



Social origin and secondary labour market entry: Ascriptive and institutional inequalities over the early career in Italy and Germany

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ABSTRACT

This paper investigates how labour market flexibilisation strengthens the role of social origin in conditioning inter- and intragenerational mobility chances. Drawing on the upper-class aversion to downward mobility, we explore mechanisms through which advantaged social origin directly compensate for the socioeconomic penalty that arises from initial contractual instability over the career. Conversely, we examine whether a bad start for less-socially privileged entrants represents a source of cumulative disadvantage. The Italian and German labour markets are compared since optimal national cases of labour market duality and rigidity yet differing in their educational and labour market institutions and mobility regimes. We perform growth curves under a matching framework to counterfactually compare the career development of service- and working-class entrants in the two countries, who began with similar socioeconomic status. We reveal that social origin contributes to unequal trajectory developments in both contexts, especially for the low- and middle-educated. No significant DESO over the career emerges among degree holders in either country. Finally, attending university entirely reduces the flexibility penalty in Italy, whereas for German graduates, initial instability serves as a gateway to more prestigious jobs.

1. Introduction

Studies on intergenerational social mobility have long been concerned with providing a sophisticated description of social-mobility rates, patterns, and variations among Western countries while have paid less attention to the mechanisms that generate mobility, with the mediating role of education being the main exception (Breen & Müller, 2020; Bukodi et al., 2016; Erikson et al., 1992). A second, less-common stream of research has focused on the structural and institutional determinants at the basis of different patterns and outcomes of social mobility, amongst which demographic variations and labour market reforms have been deemed to be the most influential (e.g. Becker et al., 2018; DiPrete, 2020; Esping-Andersen, 2015; Kalleberg & Mouw, 2018; Lersch et al., 2020; Yaish & Andersen, 2012). However, such factors have never benefited from a central position in the stratification debate.

More in detail, to the best of our knowledge, analyses and research papers focusing on the *interaction* between persistent ascriptive inequalities in mobility opportunities (the Direct Effect of Social Origin) and the restructuring of employment relations in post-Fordist labour markets (the effect of dual-EPL – Employment Protection Legislation – reforms (Bentolila et al., 2019)) is essentially missing. This lack of knowledge is problematic because the process of labour market flexibilisation and further dualisation has led to additional inequalities in the labour market that may have strengthened the role of social origin in conditioning inter- and intragenerational mobility patterns.

Western countries have reacted to the *Euroscclerosis*¹, the increasing global competition, and the rapid technological change by pursuing labour market flexibilisation aimed at optimising efficiency, tackling unemployment, and sustaining the need for quick size- and skills adjustments by lowering the adjustment costs (Breen, 1997;

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¹ Since the 80s, the combination of stringent regulation and the rising structural unemployment – also driven by the exogenous price shocks – marked a phase known as *Euroscclerosis* (Blanchard & Summers, 1986). The growing amount of unemployment hardly absorbable in rigid labour markets has challenged the widespread model of stable, full-time, full-employment with full-welfare entailments, which characterized the *Fordist golden age* (Glyn et al., 1988). Institutional rigidity and excessively high labour costs were blamed to constitute structural frictions shifting the Beveridge Curve towards higher equilibrium unemployment (Barbieri & Cutuli, 2016; Daly et al., 2012), thereby increasing inefficiency and slowing down the productivity growth (Layard et al., 2005; Nickell, 1997; Saint-Paul, 1996a, 1996b).

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Esping-Andersen & Regini, 2000; van Eyck, 2003). European Continental countries have leveraged job security by introducing fixed-term and other atypical employment contracts (DiPrete et al., 2006) thus opting for dual-EPL (Employment Protection Legislation) reforms (Bentolila et al., 2019). Scholars have paid particular attention to the Mediterranean and Continental contexts since their strict protection against dismissals for permanent employment against lower labour protection for flexible forms of employment, originated a process of labour market dualisation, targeted either at youngsters or at unskilled workers depending on the characteristics of the national production regime (Barbieri, 2009; Biegert, 2019; Kahn, 2010, 2012; King & Rueda, 2008; Palier, 2010; Palier & Thelen, 2010).

This targeting on less protected social groups has cumulated with the classic drivers of social stratification, among which social origin takes the lion's share (Barbieri & Cutuli, 2016; Blossfeld, 2008).

Against this backdrop, we focus on the labour market entry process. Mobility studies point to the early career as the life-course phase in which initial negative experiences may establish long-lasting career disparities, especially in two-tiered labour markets (Barbieri et al., 2019; Polavieja, 2003, 2005), and ascriptive differences greatly influence career prospects (Barone et al., 2011; Manzoni et al., 2014). In particular, class of origin affects individuals' occupational sorting and trajectories, even net of the achieved level of education (Bernardi & Ballarino, 2016). Upper classes influence their offsprings' opportunities either by compensating potential initial disadvantages (Bernardi, 2014; Breen & Goldthorpe, 1997; Goldthorpe, 2007) or by boosting status, earnings, and occupational prestige (Friedman & Laurison, 2020), thereby leading to a process of cumulative advantage which, across work career development, further boosts inequality (DiPrete & Eirich, 2006).

We know from recent evidence that despite the progressive labour market flexibilisation, ascriptive inequality affecting early career trajectories persists across cohorts and over periods (Passaretta et al., 2018). Such evidence challenges the idea that increasing flexibility paves the way for a more meritocratic job allocation with a decreasing direct effect of social origin.² To the best of our knowledge, no systematic attempt to focus – in a comparative perspective – on the potential combination of ascriptive and institutionally driven inequalities in shaping labour market disparities has been undertaken, yet. We aim at filling this gap, contributing to both literature on labour market dualisation and social stratification: By bringing together these perspectives, we empirically ask whether advantaged social origin can directly (net of the achieved level of education) compensate for a “*bad labour market entry*” over the early career and whether initial instability for less-socially privileged entrants represents a source of cumulative disadvantage. We do so by following the career development of Italian and German labour market youths over their first ten years after labour market entry and analysing the occupational achievement of stable and unstable entrants. We test the direct effect of the class of origin specifically over the career development (thus after the initial sorting) by comparing the career trajectories of labour market entrants from service and working-class families who counterfactually started their work career with the same occupational status but differ on their employment contract.

As a further step, we investigate whether the ascriptive-institutional inequality is moderated by the achieved level of education. Achieving tertiary education is expected to pave the way to a more meritocratic and *origin-free* labour market (Hout, 1988; Zhou, 2019) for both stable and unstable entrants – even more so in the presence of unrelenting technological progress, which increases (high) educational payoff and (high) skill remuneration (Autor, 2015; Autor et al., 2003). Conversely, the combination of contractual instability, less-prestigious parental

background, and low level of education is expected to lead to further disadvantages.

In the following, Section 2 addresses the contextual influence of the Italian and German institutional and structural features, two different “institutional settlements” (Goldthorpe, 1984) ideal typically identifiable as the Dualist and the Corporatist, focusing on educational models, labour market segmentation, and mobility structures.

Then, Subsection 2.1 reflects on the different occupational scenarios associated with flexible starts (*integration vs entrapment*). Subsequently, Subsection 2.2 reviews the mechanisms through which social origin directly compensate for secondary labour market entry. In Subsection 2.3 we discuss the moderating role of human capital in individuals' early career paths. Section 3 discusses data and methods; Section 4 presents the empirical results, while Section 5 presents our conclusions.

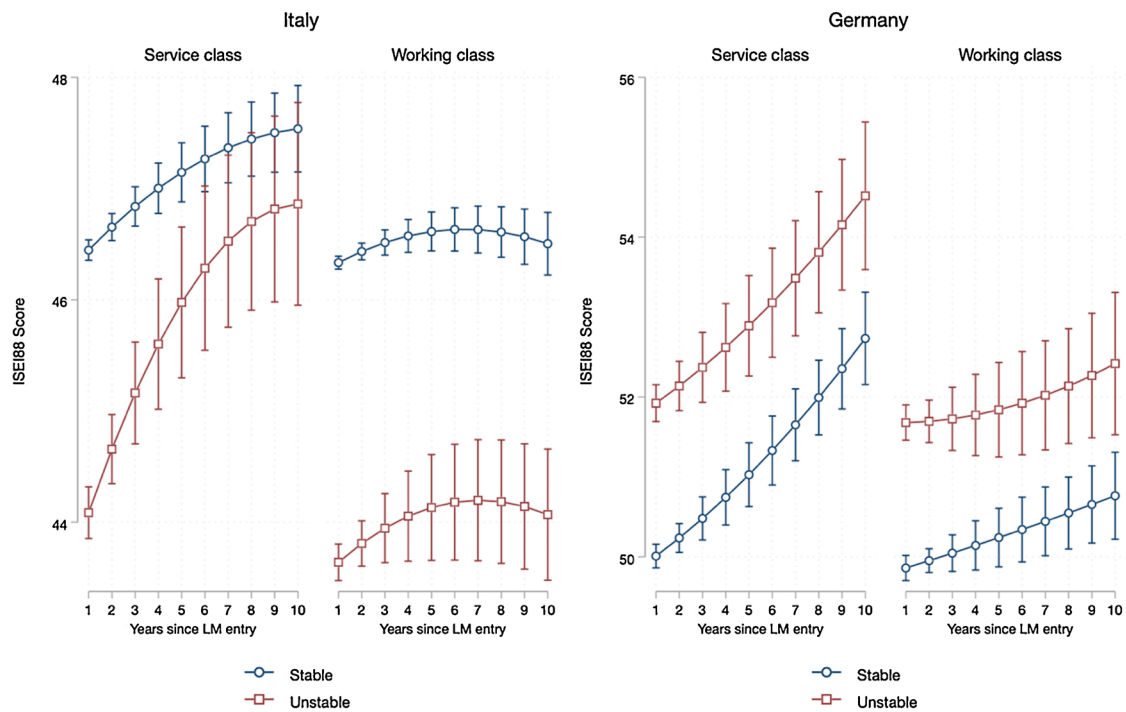
2. Institutionally originated inequalities, ascriptive disparities, and their interaction in Italy and Germany

