the oldest cohort.

In summary, the variation in fluidity across educational levels is relevant for analyzing social mobility in Brazil, but this relevance does not apply uniformly to all cohorts. Among men, it appears most significant for C1, while for women, it seems more relevant for C2. When we combine men and women, the variation in fluidity across educational levels is relevant only for C1 and not for C2 or C3.

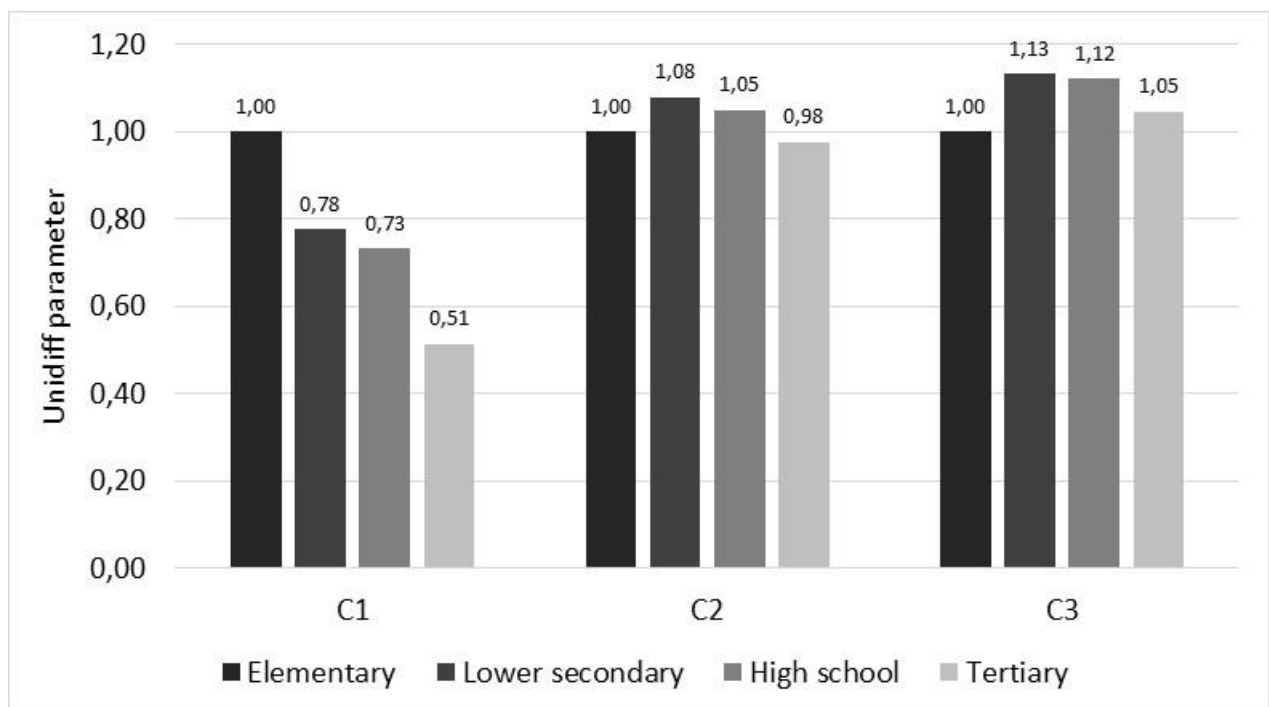
Table 2 - Fit statistics for intergenerational mobility models

Model	N	G ²	df	rG ²	P	BIC	DI	Chi2 (P-value)	
								vs. Mod 1	vs. Mod 2
Models for Men									
First cohort									
1. Independence (OE DE)	22,515	3540.0	100	0.0	0.00	2537.8	13.0		
2. Constant fluidity (OE DE OD)	22,515	122.5	75	96.5	0.00	-629.1	1.3	0.00	
3. Unidiff (OE DE β _{EOD})	22,515	99.1	72	97.2	0.02	-622.5	1.0	0.00	0.00
Second cohort									
1. Independence (OE DE)	21,295	2711.9	100	0.0	0.00	1715.3	12.3		
2. Constant fluidity (OE DE OD)	21,295	136.5	75	95.0	0.00	-611.0	2.3	0.00	
3. Unidiff (OE DE β _{EOD})	21,295	134.1	72	95.1	0.00	-583.5	2.2	0.00	0.49
Third cohort									
1. Independence (OE DE)	4,946	862.9	100	0.0	0.00	12.3	14.3		
2. Constant fluidity (OE DE OD)	4,946	137.6	75	84.1	0.00	-500.4	5.0	0.00	
3. Unidiff (OE DE β _{EOD})	4,946	136.4	72	84.2	0.00	-476.1	5.0	0.00	0.75
Models for Women									
First cohort									
1. Independence (OE DE)	9,181	1314.9	100	0.0	0.00	402.4	12.2		
2. Constant fluidity (OE DE OD)	9,181	72.0	75	94.5	0.58	-612.4	1.3	0.0	
3. Unidiff (OE DE β _{EOD})	9,181	65.6	72	95.0	0.69	-591.4	1.3	0.0	0.09
Second cohort									
1. Independence (OE DE)	14,912	999.3	100	0.0	0.00	38.3	8.4		
2. Constant fluidity (OE DE OD)	14,912	126.3	75	87.4	0.00	-594.4	2.4	0.0	
3. Unidiff (OE DE β _{EOD})	14,912	115.6	72	88.4	0.00	-576.3	2.2	0.0	0.01
Third cohort									
1. Independence (OE DE)	4,120	424.3	100	0.0	0.00	-408.1	10.3		
2. Constant fluidity (OE DE OD)	4,120	130.4	75	69.3	0.00	-493.9	4.3	0.0	
3. Unidiff (OE DE β _{EOD})	4,120	130.0	72	69.4	0.00	-469.3	4.3	0.0	0.94
Pooled models									
First cohort									
1. Independence (OE DE)	31,696	4680.7	100	0.0	0.00	3644.3	12.5		
2. Constant fluidity (OE DE OD)	31,696	139.1	75	-97.0	0.00	-638.2	1.2	0.00	
3. Unidiff (OE DE β _{EOD})	31,696	114.6	72	-97.6	0.00	-631.6	1.0	0.00	0.00
Second cohort									
1. Independence (OE DE)	36,207	3412.1	100	0.0	0.00	2362.4	10.2		
2. Constant fluidity (OE DE OD)	36,207	154.5	75	95.5	0.00	-632.8	1.8	0.00	
3. Unidiff (OE DE β _{EOD})	36,207	151	72	95.6	0.00	-604.8	1.7	0.00	0.32
Third cohort									
1. Independence (OE DE)	9,066	1103.8	100	0.0	1103.80	192.6	11.5		
2. Constant fluidity (OE DE OD)	9,066	157.4	75	85.7	157.40	-526.0	3.5	0.00	
3. Unidiff (OE DE β _{EOD})	9,066	156.7	72	85.8	156.70	-499.3	3.4	0.00	0.87