We investigate the relation between institutional and ascriptive inequalities in Italy and Germany. These two countries share a marked labour market dualisation and undertook a similar process of deregulation ‘at the margin’ but differ on other labour market and educational institutions that socioeconomic literature signals as responsible for different occupational outcomes. Italy and Germany typify the Dualist and the Corporatist regimes, different in terms of welfare states, labour policies, market economies and skill systems (Estevez-Abe et al., 2001; Goldthorpe, 1984) as we expect these macro, institutional characteristics, to be at the basis of our empirical findings. Nevertheless, we take the institutional differences as contextual background scenarios, as we mainly aim at providing a so far absent comparative contribution in the stratification literature.

Concerning institutionally originated labour market inequalities, scholars generally blame the rigidity and segmentation of EU national labour markets for their degree of dualism and for further increasing penalties in the secondary labour market (Barbieri et al., 2019; Barbieri & Cutuli, 2016; Bentolila et al., 2019; Gebel & Giesecke, 2016; OECD, 2019). Specifically, two groups are particularly at risk of occupational precarity: young labour market entrants in Italy and less-skilled workers in Germany (Barbieri, 2009). The former lack work experience, seniority, and networks, which prevents them from accessing secure and well-paid jobs. Low-skilled workers are hardly attractive to post-Fordist, technologically non-routine tasks (Oesch & Menés, 2011). Employers therefore prefer to hire them via flexible arrangements that allow for longer trial and easier dismissal when fixed-term contracts expire. In line with this understanding, the literature generally associates Italy with the *entrapment* scenario (Barbieri & Scherer, 2009; Barbieri et al., 2019), whereas the situation in Germany appears more fluid, with higher rates of secondary-to-primary labour market flows and fewer unemployment risks after a flexible career start (Eichhorst, 2014; McGinnity et al., 2005).

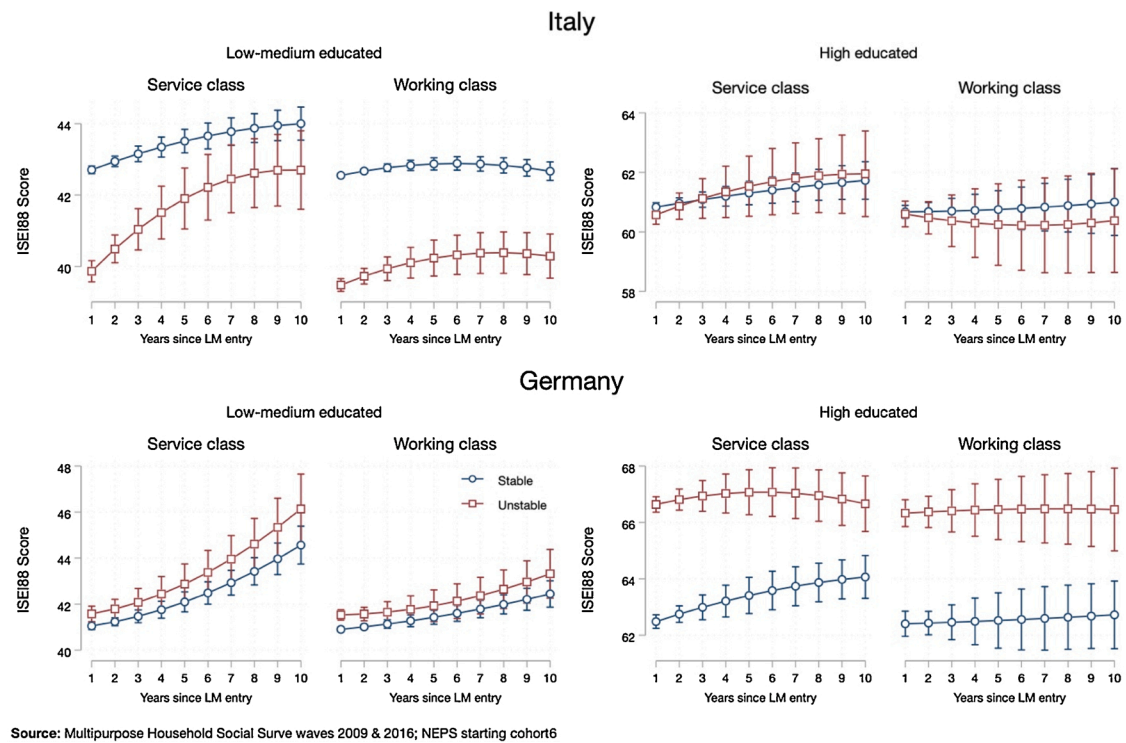
Additionally, the two countries display major differences in terms of occupational achievement and intragenerational mobility as an outcome of the interaction between social background and labour market dynamics. Italy represents a *firm-based skill regime* (Estevez-Abe et al., 2001), characterised by low social fluidity (Barone et al., 2011) and a strong and persistent effect of the class of origin in determining mobility chances (Bloise & Raitano, 2019; Breen & Müller, 2020). In this context, structural and institutional constraints hinder or limit career progression. Scholars point to strictly regulated labour- and product markets and to the dominant presence of small- and micro-firms opting for competitive strategies based on labour-cost reduction, which discourages workforce training (Cutuli & Guetto, 2013; Gangl, 2003; Konings & Vanormelingen, 2015; Müller, 2005; Nicoletti et al., 1999) or limit training to strict on-the-job essential instruction. Moreover, the Italian educational and skill-formation system provides general and standardised academic skills and does not adequately match the rapidly

² The effect of social origin, net of educational achievement, is known as “DESO” in the stratification literature: Bernardi, Ballarino 2016.



Source: Multipurpose Household Social Survey waves 2009 & 2016; NEPS starting cohort6

Fig. 1. Residual DESO model of the predicted ISEI score over the career development in Italy and Germany. Service and Working classes refer to the class of origin.



Source: Multipurpose Household Social Survey waves 2009 & 2016; NEPS starting cohort6

Fig. 2. Residual DESO model of the predicted ISEI score over the career development in Italy and Germany – educational moderation. Blue lines (and circles) indicate stable entrants; red lines (and squares) indicate unstable entrants. Service and Working classes refer to the class of origin, while low-medium and high education refer to the individuals' achieved level of education.

changing skill demand (Schizzerotto, 1997). This inadequacy hence suggests that initial labour market disparities persist, thereby leaving vast room for the influence of parental background as a way of compensating for non-optimal initial occupational achievement (Rai-tano & Vona, 2018).

Germany, conversely, is a high-wage economy with a strong industrial core that mainly focuses on highly productive, capital-intensive and export-oriented productions. Such export orientation incentivises firms to compete not only in terms of prices but also in terms of quality and innovation, which translates into better work- and pay conditions, also

for temporary workers. Additionally, Germany represents an *industry-based skill regime* (Estevez-Abe et al., 2001) featuring a better match between skill supply and job demand, driven by both a dual, vocational education system that provides differentiated job-related skills and an occupational labour market (Maurice et al., 1986) that ensures and incentivises vocational training and thus mobility chances. Again, this superior occupational match and the greater mobility chances supposedly also provide advantages in case of contractual precarity. Wage differentials in younger age between permanent and temporary contracts in Germany are, in fact, notably lower, especially when compared with Italy (Regoli et al., 2019). Despite the more-fluid labour market structure, the parental influence – and therefore the direct effect of social origin – is still present in Germany, albeit to a lesser extent than in Italy (Bernardi & Ballarino, 2016).

Following Maurice and colleagues (1986), we therefore consider national labour market institutions to be the overarching structure in the development of employment relations, contextually dependent life-course trajectories (Lersch et al., 2020; Mayer, 2004), and mobility chances (DiPrete, 2020). Given the different institutional contexts and their impact on social stratification and mobility, we expect that (Hyp. 1) in Italy, flexible labour market entries will be associated with higher occupational penalties both at the start and over the career: it follows that *the overall Italian immobility is expected to result in a stronger direct impact of ascriptive advantages*.