Source: National Household Sample Survey (PNAD)

To better understand these results, we examine the Unidiff parameters, which measure the strength of the origin-destination (OD) association across educational levels for each cohort. Figures 4-6 display these parameters for men, women, and the pooled data, respectively.

Figure 4: Unidiff parameters for men: variation of OD across educational levels



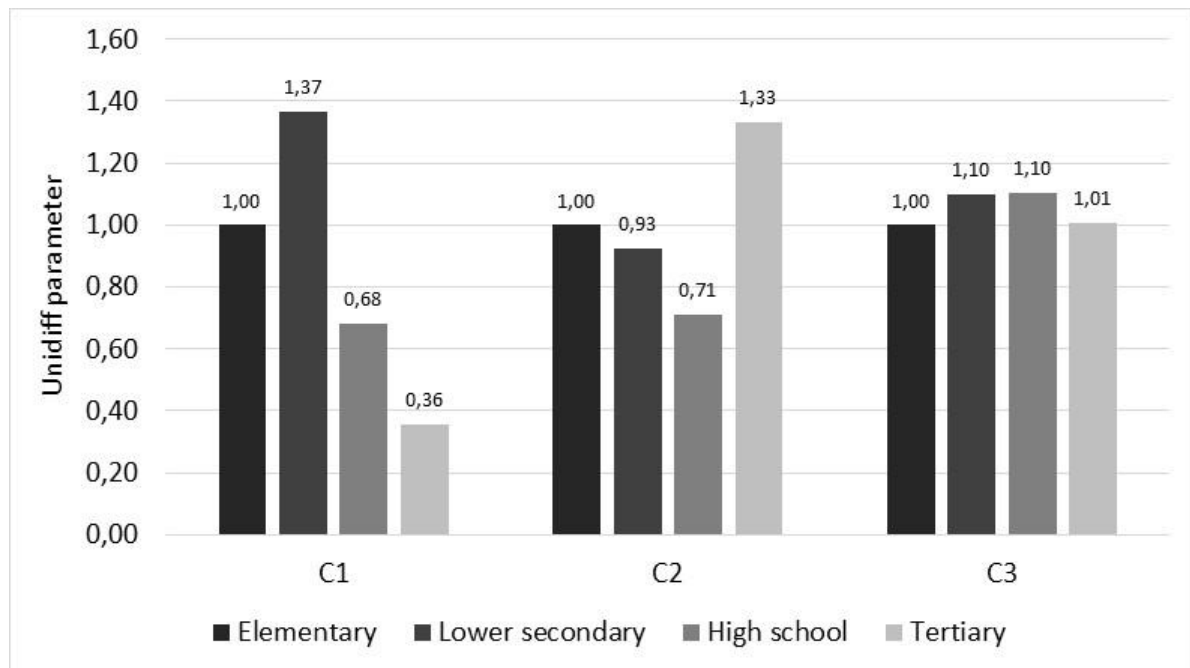
Source: National Household Sample Survey (PNAD)

The parameters are set to 1 for elementary education, which serves as a baseline. This allows us to determine whether the strength of the OD association increases or decreases at higher educational levels. For men in C1, there is a clear downward trend from lower to higher educational levels. The OD association decreases by 22% from elementary to lower secondary school and by 49% from elementary to tertiary education. In other words, for men born between 1928 and 1943, the chances of class mobility were significantly higher for those with more education.

The patterns for C2 and C3 are quite different. In these cohorts, the chances of class mobility remained more consistent across educational levels—reaching higher levels of education did not appear to weaken the OD association. This is visually represented in Figure 4, where the bars for C2 and C3 are much closer in height. If there is any significant variation in the parameters for C2 and C3, it is an increase in the Unidiff parameters from the first to the second and third educational categories, rather than a decrease.

In summary, the results for men support our two hypotheses: in the older cohort, class barriers to mobility were significantly weaker for those with higher levels of education, while the strength of the OD association remained similar across educational levels for the two younger cohorts.

Figure 5: Unidiff parameters for women: variation of OD across educational levels



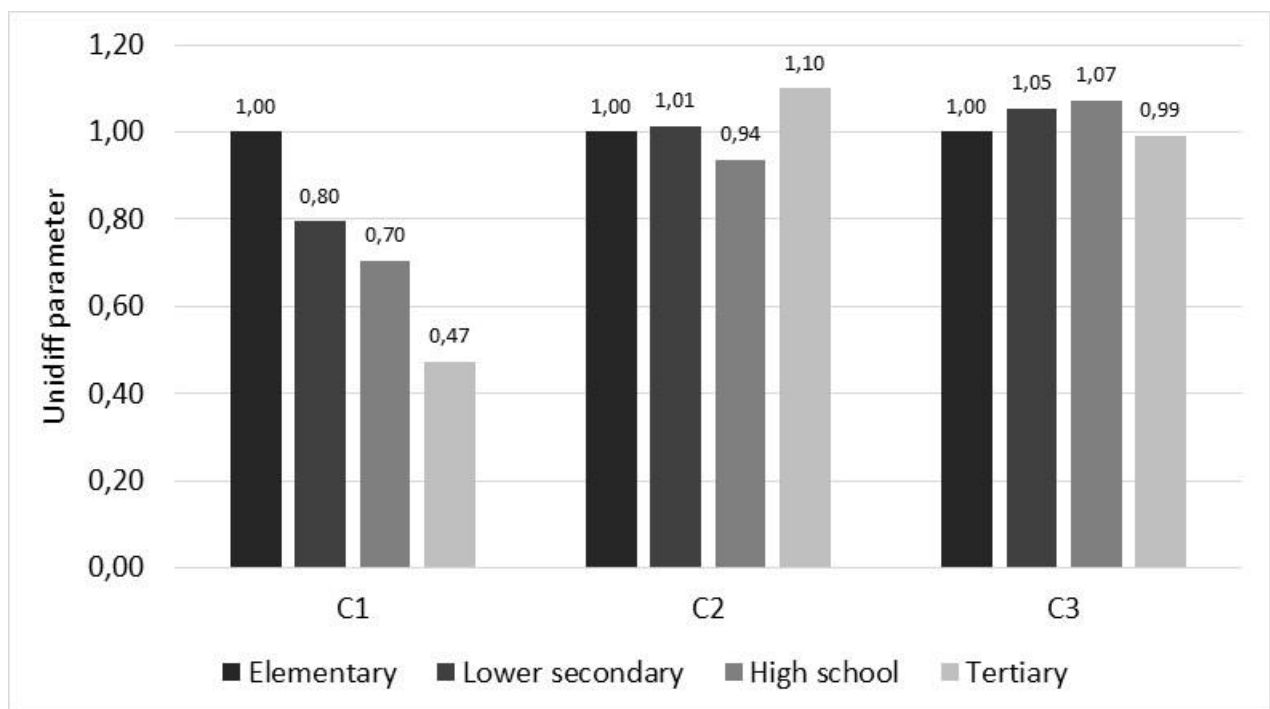
Source: National Household Sample Survey (PNAD)

For women, the results are less clear. In C1, Figure 5 shows a general downward trend in the OD association from elementary to tertiary education, except for a 37% increase at the lower secondary level. In C2, the OD association decreases by 29% from elementary to high school, but then rises sharply at the tertiary level. The results for C3 are more stable, with only slight variations in the Unidiff parameters, slightly higher at the lower secondary and high school levels.

In summary, if not for the anomalies at the lower secondary level in C1 and the tertiary level in C2, the results for women would closely resemble those for men. These inconsistencies might be due to the smaller participation of women in the labor market in the first two cohorts, which leads to a smaller sample size (see the second column in Table 2), or the more selective social mechanisms determining women's labor market

entry in older cohorts. Although these factors complicate the analysis, there is still a general trend of less variation in the OD association across educational levels among the younger cohort of women.

Figure 6: Unidiff parameters for pooled data: variation of OD across educational levels



Source: National Household Sample Survey (PNAD)

Figure 6 shows the Unidiff parameters for the pooled data. The pattern closely resembles that of men: a clear downward trend across educational levels for the first cohort, with much less variation for C2 and C3. Overall, the results align with our expectations, with only a few exceptions.

4.2 Occupational Status Models Using ISEI

For occupational status, we ran OLS models using ISEI as the dependent variable. Separate models were fitted for men, women, and the pooled data for each of the three cohorts. The independent variables include educational levels, social origin, and their interaction terms. Social origin is measured by the father's ISEI when respondents were fifteen. The main results are shown in Table 3.

Table 3 – OLS models for status transmission across educational levels

Independent variables	Men			Women			Pooled		
	C1	C2	C3	C1	C2	C3	C1	C2	C3
Education (ref: Elementary)									
Lower secondary	20.2 ***	7.7 ***	2.5	20.8 ***	8.2 ***	5.7 **	20.3 ***	7.9 ***	3.7 **
High school	30.5 ***	17.4 ***	9.8 ***	41.4 ***	24.1 ***	11.5 ***	33.9 ***	20.5 ***	10.6 ***
Tertiary	43.8 ***	32. ***	29. ***	47.7 ***	38.1 ***	30.1 ***	44.9 ***	35. ***	29.7 ***
Origin (father's isei)	0.3 ***	0.2 ***	0.2 ***	0.2 ***	0.2 ***	0.2 *	0.3 ***	0.2 ***	0.2 ***
Interaction (origin#education)									
Lower secondary	-0.18 ***	-0.08 ***	0.05	-0.09 *	-0.06 *	-0.08	-0.16 ***	-0.07 ***	0.
High school	-0.23 ***	-0.11 ***	-0.01	-0.23 ***	-0.12 ***	0.04	-0.23 ***	-0.13 ***	0.01
Tertiary	-0.24 ***	-0.08 ***	-0.05	-0.23 ***	-0.09 ***	0.07	-0.24 ***	-0.09 ***	-0.01
Constant	23.2 ***	21.7 ***	20.6 ***	19.3 ***	20.1 ***	18.7 ***	23.4 ***	21.4 ***	20.4 ***
N	23,134	21,200	4,870	9,223	14,868	4,023	32,357	36,068	8,893
R²	0.332	0.448	0.426	0.485	0.526	0.49	0.378	0.48	0.455

Source: National Household Sample Survey (PNAD)

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3 reveals two key findings: first, the strong impact of education on ISEI, and second, the significant decline in this impact from C1 to C3 for men, women, and pooled data. This decline is linked to the educational expansion in Brazil during the 1980s and early 1990s. Here, we focus on the interaction between education and social origin to understand how social origin effects on occupational status vary by educational level.