On the contrary, in Germany, we expect to find reduced (or even non-tangible) flexibility-driven penalties. However, we expect to find a sizeable impact of the class of origin on occupational achievement either as compensation or as a boost for the career chances, despite the more diffused German training- and mobility opportunities.

2.1. A flexible career start in Italy and Germany: a bridge or a mobility trap?

Initial employment instability is associated with greater variability in the development of occupational trajectories (Lersch et al., 2020). The literature has long tested whether atypical entry serves as a beneficial stepping-stone for secure and more-rewarding jobs or whether it stands as a scarring trap in the way of future career mobility. While most of the empirical work has addressed micro- and macro-level differences in the mobility chances of transitioning to permanent employment (Kalleberg & Mouw, 2018), our interest lies in occupational mobility outcomes: catching up with those who directly entered in the primary labour market is clearly a signal of upward mobility (Passaretta & Wolbers, 2019).

The *entrapment* hypothesis states that employers rely on flexible arrangements primarily to buffer labour costs and to bypass strict dismissal rules, especially in strongly segmented labour markets (McGinnity et al., 2005). Neither employers nor employees are in this case encouraged to invest in training or skill development (Barbieri et al., 2016; Kahn, 2010), and therefore protracted precarious experiences contribute to human capital depreciation (Gagliarducci, 2005). In parallel, fixed-term job spells may be a negative signal for future employers, who feel discouraged by candidates who have not been offered a permanent position upon the expiration of a fixed-term contract. From a social mobility perspective, worse working conditions, less time for active job search, and negative future stigma increase the risk of being locked into carousel careers, thereby potentially reducing upward career chances and leading to immobile or reduced earnings (Barbieri & Cutuli, 2018; Kuhn, 2020).

In stark contrast, the *integration* scenario frames flexible starts as a necessary bridge towards stable and better-rewarded occupations. Employers may adopt fixed-term contracts as an initial screening device to evaluate workers' productivity before a longer employment relationship takes place (Gebel, 2010; Giesecke & Groß, 2004). Bad matching – particularly for high-skilled occupations – is very costly in primary labour markets, in which scarcely productive stable workers however enjoy high levels of protection from dismissals. In accounting for future hiring processes, this scenario predicts a positive evaluation for candidates with functional short-term work experiences, which signal an investment in gaining specific skills. While some empirical work has found positive impacts of initial flexibility on further contractual stability (Auray & Lepage-Saucier, 2020; Berton et al., 2011), this impact is less clear for wages and socioeconomic mobility. Nonetheless, these premises point to greater chances of upward career mobility, thereby compensating for the bad start and even providing relative future advantages in terms of earnings and occupational status.

2.2. How social origin directly compensates for a disadvantaged career start

From a career-mobility perspective, the interaction between a flexible start and social origin deserves particular attention. Parental social class determines individuals' occupational career first of all influencing educational opportunities and achievements (Blau & Duncan, 1967; Müller & Gangl, 2003; Shavit & Müller, 1998). We know, indeed, that the class of origin is known to lead to advantages in early skills (Karlson & Birkelund, 2019), at school (Calarco, 2018), and in the quality and chances of successfully completing tertiary education (Breen et al., 2009). Moreover, the social background directly intervenes in individuals' trajectories both at labour market entry and over the intra-generational development net of the achieved level of education. In other words, better-off parents with a high level of social status are rationally motivated to either compensate for their children's initial labour market "failures" to avoid them downward mobility or to boost their labour market achievement. At the beginning of and over the career, the class of origin can directly act through indirect endowments and direct investments (Erola et al., 2016). Inside the black box of the direct effect of the class of origin, scholars pointed to greater motivation, increased productivity-related non-cognitive skills (Gil-Hernández, 2019; Gugushvili et al., 2017), higher levels of self-esteem (Kraus & Park, 2014), monetary safety nets in the case of low-paying jobs, and profitable networks (Friedman & Laurison, 2020; Rivera, 2016) in addition to easier conformity to formal and informal rules of social closure (Bernardi & Gil-Hernández, 2020; Laurison & Friedman, 2016).

In the present work, these direct mechanisms of the class of origin are assumed to be relevant in relation to initial flexible employment. We therefore investigate whether the class of origin *directly* differentiates the intragenerational career mobility (in terms of the socio-economic condition: ISEI score) of secondary labour market entrants.

Since contractual instability at labour market entry is potentially associated either with entrapment in the peripheral market (in strictly dualistic labour markets) or with employers' screening practices (in less segmented labour markets), we derive similar expectations according to both discussed scenarios.

If initial flexible employment is associated with lower occupational achievement in dual labour markets, we expect entrants from higher classes to compensate over their careers any initial socioeconomic gap. Conversely, working-class entrants are expected to more likely end up

entrapped in less-prestigious and more-poorly remunerated jobs compared both with the stable working-class entrants and with those coming from higher classes. Accordingly, ascriptive disadvantages and initial instability are expected to result in a cumulation of disadvantages. When initial contractual instability tests workers' productivity, we expect labour market entrants from the upper classes to maximise their prospective upward mobility through the mentioned boosting mechanisms. Even in this positive case, a disadvantaged parental background is expected to hinder career progression, according to a "class ceiling" effect (see Friedman and Laurison, 2020).

Thus, **Hyp. 2** follows: Overall, in both countries, we expect *the class of origin to directly operate in maintaining or even reinforcing existing inequalities. If so, flexible employment solutions should be interpreted as contributors to the persistent inequality of opportunities.*

2.3. The Direct effect of social origin and the origin-education interaction

As mentioned, educational achievement is the main mediating mechanisms through which social origin affect children's career opportunities (Blau & Duncan, 1967; Karlson & Birkelund, 2019), and the remaining influence of the class of origin is what we refer as the direct effect. With respect to this residual direct effect, scholars (Bernardi & Gil-Hernández, 2020) have further debated around an *additional moderator role of education*, which may differentiate the direct influence of the class of origin (thus when the mediating role of education is already accounted for). In this work, we hence ask whether also the ascriptive-institutional inequalities interaction of our interest is *moderated* by the achieved level of education.

Among less educated labour market entrants, we expect social origin to play a substantial direct difference in their career opportunities. We know that advantaged class parents want to compensate for children's poor educational achievement (Goldthorpe & Jackson, 2007), and we expect an even stronger influence in case of precarious start in the labour market. Indeed, flexible contracts more likely serve to buffer demand fluctuations among less-skilled workers and less-complex occupations, which is in line with the entrapment scenario (Gebel, 2010).

Thus, **Hyp. 3** follows: *the less-educated high class descendants will benefit from their class position whereas we expect to find persisting occupational disparities among poorly educated labour market entrants from lower social class.*

Achieving tertiary education, instead, is claimed to be the *great equaliser* (Breen & Jonsson, 2007). That is, the higher level of specific skills make the labour market more meritocratic among degree holders, and background-related differences are supposed to vanish – or at least the gap in occupational and income attainments is expected to weaken over the career progression (Goldthorpe & Jackson, 2007; Torche, 2011). Reasons for the equalising effect could be found in less common background-related discrimination in more bureaucratised sectors (Bernardi & Gil-Hernández, 2020) and in the increasingly positive payoff from education and human capital (Autor et al., 2003) driven by the trend of growing technological change and processes of automation. Moreover, individuals' credentials and specific skills may also influence the occurrence of the *integrations* scenario when entrants experience contractual instability (Giesecke & Groß, 2003), as the literature shows that more innovative sectors and firms often require initial probation periods for the newly hired (Mattijsen et al., 2020). Alternatively, scholars pinpoint a contrasting reason behind reduced ascriptive inequality based on the positive selection of working-class individuals who achieve tertiary education (Karlson & Birkelund, 2019; Zhou, 2019). Degree-holders from a more disadvantaged background may display above-average abilities and motivation that made possible the overcoming of initial disadvantages. In either case, we should find neither background-related differences in the occupational trajectories of highly educated unstable entrants nor remarkable differences between stable and unstable tertiary-educated labour market entrants. Thus, **Hyp. 4a** follows: *For all graduated unstable entrants, we expect*

tertiary education to exert a tendential equalising effect in the career progression, regardless of the class of origin and the initial contractual stability.

Though, recent evidence is still revealing sizeable advantages for the upper classes among degree-holders in terms of both occupational prestige and income (Bernardi & Gil-Hernández, 2020; Fiel, 2020; Witteveen & Attewell, 2020), even in highly mobile contexts.³

Service-class descendants with a university degree not only manage to enter the labour market with better jobs but also – thanks to the family-related *boosting advantages* – reach more-remunerative job positions over their careers. This finding is in line with the *effectively maintained inequality* mechanism (Lucas, 2001, 2017): A more prestigious parental background guarantees persisting advantages via the exploitation of family-based economic, cultural, and social capital.

Hence, **Hyp. 4b** follows: *a higher social background is expected to result in additional boosting advantages for tertiary educated*, thereby increasing background-related differences over the career progression.

To sum up, the two distinct ways in which advantaged social origin contributes to persisting intergenerational inequalities over the work career can be described by the "lift" (compensation for the low-educated) and the "push" (a boost for the highly educated) analogies.