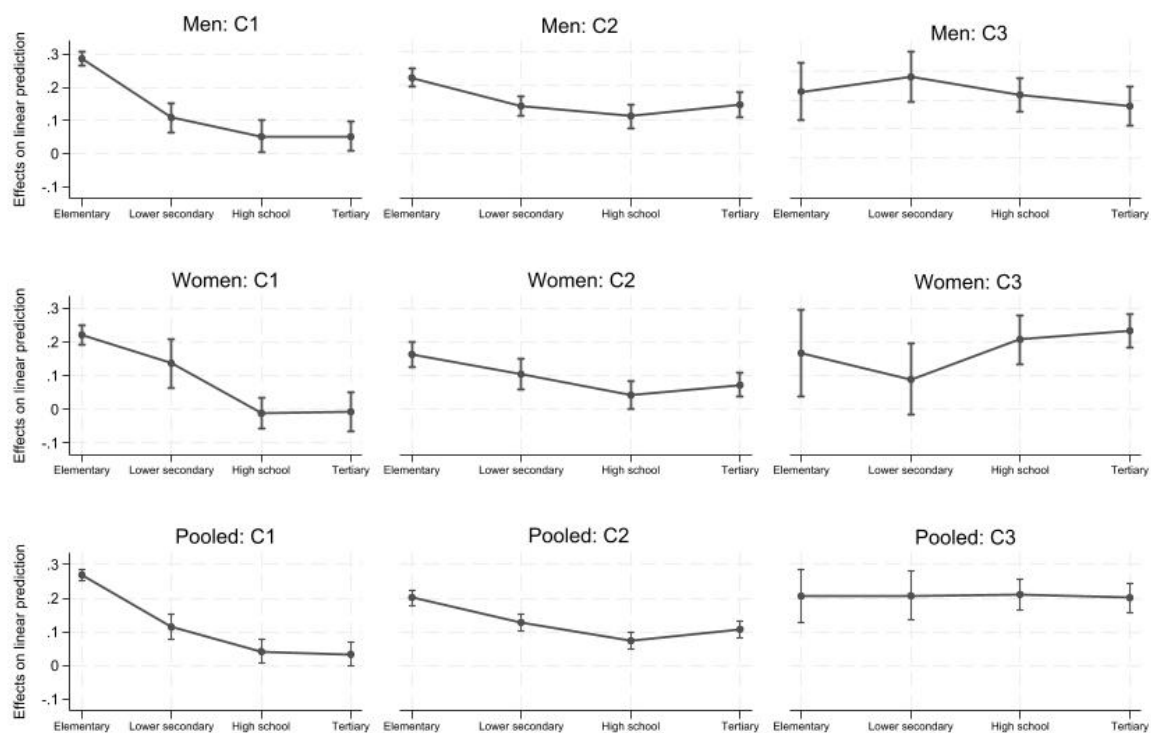
To simplify interpretation, we calculated the average marginal effects (AME) of social origin on respondents' ISEI. AME represents the expected change in a respondent's ISEI for each unit change in their father's ISEI (Powers and Xie, 2008). Since we used OLS models, the results match the sum of the coefficients for social origin and its interaction term. Figure 7 provides the details.

The results are clear for both genders and pooled data. In C1, there is a substantial and statistically significant decrease in the effect of social origin as education increases, whereas in C3 there is no clear pattern or significant decrease. C2 shows a moderate decline in the effect of social origin, but it is not as pronounced as in the oldest cohort. Notably, for C1, the effect of social origin among those who entered university is statistically close to zero for men and zero for women and the pooled model. This suggests that, for men and women born between 1928 and 1943 who achieved higher education, social origin had little to no influence on their occupational status—a scenario ideal for educational reformers. The same applies to those who completed high

school, indicating that the reduction in social origin effects is linked to achieving higher education levels, not just a tertiary degree.

However, for the youngest cohort, born after Brazil's educational expansion, attaining higher education no longer significantly reduces the effect of social origin on occupational status. In summary, the OLS model results for ISEI support our two hypotheses for both sexes.

Figure 7: Average Marginal Effects of Father's ISEI on Current ISEI Across Educational Levels



Source: National Household Sample Survey (PNAD).

4.3 Access to non-manual occupational classes

From the intergenerational social mobility literature, one might expect a clear compositional effect at the top of the class structure. Obtaining a higher qualification is often seen as the best way to break away from a humble social origin. For example, the

social connections made at university, the habits and customs developed during those years, and the strong signal a degree sends to employers should all help individuals enter non-manual classes, regardless of their social origin. In this section, we test the hypothesis that attaining higher degrees weakens the effect of social origin on the chances of reaching non-manual classes.

As in the social mobility tables, we use the EGP scheme to measure both the respondent's and their father's social class, but we combine categories I (Professionals and administrators) and II (Routine non-manual workers) as non-manual. Together, these categories represented 26.8% of the working population in C3 among men and 44.4% among women. We combine Classes I and II for two main reasons. First, their mean ISEI score is significantly higher than that of the manual classes (see Figure 4A). Second, there is a strong divide between manual and non-manual classes in Brazil, making entry into the non-manual classes a key step for improving status, income, and life opportunities (Pastore and Silva, 2000). Therefore, these classes represent the most privileged social positions in Brazil.⁹

Table 4 – Logit models for the chances of reaching non-manual occupational classes

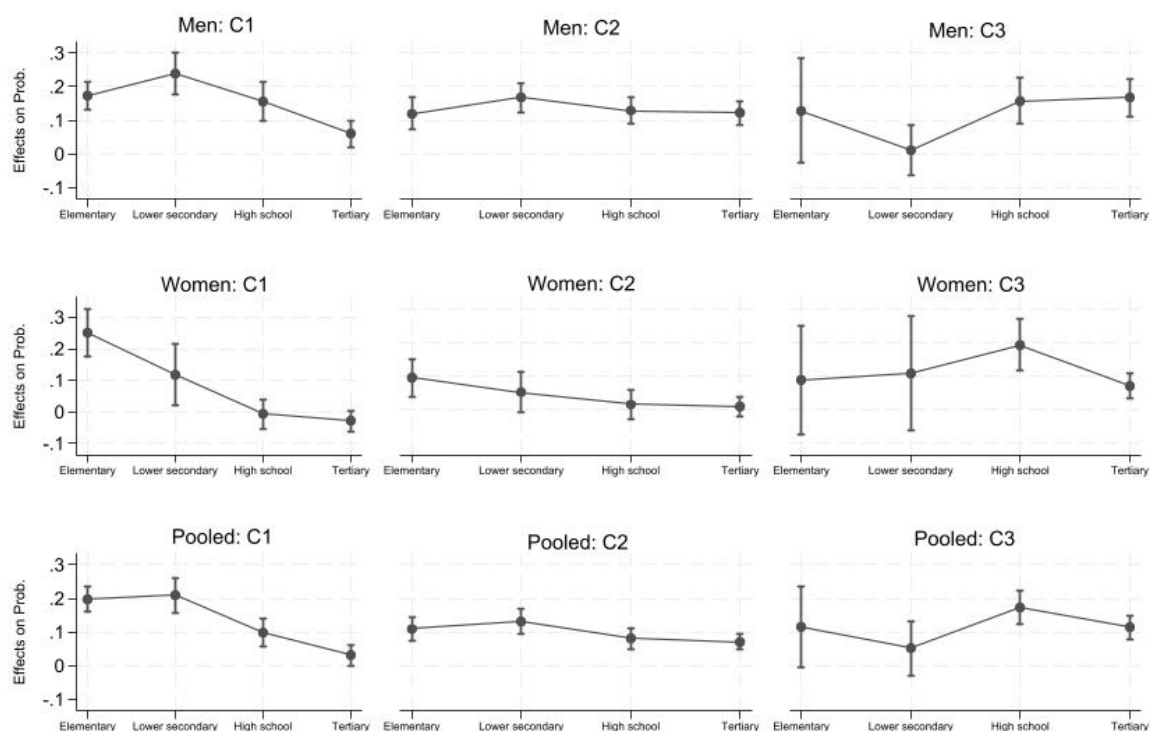
Independent variables	Men			Women			Pooled		
	C1	C2	C3	C1	C2	C3	C1	C2	C3
Education (ref: Elementary)									
<i>Lower secondary</i>	2.39 ***	1.1 ***	0.84 ***	2.88 ***	1.42 ***	1.02 ***	2.53 ***	1.27 ***	0.89 ***
<i>High school</i>	3.53 ***	2.31 ***	1.52 ***	5.28 ***	3.16 ***	2.43 ***	3.96 ***	2.71 ***	1.93 ***
<i>Tertiary</i>	4.56 ***	3.5 ***	3.2 ***	7.66 ***	4.37 ***	4.43 ***	4.92 ***	3.88 ***	3.76 ***
Origin (father on top classes)	1.62 ***	1.3 ***	1.32 *	1.83 ***	0.97 ***	1.07	1.7 ***	1.17 ***	1.22 *
Interaction (origin#education)									
<i>Lower secondary</i>	-0.65 **	-0.32	-1.22	-1.32 ***	-0.7 *	-0.37	-0.84 ***	-0.44 *	-0.82
<i>High school</i>	-0.78 **	-0.77 ***	-0.55	-1.94 ***	-0.9 **	-0.29	-1.04 ***	-0.84 ***	-0.46
<i>Tertiary</i>	-1.04 ***	-0.7 **	-0.53	-3.57 **	-0.88 **	-0.46	-1.32 ***	-0.75 ***	-0.55
Constant	-2.83 ***	-2.87 ***	-2.79 ***	-2.58 ***	-2.59 ***	-2.85 ***	-2.92 ***	-3.1 ***	-3.15 ***
N	22,515	21,295	4,946	9,181	14,912	4,120	31,696	36,207	9,066
χ²	3,710	3,277	678	1,463	3,531	792	5,655	6,758	1,553
Model DF	7	7	7	7	7	7	8	8	8
Pseudo R-squared	0.334	0.242	0.202	0.426	0.344	0.2902	0.361	0.297	0.261

Source: National Household Sample Survey (PNAD)

* $p < .05$; ** $p < .01$; *** $p < .001$

We estimated nine logit models to assess the chances of reaching non-manual classes, using education, social origin, and their interaction terms as independent variables. Table 4 shows the coefficients for each cohort for men, women, and pooled data. As expected, the chances of entering non-manual classes are much higher for those with more education and a more advantaged social origin. To examine whether the influence of social origin decreases with higher education levels, and how this compositional effect varies across cohorts, Figure 8 presents the average marginal effects.

Figure 8: Average Marginal Effects of Social Origin on The Probability of Reaching non-manual classes across Educational Levels



Source: National Household Sample Survey (PNAD)

For both men and women in C1, there is a substantial decrease in the effect of social origin as educational levels increase. For men, the social origin effects on the probability of entering non-manual classes range from 0.12 to 0.22 at the elementary level, dropping to 0.013 to 0.10 at higher educational levels. For women, the corresponding range is 0.16 to 0.34 at the elementary level, decreasing to -0.01 to 0.01 at the tertiary level. In other words, these effects are significantly weaker for the more highly educated in C1. The results for the pooled sample, shown at the bottom of Figure 8, follow the same trend.

However, the pattern changes in C2. For men, the downward trend disappears, while for women, the decrease is much weaker and non-significant—similar to the pooled models. Finally, in C3, the results resemble a ‘trendless fluctuation’ for men, women, and pooled data. Thus, higher educational levels were relevant for reducing social origin effects on entering non-manual classes in C1 but not in C2 or C3, confirming both of our hypotheses.

5. DISCUSSION AND CONCLUSION

Previous research on social mobility in Brazil are dubious when it comes to “compositional effect”. On the one hand, some papers argue that educational expansion did not lead to a decline in the direct effect of social origins on destinations (Ribeiro, 2012; Torche and Ribeiro, 2010). On the other hand, a more recent paper (Ribeiro, 2023) states that compositional effect has been vital to increasing social mobility over younger cohorts. This paper contributes to the ongoing debate by presenting findings that challenge more optimistic perspectives. In doing so, it aligns more closely with research from other Latin-American countries, such as Argentina and Uruguay (Jorrat et al., 2024; Boado and Fachelli, 2020), rather than with studies based on European Societies and the United States (Breen and Muller, 2020).

Our findings show that for Brazilian men and women born before the major educational expansion, attaining higher educational levels did appear to weaken the influence of social origins on their occupational mobility. Completing high school was enough to significantly improve mobility chances and reduce the impact of social origins and the likelihood of reaching higher social classes. At first glance, educational reforms seemed to fulfill the promise of making Brazilian society more “meritocratic”.