3. Data and methods

We draw on two country-specific retrospective datasets. For the Italian case, we use a newly built dataset merging the 2009 and 2016 waves of the Multipurpose Household Social Survey (*Famiglie e soggetti sociali*, FSS), a household longitudinal survey of Italian families collected indicatively every 5 years by the Italian Institute of Statistics (ISTAT) which retrospectively reconstruct individuals' work and educational careers. For Germany, we draw on the 10th wave of the Starting Cohort 6 of the National Educational Panel Study (Blossfeld and Von Maurice, 2011). This survey started in 2007 and collects yearly individual information up to 2017 about educational and professional careers and lifelong learning. In both datasets, we make use of their retrospective components in spell format, which retrace the individuals' entire educational and work histories up to the moment of the last interview. The starting sample for the Italian case counts 68603 (43850 for 2009 and 24753 for 2016) individuals, while the German data has 17139 individuals.⁴

We follow individuals over the first ten years in the labour market, beginning with the first job (lasting at least three months) after leaving the educational system. Not all cases are followed for all ten years, but we ensured that everyone had been continuously observed for at least five years after labour market entry. We restricted our sample to labour market entrants that left the educational system at the age of 16–35 over the period 1970 and 2007. Appendix A, *Tables A1 and A2* retraces the stepwise deletion of cases to reach our analytical sample. After a listwise missing deletion, our samples are finally composed of 144,465 person-year observations for 14,893 individuals in Italy and 113,174 person-year observations for 11,470 individuals in Germany.

³ Research on Scandinavian countries has shown that the disadvantages associated with low social origin have largely disappeared, but the advantages related to privileged origin persist (Esping-Andersen & Wagner, 2012). However, other research based on more-appropriate longitudinal and register data for the US and DK has demonstrated that the greater Danish income mobility is mainly welfare-driven (via redistributive tax and transfers and wage-compression policies) while class educational differentials are maintained due to the redistributive policies that increase income mobility (Landerso & Heckman, 2017).

⁴ A detailed discussion on the data construction, the sampling methods, the data structure, and the variables can be found in the provided data manuals. For the Italian data: <https://www.istat.it/en/archivio/236643>; for the German data: <https://www.neps-data.de/Data-Center/Data-and-Documentation/Start-Cohort-Adults/Documentation>.

3.1. Analytical strategy and measures

The study of career development is conducted by performing a random growth-curve analysis, thereby exploiting the multilevel structure of the data. Individual temporal observations (Level 1, j) are nested within individuals (Level 2, i), which allows us to consider both time-varying and time-constant information as well as their interaction. Individuals' occupational achievement is operationalised using the ISEI (International Socio-economic Index of Occupational Status; Ganzeboom et al., 1992). A metric score derived from the 1988 version of the International Standard Classification of Occupations (ISCO-88), which scales from 16 (e.g. labourers, cleaners) to 90 (e.g. doctors, CEO, judges), and hierarchically orders occupations according to the intervening role of such occupations in maximising the education-income relation. The main advantages of adopting the ISEI instead of income are that any intra-individual change implies an actual change of position within the occupational stratification⁵, and it is less subject to recall bias in a retrospective setting (Härkönen et al., 2016). Appendix A Fig. A1 shows the univariate kernel distribution for the whole sample and according to the achieved level of education.

Our baseline growth curve model includes a three-way interaction between unstable career start ($unst_i$), social origin ($orig_i$), and career development (car_{ij}), (and its square) as formalised in Eq. (1). The career counter is set as a random slope (μ_{3j}) to allow the coefficient to vary across individuals.

$$y_{ij} = \beta_0 + \beta_1 unst_i + \beta_2 orig_i + (\beta_3 car_{ij} + \beta_4 car_{ij}^2) + \beta_5 unst_i * orig_i + \beta_6 unst_i * (car_{ij} * car_{ij}^2) + \beta_7 orig_i * (car_{ij} * car_{ij}^2) + \beta_8 unst_i * orig_i * (car_{ij} * car_{ij}^2) + (\mu_{0j} + \mu_{3j} + \varepsilon_{ij}) \quad (1)$$

We define an unstable labour market start ($unst_i$) as a time-constant dummy indicator that groups workers who began their career with a fixed-term contract that lasted for at least four months without being converted into a permanent position.⁶ Entrants with permanent contracts and those experiencing only three months of temporary employment and then shifting to a permanent position, compose the reference ("stable") group. Results remain robust to more-restrictive specifications, as discussed in Par. 5.3.

Class of origin ($orig_i$) is defined following an aggregated ESeC classification (Rose & Harrison, 2007) in order to minimise occupational-measurement error (Houseworth & Fisher, 2020) and by applying a dominance criterion among parents. We distinguish between i) the Service class, which is composed of managerial and professional occupations; ii) the Intermediate class, which includes small employers and high-grade white- and blue-collar workers; and finally, iii) the Working class, which includes lower-grade white- and blue-collar workers and routine occupations. To maximise the differences related to the class of origin, growth curves are reported comparing labour market entrants from the Service and the Working classes.

Our analytical interest, however, lies in the mechanisms through which social origin directly influence career mobility after initial instability. To this end, we incorporate in Eq. (2) the ISEI at labour market entry ($1^{st}isei_i$) in interaction with career advancement and the

stable/unstable start to absorb the portion of the effect of social origin that passes via unequal allocation into the first job.

By doing so, we isolate the influence of the class of origin over career progression.

$$y_{ij} = \beta_0 + \beta_1 unst_i + \beta_2 orig_i + (\beta_3 car_{ij} + \beta_4 car_{ij}^2) + \beta_5 unst_i * orig_i + \beta_6 unst_i * (car_{ij} * car_{ij}^2) + \beta_7 orig_i * (car_{ij} * car_{ij}^2) + \beta_8 unst_i * orig_i * (car_{ij} * car_{ij}^2) + \beta_9 1^{st}isei_i + \beta_{10} 1^{st}isei_i * unst_i + \beta_{11} 1^{st}isei_i * unst_i * (car_{ij} * car_{ij}^2) + (\mu_{0j} + \mu_{3j} + \varepsilon_{ij}) \quad (2)$$

As is well highlighted in the mobility literature, the initial occupational disparity has a deterministic mediating role, especially in socially immobile contexts like the Mediterranean/Dualist and Continental/Corporatist countries (Passaretta et al., 2018). In practice, we compare the career development of workers from the service- and working-class who counterfactually began with a similar ISEI score and differ solely depending on initial (in)stability. Initial precarity is indeed associated with different ISEI levels at the labour market entry, as shown in Appendix A, Figs. A2 and A3. In Italy, initial job insecurity is associated with less-prestigious jobs, especially among the least educated. In stark contrast, Germany shows slightly higher-level occupational status for unstable entry jobs, but the process of labour market flexibilisation, however, has reduced the "flexibility premium" across school leaver cohorts.

The influence of the parental background remaining from Eq. (2), generally referred to as "residual DESO", includes often-unobservable direct mechanisms that are in act specifically after labour market entry.

3.2. Overcoming the educational mediation and observable confounders

To get the *direct effect* of social origin, we purge the portion of the origin effect that is mediated by the level of educational achievement (Hällsten, 2013; Sullivan et al., 2018). In Italy, we distinguish between the levels of basic (primary or no formal education), intermediate (high-school diploma), post-secondary vocational, bachelor, and master or higher. In Germany, we distinguish between basic instruction, first-level vocational training, Gymnasium (Abitur), higher-level post-secondary vocational training, university of applied sciences, and finally, university or higher. We maintain country-based distinctions to preserve nation-specific educational characteristics and their impact.

We address the educational mediation and control for observable confounders in two separate steps.

First, we consider the possible *non-random selection into initial non-standard employment* by applying a matching framework, and specifically the coarsened exact matching (CEM). As shown in Appendix A, Figs. A4 and A5, workers exposed to contractual instability have different social characteristics that potentially influence also the intra-generational career development. The increasing use of flexible contracts at the labour market entry in the two countries diverges in its educational and skill compositions over the considered cohorts. In Italy, less-educated labour market entrants have been the most at risk of instability since the 80 s and have remained so since the major reforms (of the late 90 s and early 2000s). In Germany, mainly the tertiary-educated had been exposed to temporary employment until the mid-90 s, whereas the low- and mid-educated had been targeted until 1996, which further deregulated existing restrictions on newly hired employees and successful apprentices (Gebel, 2010). The skill-biased pattern is also confirmed when considering the starting occupation defined as ISCO88 major groups of the first occupation.

It is thus important to make stable and unstable entrants comparable according to their characteristics antecedent to their labour market entrance by identifying adequate control cases for each treaded entrant. Differently from traditional matching strategies that rely on a predicted propensity score, the CEM (Iacus et al., 2012) splits the confounders into

⁵ As for other metric scores of occupational status (e.g. SIOPS), scholars focus their analyses on limited average ISEI variation within individuals' careers, which, nevertheless, are still indicative and investigated as (most likely horizontal) occupational mobility (see for instance the limited variation in Ballarino et al., 2020; Barone et al., 2011; Manzoni et al., 2014; Passaretta et al., 2018).