However, the situation for younger cohorts is less promising. Among those born between 1951 and 1966, and especially those born between 1969 and 1984, the compositional effect of education on the strength of the association between social origin and

destinations was much weaker or even absent. This pattern holds true regardless of how class and status are measured. For these younger cohorts, higher education was no longer an effective means of breaking away from humble origins and increasing mobility chances.

There is a reasonable explanation for these findings, based on the selectivity hypothesis (Karlson, 2019; Buis, 2011; Holm and Jaeger, 2011; Cameron and Heckman, 1998). The weaker origin-destination association observed among the higher educated in the oldest cohort likely reflects a process of positive selection rather than a direct causal relationship between education and mobility. Those who entered university in this cohort were likely more positively selected for socially valued skills, abilities, and motivation, making them more prone to mobility (Zhou, 2019). As the educational system expanded, this selection process became less discerning, leading to a more heterogeneous pool of graduates in terms of these unmeasured characteristics, which helps explain why the compositional effect diminished.¹⁰

The top 3% of high educational achievers in the oldest cohort also experienced labor market benefits, as the scarcity of their credentials sent a strong signal to employers, effectively overshadowing their social backgrounds. Over the last decades, however, Brazilian occupational structure has been relatively stable when compared to the educational distribution of its population. And, as a result, overeducation has been growing in the country (Ribeiro, 2017). Thus, for younger cohorts, with a greater proportion of the population completing high school or attending universities, the power of these credentials to signal desirable cognitive and non-cognitive abilities or trainability to employers, and this way mask social origins, might have significantly diminished (Thurow, 1975; Spence, 1973).

Besides, the expansion of tertiary education in Brazil has been achieved through the diversification of fields of study alongside a growing participation of low-quality private sector institutions (Carvalhoes and Ribeiro, 2019). Therefore, it is possible that not only selectivity and overeducation help us to explain decreasing compositional effect over cohorts. Although more people are getting into the tertiary degree, the decline of its

quality, along with the larger presence of less prestigious fields of study within it, might also be an important ingredient explaining our results.

Consequently, merely expanding access to education does not seem sufficient to weaken the direct relationship between social origins and occupational outcomes in Brazil, contrary to the optimistic scenarios often found in studies of more developed societies (Torche, 2011; Breen, 2010; Breen and Jonsson, 2007; Breen and Luijkx, 2007; Vallet, 2004; Hout, 1984, 1988). In fact, recent research has shown that educational expansion in Brazil has not reduced the impact of social origin on status attainment (Salata and Cheung, 2022). By examining the compositional effect, this paper not only contributes to the field of sociology of education, it also has substantial policy implications, as the evidence raises significant doubts about Brazil's reliance on educational expansion as a means to promote social mobility.

Education is a positional good (Hirsch, 1978), its value is relative to the level of education attained by others. In this context, our position in the educational hierarchy matters more than the absolute level of education we possess (Shavit and Park, 2016). As education becomes more widespread, the returns to a given degree in the labor market decline (Salata, 2019; Bol, 2015). This paper argues that education also functions as a positional good in terms of its compositional effect: as more people achieve higher degrees, the capacity of educational qualifications to reduce the influence of social origins weakens. Thus, policy efforts aimed at fostering a more equitable society in Brazil must extend beyond educational expansion.

Despite the remarkable expansion of the educational system over the last decades, which guaranteed that almost all 7-14 years old youths were enrolled, Brazil still faces a huge challenge when it comes to the quality of elementary education (Sasaki et al., 2018). When analysing results from the PISA¹¹ test, we find that Brazilian 15-years-old students are still very far behind the OECD¹² average in Reading, Mathematics and Science. Worse still, after 2009, in all three subjects, only small and mostly non-significant fluctuations were observed. Besides, as mentioned above, in tertiary education expansion was accompanied by the increasing participation of low-quality

institutions and less prestigious courses. Thus, the results we gather endorses the necessity for expansion to be carried out along with more effective policies addressing the quality of education. Otherwise, Brazilian society will be at risk of distributing more credentials without necessarily improving people`s lives.

It is important to emphasize, however, that education holds intrinsic value. Beyond comparisons with others, individuals with more education benefit from enhanced critical thinking, improved reasoning skills, a greater sense of self-fulfilment, and other personal advantages (Bills, 2016). From this perspective, where education is considered a consumption good, having more is always better. However, when viewed as an investment aimed at achieving better labor market outcomes, its value depends significantly on the educational levels of others (Bukodi and Goldthorpe, 2016). Consequently, contrary to more optimistic viewpoints, merely expanding access to education may not be sufficient to reduce inequality (Brown, Lauder and Cheung, 2020; Hout and DiPrete, 2006), despite the undeniable benefits of having a better-educated population. In this context, our findings raise concerns about the effectiveness of large-scale educational expansion in addressing inequalities of opportunity in Brazil.

Data Availability Statements

The data used in this study are publicly available and can be freely accessed at the Brazilian Institute of Geography and Statistics (IBGE) website: <https://www.ibge.gov.br/en/statistics/downloads-statistics.html>. Additionally, the authors are available to provide the data upon reasonable request