⁶ We also define unstable entrants as workers who began with a fixed-term contract that lasted less than four months without any transition to permanent employment. For instance, if a worker became unemployed in the fourth month after three months of temporary employment (first experience), they count as part of the unstable group.

categories (e.g. age upon leaving education is coarsened into categorical subgroups) and sorts individuals into strata in which units have the same values on the coarsened variables. Individuals in strata without at least one treated and one control case are not matched and curbed from the analysis. The matching is performed at the exact beginning of the working career, and the resulting individual time-constant weights are generalised to the whole career trajectories. We specifically match on parental social class and education (dominance criterion for both), age upon leaving education, sex, achieved education, school-leaver cohort, regional position, and nationality (available only for Germany) by manually defining the coarsened categories. Appendix A, Tables A3 & A4 evaluates the matching performance by presenting descriptive statistics for the stable and unstable entrants before and after applying weights.

As a second step, we control for sources of heterogeneous career development in the growth curve estimation. As reported in Eq. (3), we include the level of education, sex, and school-leaver cohorts in interaction with the career progression. For the sake of brevity, these three time-constant additional controls and their interaction are summarised with the notation $controls_i$.

$$\begin{aligned}
 y_{ij} = & \beta_0 + \beta_1 unst_i + \beta_2 orig_i + (\beta_3 car_{ij} + \beta_4 car_{ij}^2) \\
 & + \beta_5 unst_i * orig_i + \beta_6 unst_i * (car_{ij} * car_{ij}^2) + \beta_7 orig_i * (car_{ij} * car_{ij}^2) \\
 & + \beta_8 unst_i * orig_i * (car_{ij} * car_{ij}^2) + \beta_9 1^{st} isei_i + \beta_{10} 1^{st} isei_i * unst_i + \beta_{11} 1^{st} isei_i * unst_i * (car_{ij} * car_{ij}^2) \\
 & + \beta_{12} controls_i + \beta_{13} controls_i * (car_{ij} * car_{ij}^2) \\
 & + (\mu_{0j} + \mu_{3j} + \varepsilon_{ij})
 \end{aligned} \tag{3}$$

The empirical section presents the predicted ISEI score over the first ten years estimated on the matched sample and according to Eq. (3). The inclusion of the confounders directly in the growth curves model leads to identical results. We preferred a two-step approach to evaluate the selection into initial contractual instability.

This last model specification is replicated separately for the low-, middle-, and tertiary-educated to test the equalising power of tertiary education.

4. Empirical evidence

4.1. The direct influence of parental background on unstable starts over the career

Following Eq. (3), we estimate the growth curves of stable and unstable labour market entrants that counterfactually began with comparable occupations that differ on their social origin. In so doing, we can study the interactive relation between initial contractual instability and the residual effect of the parental background that intervenes in supporting or compensating the career development. Fig. 1 compares the career development along the first ten years in the labour market of young workers from the service- and working-class origin while controlling for the ISEI score of the first job, observable confounders, and sources of career heterogeneity.

In the Italian case, empirical evidence points to a clear *compensatory advantage* for the service class's descendants: Unstable entrants with a high social background almost entirely recover their initial gap with their stable counterparts within the first ≈ 6 years (a growth of around 3/4 ISEI points). Conversely, among working-class descendants who entered the labour market with a “flexible” position, no signals of compensation emerge, revealing the *trap* nature of initial career

instability in Italy. In fact, despite trivial signals of upward mobility (not even 1 ISEI point in 10 years), unstable working-class entrants never catch up with their stable counterparts.

Upon examining the Italian stable entrants (and controlling for the level of the entry job) from the service class, they manage to increase their occupational socio-economic status (≈ 2 ISEI points), the overall rigidity of both the Italian labour market notwithstanding. Thus, the parental background not only compensates for initial disadvantages but also helps in overall boosting career chances. Stable entrants from the working-class are instead subject to a “*class-ceiling*” effect with consequent occupational immobility after their entrance.

In the German case, a different interactive dynamic is at stake. First, a sort of *flexibility premium* (of about 2 ISEI points) is evident for both service- and working-class descendants. However, social-class differences are what strikes the most regardless of the initial contractual stability: the parental background exerts an occupational *boost* to the offspring of the upper class (a growth of more than 2 ISEI points), whereas working-class entrants remain de facto immobile. Fig. 1 reveals that the flexibility premium in the German labour market functions as a class premium that largely benefits upper-class descendants. In other

words, our results show that ceteris paribus, regardless of the stability at labour market entry, advantaged social origin nevertheless leads to mechanisms over the career that serve as a form of *compensation* (in Italy) or *boosting* (in Germany), which results in the reproduction of socially stratified occupational inequalities among labour market entrants during their early careers.

For both the Italian and German cases, we thus confirm Hypothesis 1 and Hypothesis 2 regarding the stronger flexibility penalty in Italy and the direct role of the class of origin in reinforcing the existing inequalities, either through a compensation mechanism (as in Italy) or via a boost of occupational achievement (in Germany).

4.2. Is tertiary education an equaliser? The origin-education interaction

Further, we decompose the results of the previous analysis according to the achieved level of education. We test the *equalising* power of the college degree by splitting the sample between the low-to-medium educated (at most, upper-secondary) and the highly educated (those with any kind of tertiary degree). Based on our theoretical reflection, the DESO *compensation* pattern should be much more apparent among less-educated service-class descendants. Moreover, as highly educated individuals compete in a more-meritocratic market, they should be penalised less by initial instability, regardless of their origin (*equalisation*), but, if class advantages persist, the entrants from the service class might present additional *boosting advantages*. Overall, empirical evidence for Italy and Germany (Fig. 2) converges towards an *equalising* effect of tertiary education, at least regarding the DESO mechanisms that operate after an unstable start. The overall educational moderation, however, leads to different contextual scenarios.

Considering first the *low-to-medium-educated* (left panels), we confirm the expected compensation / entrapment dynamics only for the Italian case. The direct effect of the parental background over the career is visible in the compensation of the flexibility penalty among Italian

entrants from the upper classes (unstable entrants pass from an ISEI score of less than 40 to more than 42, whereas stable entrants have an average ISEI score of around 43). The stable entrants from the service class also show positive deviations from the initial ISEI. Conversely, the absence of social privileges translates to a visible ceiling effect for both stable and unstable working-class entrants.

In Germany, we can find neither significant penalties nor premiums attached to unstable starts among the lower-educated. What we see, instead, is that social origin plays a *direct* and major role, regardless of the contractual conditions: Advantaged social origin translate into better career chances for less-educated children, as revealed by their much-steeper upward trajectory with a growth of ≈ 4 ISEI points. The results from the analysis of less educated in both countries are in line with Hypothesis 3, and particularly we document a direct influence of the class of origin for precarious entrants in Italy and for all entrants in Germany, regardless of their contractual stability.

Finally, among the *tertiary-educated* (right panels), the direct effect of social origin over the career is no longer relevant as it is for the less-educated, especially in Germany. In Italy, we still detect little and not significant signs of initial upward mobility among stable and unstable entrants from the service class who might exploit their social origin to increase their career chances. The trend for individuals of working-class origin is less straightforward and the estimations more unstable, which points to their lower absolute representation among the tertiary-educated.

The role of initial contractual instability among the highly educated displays further contextual differences. In Italy, no significant disparities emerge between the career development of stable and unstable labour market entrants. While attending university in Italy is clearly a socially stratified privilege (Barone et al., 2017; Schizzerotto & Barone, 2006), earning a *laurea* does help in overcoming institutionally driven inequalities, even among the less-socially advantaged. In the more-egalitarian German system, a persistent flexibility premium (about 4 ISEI points) among the tertiary-educated is present, regardless of their class of origin, which reveals that jobs that require initial screening (and therefore that use flexible contracts) are generally associated with a higher socio-economic status and greater rewards in the highly skilled German labour market.

These findings support Hypothesis 4a in both countries, as the direct influence of the class of origin is sensibly or even entirely suppressed among labour market entrants who achieved a tertiary education.

4.3. Robustness checks and limitations

We finally test the sensitivity of our results, both core models and the educational moderation by performing a series of robustness checks, as presented in Appendix B. First, we assess the validity of our treatment variable – the unstable start – according to two alternative (and stricter) specifications. The first alternative imposes a stricter form of initial contractual instability by restricting the treatment condition to those remaining with fixed-term contracts (i.e. contracts that are not converted into permanent contracts) throughout the entire first year (twelve months) in the labour market. The control group therefore comprises entrants with permanent contracts and entrants with a fixed-term contract that has been converted (or entrants who have found a stable job) before the end of the first year. The second alternative, on the other hand, draws on the core-treatment definition (starting and remaining for at least four months in temporary employment) but limits the comparison just to stable entrants. Thus, we exclude flexible entrants who moved to permanent contracts in the first three months. Matching weights are re-estimated for each alternative specification. The results remain unaltered by these stricter specifications, thereby validating the results presented above.

Second, we test the Standard Occupational Prestige Scale (SIOPS) – a metric measure of occupational prestige – as an alternative dependent variable. SIOPS was developed as an instrument for cross-national

comparative research (Ganzeboom & Treiman, 1996). Despite its widespread adoption, its validity has been heavily debated in the literature (Hällsten, 2020; Lynn & Ellerbach, 2017) both in terms of measurement errors⁷ and correlation with other SES dimensions (education, income, and wealth). Nevertheless, the strong correlation between ISEI and SIOPS led to virtually identical results, as expected. Finally, income- and wage measures can be alternative mobility measures yet are available only for Germany and for overly limited cases to perform additional checks. Even so, monetary scales would not be necessarily a better option. Compared with ISEI, income and wages are much more volatile (Jenkins & Van Kerm, 2009) and display lower intergenerational significance (Hällsten, 2020). More substantially, income is an epiphenomenon of structural cleavages and inequalities (Connelly et al., 2016) and thus misses major and consequential dimensions of social stratification of our interest (Goldthorpe, 2012).

Despite the applied matching techniques, we must acknowledge that observable confounders might not fully absorb other crucial factors that may influence both the selection into stable or unstable labour market entry position and the chances of intragenerational career mobility. First, educational credentials may not be enough to fully get the direct effect of social origin. As pointed out by Bernardi and Gil-Hernández (2020), the field of study also contributes to a horizontal stratification, especially among tertiary educated. However, this information was not available for both countries in all waves, and this omission may only partially positively bias the estimated impact of the class of origin. Further, unobserved cognitive and non-cognitive skills, individuals' motivation, efforts, and genetic predisposition that are not captured by the included parental class and education may be the mechanisms through which social origin differentiates career trajectories rather than a direct parental support and sustainment throughout the career. Nevertheless, only a detailed mediation analysis with appropriate data could disentangle the precise mechanisms through which the class of origin influences the career development (after the entry), especially in case of initial disadvantages.

5. Discussion and conclusions

We investigated the extent to which institutionally originated inequalities (unstable entry into the secondary labour market) interact with persistent ascriptive disparities, namely the direct effect of social origin. We focused particularly on Italy and Germany, two examples of different institutional settlements within Europe, as their different ways of dualising labour markets are suitable cases for grasping the mechanisms by which advantaged social origin react to *bad labour market starts*, whose penalties are particularly persistent in conservative contexts (Barbieri et al., 2019; Gebel & Giesecke, 2016). Following the literature on social mobility, we found that the parental aversion to intergenerational downward mobility and the resulting social demotion – well-illustrated in the stratification literature (Breen & Goldthorpe, 1997) – are also at stake when considering initial contractual instability, especially if it is associated with lower initial socio-economic positions.

We followed young Italian and German workers by adopting a dynamic perspective in order to study occupational mobility over the first ten years of their labour market career. In greater detail, we sought to uncover the direct effect of social origin over the career development, and particularly as a reaction to a disadvantaged entry – the *residual DESO*. To this end, we compared stable and unstable entrants who had counterfactually begun their careers with similar socio-economic

⁷ Concerning measurement errors in SIOPS, Hällsten (2020) points out that prestige scores are error-prone estimates of the socioeconomic attributes of occupations and are thus something different than socioeconomic status. Moreover, Lynn and Ellerbach (2017) have demonstrated that the cognitive maps underlying the basis of the hierarchical structure of prestige scales are highly influenced by individuals' level of education.

statuses and differed only in terms of their social origin.

Striking contextual differences emerged regarding the implications of unstable initial employment as well as its relationship with ascriptive factors, which points to the centrality of institutional features such as the characteristics of the educational and occupational systems. Of course, we do not pretend to derive causal statements about the effect of specific institutional arrangements: That said, our analysis shows that Italy and Germany differ in the average composition and socio-economic status of initial flexible employment as well as in terms of the direct influence that social origin exerts on the further career development.

In line with previous literature, Italian instability is associated with less-skilled labour market entrants, and the flexibilisation process exacerbates the precariousness and penalties of the secondary labour market. We particularly documented how the direct effect of social origin is also crucial in reproducing an inequality of opportunities in relation to flexible employment. Upper-class descendants demonstrate their *compensatory advantages* by buffering initial labour market failures (i.e. the occupational penalty resulting from starting flexibly). This finding is strikingly evident when lower- and middle-educated labour market entrants are considered: In their case, the absence of ascriptive privileges prevents upward mobility throughout the career, thereby confining unstable entrants to less-prestigious and less-rewarding jobs. In Germany, on the other hand, we found no signs of occupational penalties related to an unstable labour market start: Flexible jobs in Germany seem far from being representative of “*bad starts*”. Despite reports in the literature that wage- and security penalties are associated with flexible beginnings (Gebel, 2010; Giesecke & Groß, 2004; Scherer, 2004), initial labour market instability in Germany is generally concentrated among highly educated workers (even though recent reforms have also marked an increase among low-skilled workers) and is associated with a significant occupational *premium*, as predicted by the *integration* scenario. Nevertheless, the direct influence of the class of origin contributed to explaining how inequalities are perpetuated, even when there are no detectable initial labour market penalties. Indeed, low-educated entrants from the service class, who started their career in the secondary labour market, manage to move upwards during their career progression.

A major finding common to both countries concerns the *equalising role* of tertiary education, at least regarding our interactive mechanisms. Advantaged social origin generally result in slightly better initial job allocation among degree-holders; however, we did not find any significant direct effect of the class of origin (DESO) over the career. Service- and working-class entrants present similar patterns along the first ten years. Furthermore, tertiary education entirely reduces the flexibility penalty in the Italian context of working-class entrants who achieve tertiary education. Conversely, in Germany, initial labour market flexibility serves as a gateway to more-prestigious jobs in the highly skilled labour market. All in all, graduating seems to foster greater equality of opportunities during the early stages of the working career either because of a more meritocratic market or a positive selection of working-class entrants *who achieved tertiary education*.

In conclusion, flexibility dynamics clearly matter in terms of both inter- and intragenerational mobility. Flexible employment at labour market entry in and of itself may be a driver of higher labour market fluidity, yet it may also exacerbate ascriptive inequalities, especially among less-educated workers. However, this finding does not represent an inexorable end because a flexible labour market entry may serve either as a trap or as a stepping-stone towards further career development. In Southern Europe, where a secondary labour market entry is usually a bad start, the unstable entry is experienced as a class failure by upper-class families, who fight back by “lifting” their members, while working-class secondary-labour market entrants remain trapped in the secondary labour market. In this situation, institutionally originated inequality in the labour market combines with ascriptive (class-based) disparity, thereby reinforcing *class-ceiling* effects and adding to the already-high level of social inequality.

Data availability

No data was used for the research described in the article.

Declaration of Competing Interest

The authors report no declarations of interest.

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Appendix A. Descriptive tables and figures

Table A1

Sample selection steps – Italy.

Italy			
	Individuals	Spells	% ind
FSS 2009 & 2016	68,603 (43,850–2009 24,753–2015)	–	100
Have work experience	49,365	115,244	72.0
No ISEI missing info	45,980	106,738	67.0
1 st valid job longer than 3 months after end of education	42,348	89,276	61.7
	Individuals	Person- Months	% ind
	42,348	11,946,945	61.7
Followed for at least 5 years	37,371	11,802,099	54.5
Right censor at 10 years	37,371	4,344,559	54.5
Left education period 1970–2007 aged 16–35	15,808	1,826,088	23.0
	Individuals	Person- Years	% ind
	15,808	153,361	23.0
Analytical sample	14,893	144,465	21.7
Matched sample	14,721	142,800	21.5

Table A2

Sample selection steps – Germany.

Germany			
	Individuals	Spells	% ind
Neps 6 th SC 10.0.1	17,139	–	100
Have work experience	17,051	81,971	99.5
No ISEI missing info	16,971	80,798	99.0
1 st valid job longer than 3 months after end of education	16,136	60,489	94.2
	Individuals	Person- Months	% ind
	16,136	5,025,177	94.2
Followed for at least 5 years	15,026	4,991,938	87.7
Right censor at 10 years	16,353	1,767,115	87.7
Left education period 1970–2007 aged 16–35	12,636	1,491,126	73.7
	Individuals	Person-Years	% ind
	12,636	124,679	73.7
Analytical sample	11,470	113,174	66.9
Matched sample	10,467	103,420	61.1

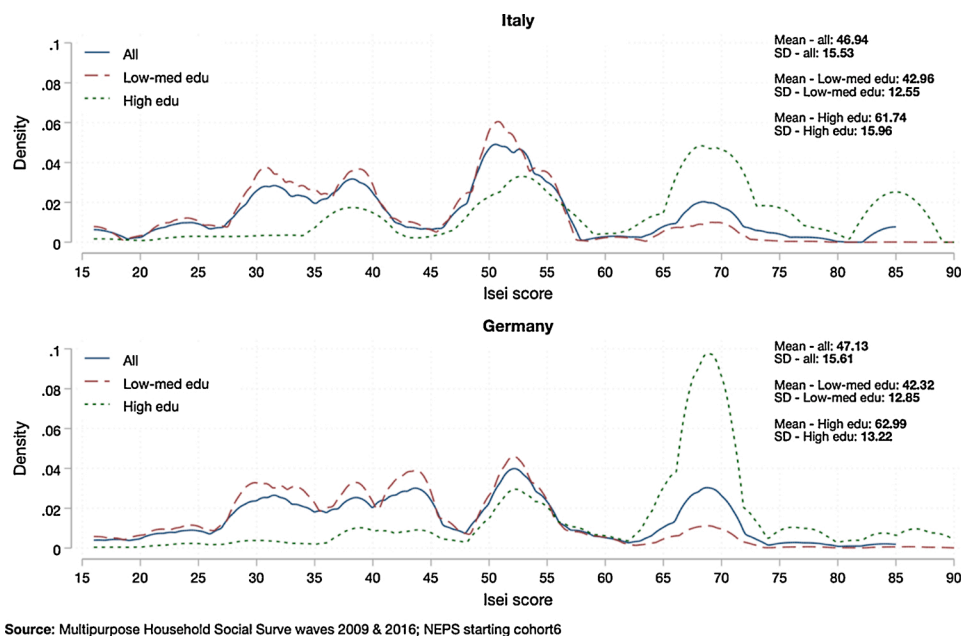


Fig. A1. Kernel density distribution, mean and standard deviation of ISEI score for the whole analytical sample and according to the achieved education.