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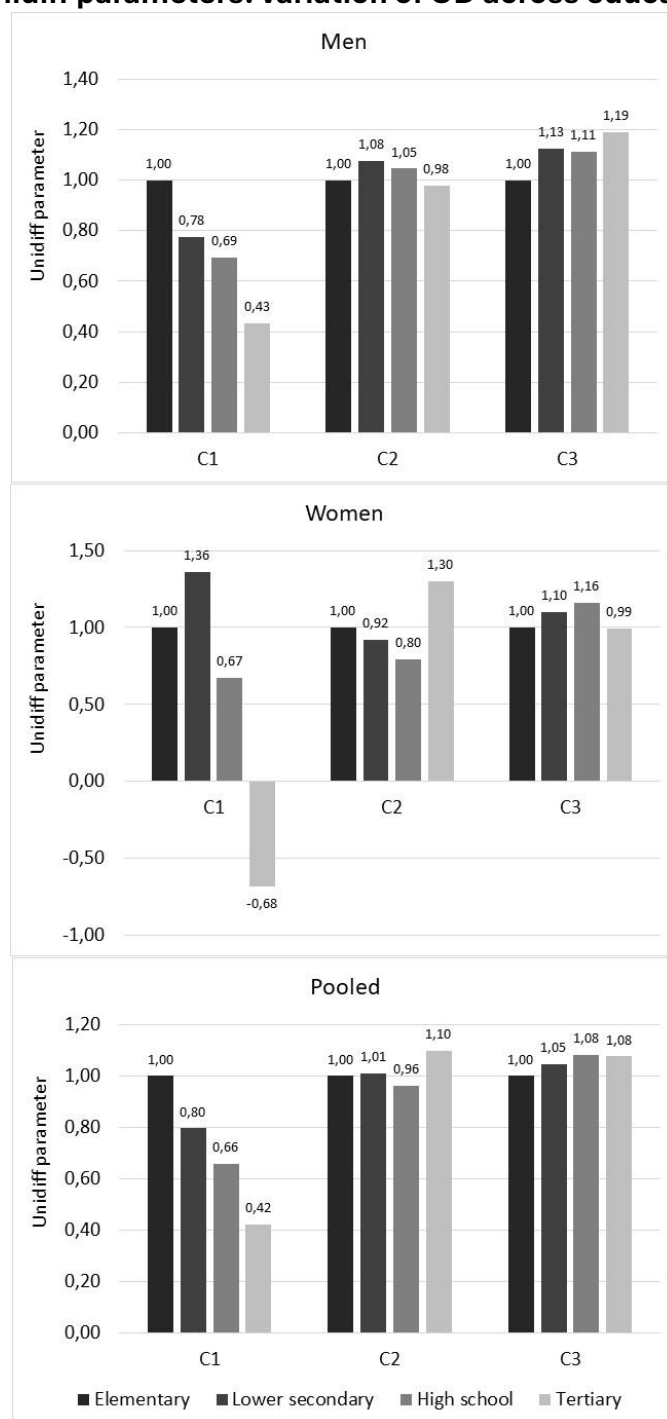
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ATTACHMENTS

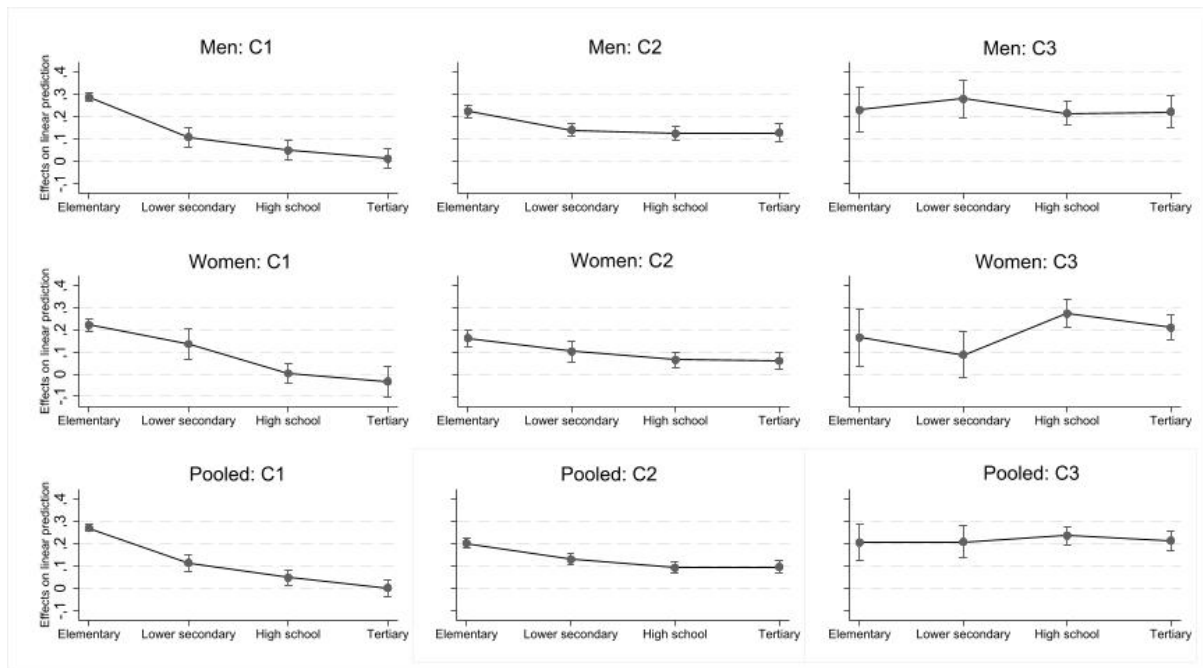
Figure 1A: Unidiff parameters: variation of OD across educational levels*



Source: National Household Sample Survey (PNAD)

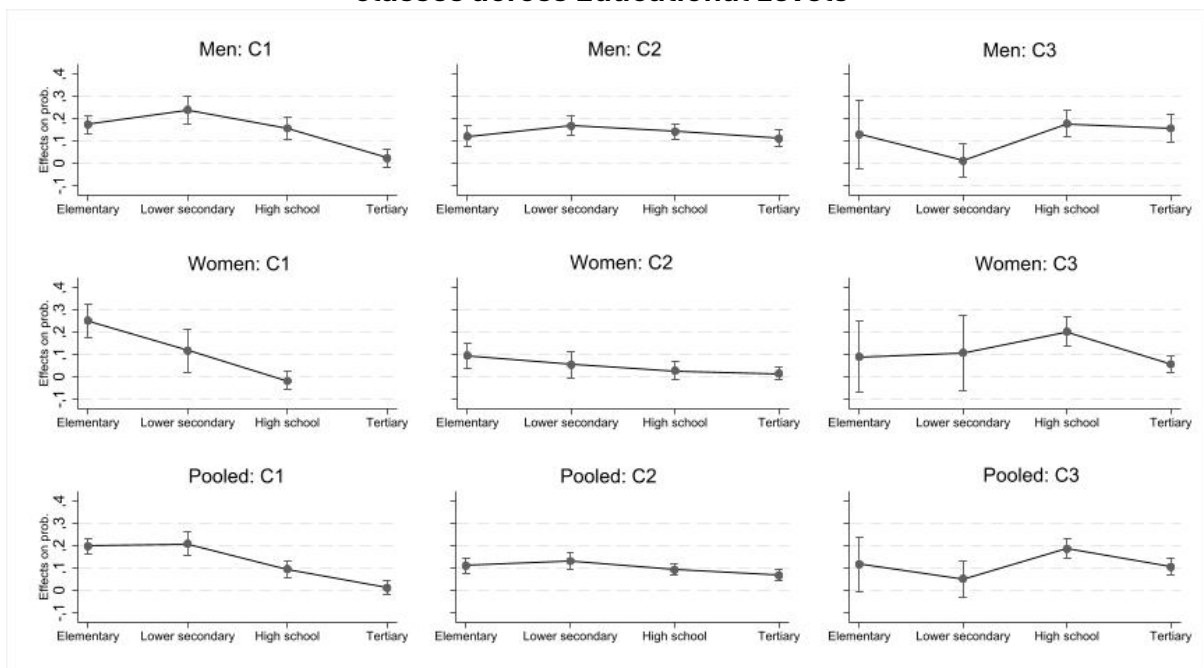
Note(*): tertiary education measured as completed.