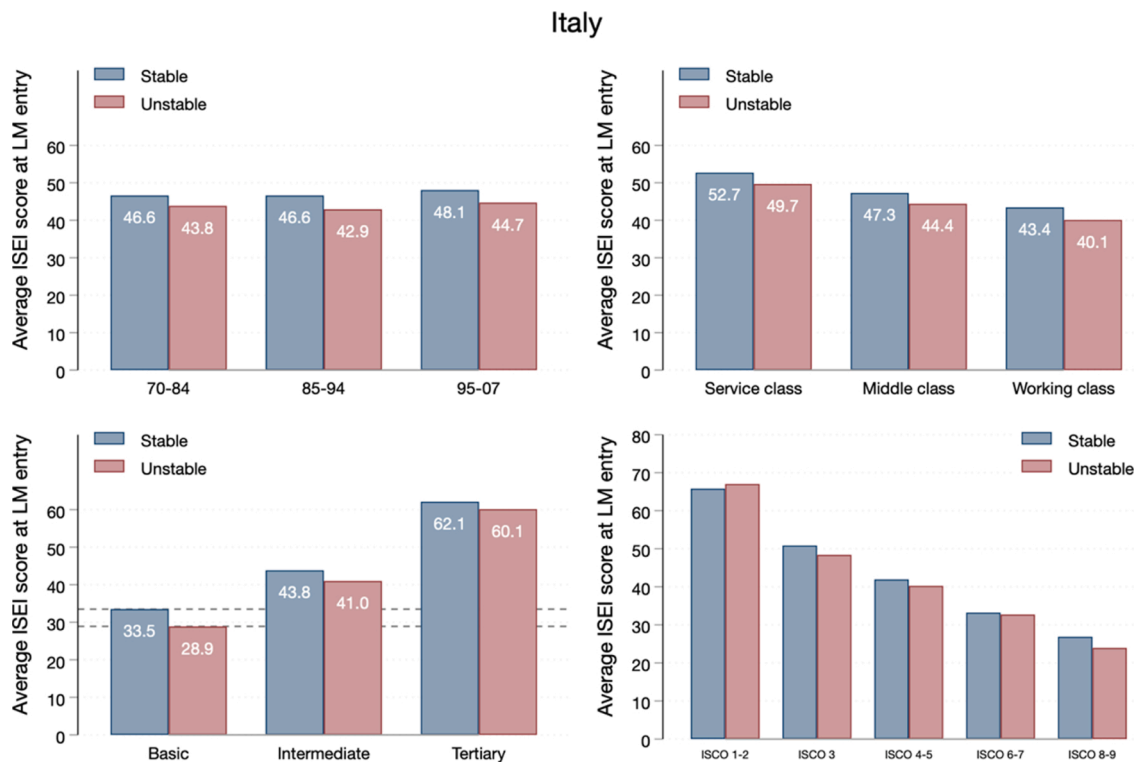


Fig. A2. Average ISEI score at labour market entry over school leavers cohorts (top left), class of origin (top right), own educational achievement (bottom left), and ISCO level of the first occupation (bottom right) – Italy.

Germany

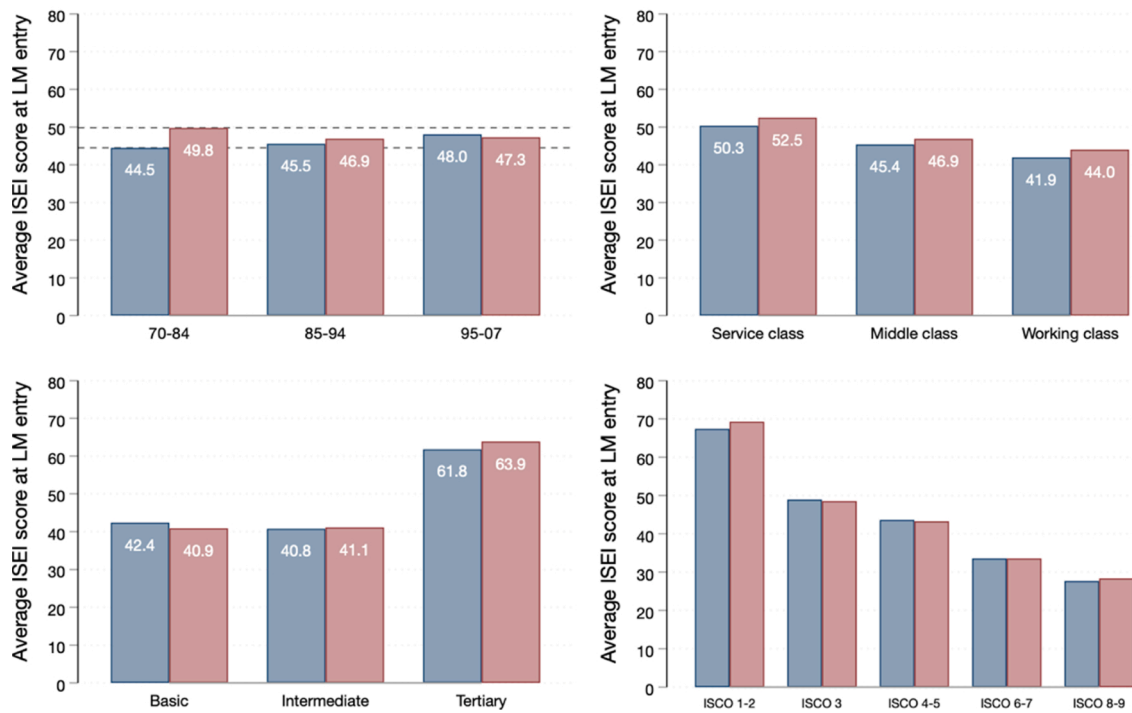


Fig. A3. Average ISEI score at labour market entry over school leavers cohorts (top left), class of origin (top right), own educational achievement (bottom left), and ISCO level of the first occupation (bottom right) – Germany.

Italy

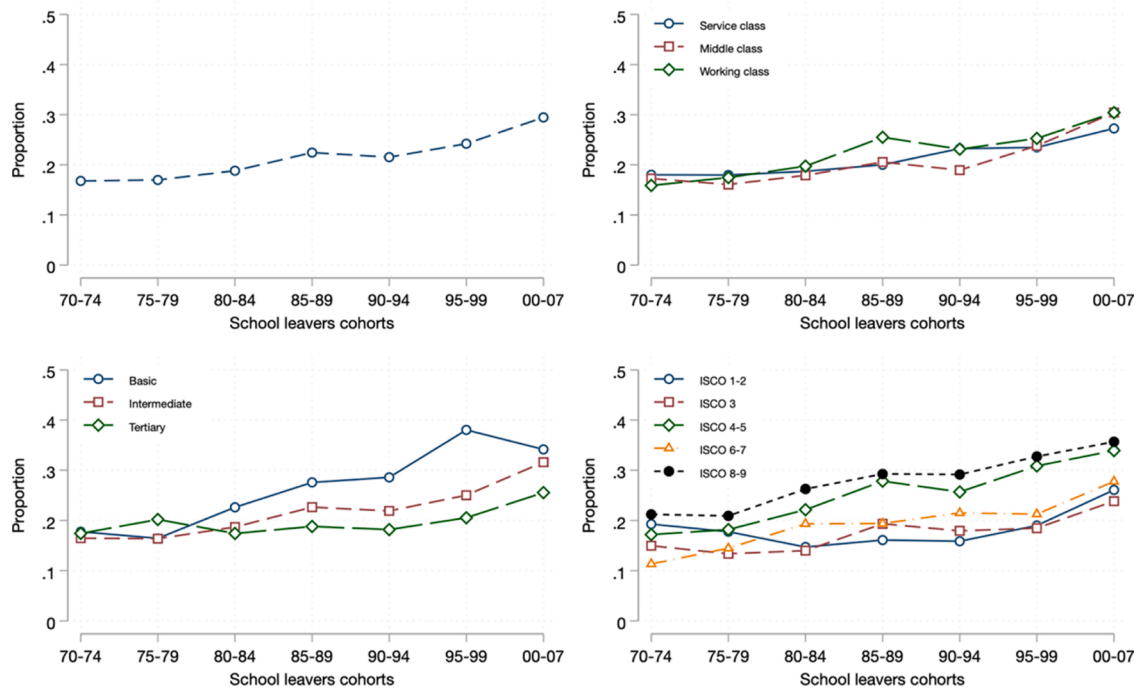


Fig. A4. Exposure to unstable entry (expressed in proportion) over school leavers cohorts and class of origin (top right), own educational achievement (bottom left), and ISCO level of the first occupation (bottom right) – Italy.