Figure 2A: Average Marginal Effects of Father`s ISEI on Current ISEI Across Educational Levels*



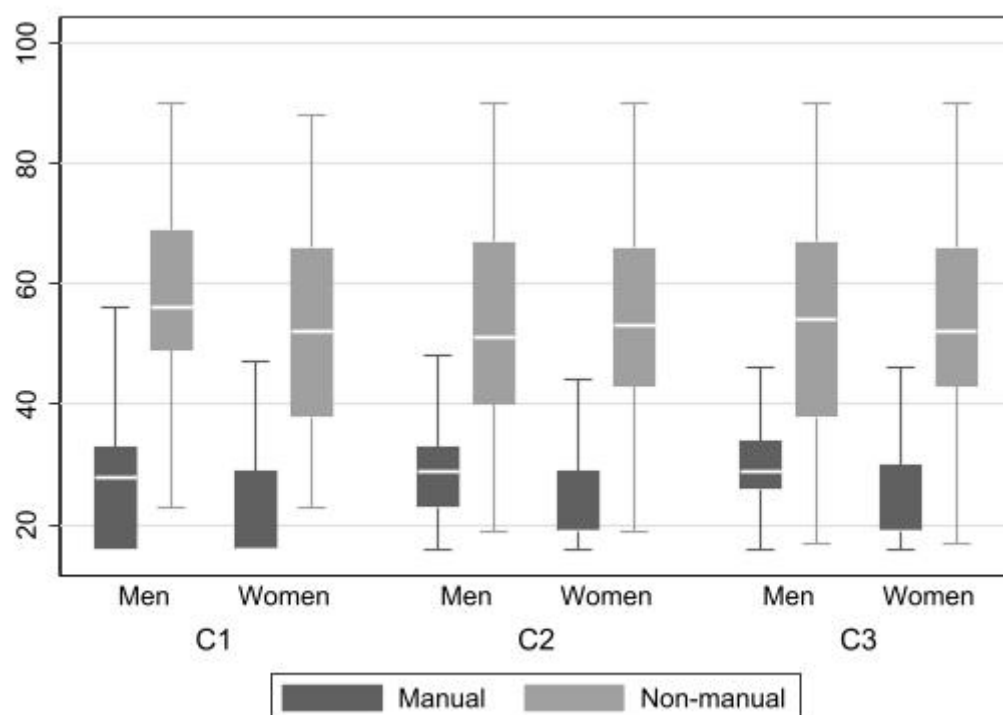
Source: National Household Sample Survey (PNAD)
Note(*): tertiary education measured as completed.

Figure 3A: Average Marginal Effects of Social Origin on The Probability of Reaching non-manual classes across Educational Levels*



Source: National Household Sample Survey (PNAD)
Note(*): tertiary education measured as completed.

Figure 4A: ISEI, by Manual and Non-Manual Class Categories



Source: National Household Sample Survey (PNAD)

ENDNOTES

¹ Departing from another theoretical perspective, credential inflation and the devaluation of educational credentials were also identified and analysed by Bourdieu and Passeron (1970).

² Despite regional disparities in quality, the organizational structure of the Brazilian education system - in terms of levels and grades - is well standardized. In terms of curricular content, efforts to ensure greater standardization have been intensified since

the 1960s, which in recent years culminated in the National Common Curricular Base (BNCC), approved in 2017.

³ The sample selection bias has been deeply debated in a special issue on unobserved heterogeneity in educational transition models, published at the *Research on Social Stratification and Mobility* (Buis, 2011).

⁴ We conducted sensitivity tests, and we found that the main results and conclusions would be the same if we used other age ranges (such as 35-50 and 40-55).

⁵ We also tested alternative models using tertiary attainment instead of attendance. The results remained consistent and the overall conclusions were unchanged, as illustrated in Figures 1A, 2A and 3A. Given the low prevalence of tertiary degrees among older cohorts in Brazil, we opted to include individuals who completed at least one year of tertiary education within this category.

⁶ To create the class categories, we used information on respondent`s (and their father`s) occupational classification. The classifications used in the PNADs are distinct but similar to the International Standard Classification of Occupations (ISCO), which permits its aggregation into the EGP categories.

⁷ The classification we apply here is identical to the one used by Ribeiro (2023).

⁸ This relationship, between economic inequality and class mobility, was also observed by Hertel and Groh-Samberg (2019).

⁹ While some non-manual occupations have undergone proletarianisation in recent decades, it is important to note that in Brazil – as in other Latin-American countries - the proportion of the labour force within non-manual classes remains relatively small. Thus, accessing non-manual occupations continues to represent a significant milestone, typically associated with, greater job stability and better working conditions.

¹⁰ It is important to stress that the results we gathered don`t necessarily mean that the equalization hypothesis is either correct or incorrect in other historical and social contexts - as can be inferred from Breen and Müller (2020).

¹¹ Programme for International Student Assessment.

¹² Organisation for Economic Co-operation and Development.