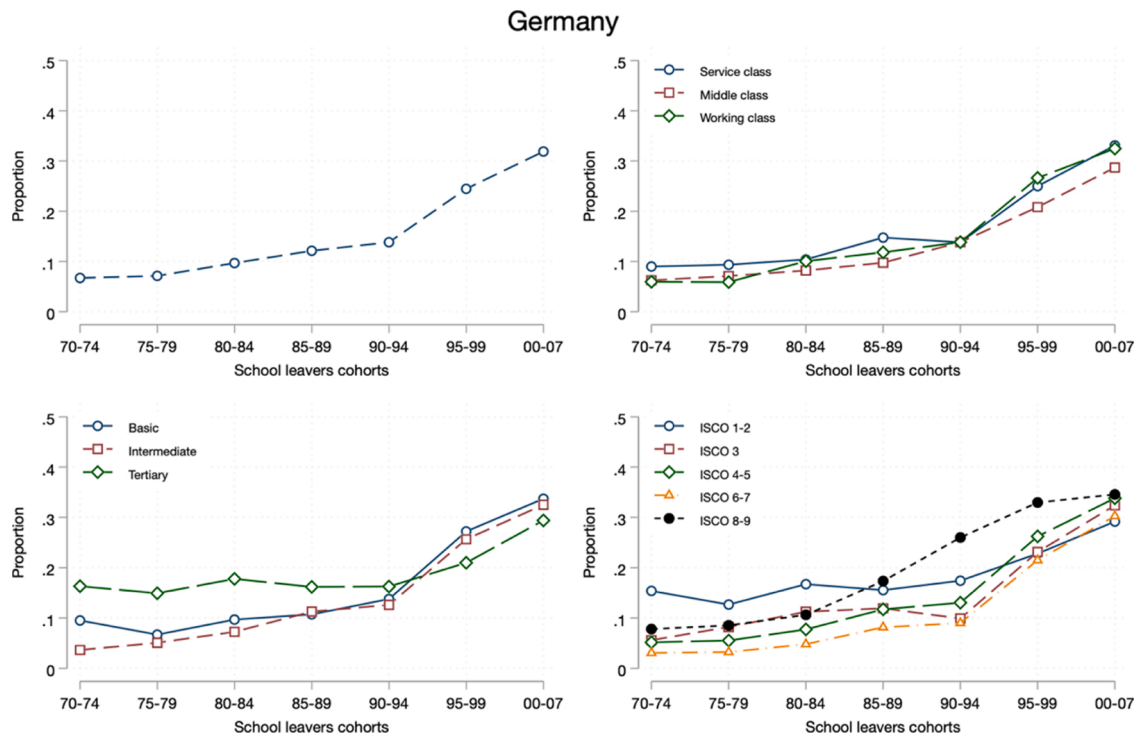


Fig. A5. Exposure to unstable entry (expressed in proportion) over school leavers cohorts and class of origin (top right), own educational achievement (bottom left), and ISCO level of the first occupation (bottom right) – Germany.

Table A3

Distribution of covariates among stable and unstable entrants before and after coarsened exact matching - Italy.

Italy	Unstable entry				Stable entry			
	Pre-matching		Post-matching		Pre-matching		Post-matching	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Female	0,54	0,50	0,54	0,50	0,45	0,50	0,45	0,50
<i>Educational achievement</i>								
None	0,01	0,09	0,01	0,09	0,01	0,07	0,01	0,07
Basic	0,07	0,25	0,06	0,25	0,06	0,24	0,07	0,25
Intermediate	0,72	0,45	0,72	0,45	0,71	0,45	0,72	0,45
Post-secondary voc	0,01	0,11	0,01	0,11	0,01	0,10	0,01	0,11
Bachelor	0,03	0,17	0,03	0,17	0,03	0,17	0,03	0,17
Master or more	0,17	0,37	0,17	0,38	0,18	0,39	0,17	0,38
<i>Age left education</i>								
16–20	0,72	0,45	0,73	0,45	0,70	0,46	0,73	0,45
21–25	0,17	0,38	0,17	0,38	0,19	0,39	0,17	0,38
26–30	0,08	0,28	0,08	0,27	0,09	0,29	0,08	0,27
31–35	0,02	0,15	0,02	0,14	0,02	0,14	0,02	0,14
<i>Cohort left education</i>								
1970–1984	0,34	0,47	0,34	0,47	0,43	0,50	0,38	0,49
1985–1994	0,32	0,47	0,32	0,47	0,32	0,47	0,28	0,45
1995–2007	0,34	0,47	0,34	0,47	0,26	0,44	0,34	0,47
<i>Parental social class</i>								
Service class	0,22	0,42	0,22	0,42	0,22	0,41	0,22	0,42
Middle class	0,38	0,49	0,38	0,49	0,40	0,49	0,38	0,49
Working class	0,40	0,49	0,40	0,49	0,38	0,49	0,40	0,49
<i>Parental education</i>								
ISCED 5 or more	0,08	0,26	0,08	0,26	0,08	0,27	0,08	0,27
ISCED 3/4	0,28	0,45	0,27	0,45	0,24	0,43	0,27	0,44
ISCED 2 or below	0,65	0,48	0,65	0,48	0,68	0,47	0,65	0,48
<i>Macro-region</i>								
North-West	0,21	0,40	0,21	0,40	0,23	0,42	0,23	0,42
North-East	0,30	0,46	0,30	0,46	0,27	0,44	0,27	0,45
Centre	0,18	0,39	0,18	0,39	0,19	0,39	0,18	0,39
South	0,22	0,41	0,22	0,41	0,23	0,42	0,22	0,41
Islands	0,10	0,30	0,10	0,30	0,08	0,27	0,10	0,30
<i>Wave</i>								
2009	0,52	0,50	0,52	0,50	0,57	0,50	0,56	0,50
2016	0,48	0,50	0,48	0,50	0,43	0,50	0,44	0,50

Number of strata: 335

Number of matched strata: 217

Table A4

Distribution of covariates among stable and unstable entrants before and after coarsened exact matching - Germany.

Germany	Unstable entry				Stable entry			
	Pre-matching		Post-matching		Pre-matching		Post-matching	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Female	0,54	0,50	0,54	0,50	0,50	0,50	0,48	0,50
Non-native	0,03	0,18	0,03	0,17	0,03	0,18	0,03	0,18
<i>Educational achievement</i>								
Basic or none	0,13	0,34	0,13	0,34	0,12	0,32	0,10	0,30
Vocational 1 st lvl	0,17	0,38	0,17	0,38	0,28	0,45	0,21	0,40
Abitur	0,27	0,44	0,27	0,45	0,36	0,48	0,27	0,45
Vocational 2nd lvl	0,03	0,18	0,03	0,17	0,05	0,21	0,03	0,17
UAS	0,08	0,27	0,08	0,27	0,07	0,26	0,08	0,27
University	0,32	0,47	0,32	0,47	0,13	0,33	0,32	0,47
<i>Age left education</i>								
16–20	0,34	0,48	0,35	0,48	0,49	0,50	0,34	0,48
21–25	0,36	0,48	0,36	0,48	0,36	0,48	0,36	0,48
26–30	0,25	0,43	0,24	0,43	0,12	0,33	0,24	0,43
31–35	0,05	0,22	0,05	0,22	0,03	0,16	0,05	0,22
<i>Cohort left education</i>								
1970–1984	0,31	0,46	0,31	0,46	0,52	0,50	0,37	0,48
1985–1994	0,29	0,46	0,30	0,46	0,31	0,46	0,25	0,43
1995–2007	0,40	0,49	0,39	0,49	0,17	0,38	0,39	0,49
<i>Parental social class</i>								
Service class	0,41	0,49	0,41	0,49	0,31	0,46	0,39	0,49
Middle class	0,24	0,43	0,24	0,43	0,27	0,44	0,27	0,44
Working class	0,35	0,48	0,35	0,48	0,43	0,50	0,35	0,48
<i>Parental education</i>								
ISCED 5 or more	0,43	0,50	0,43	0,50	0,34	0,47	0,42	0,49
ISCED 3/4	0,51	0,50	0,52	0,50	0,57	0,50	0,53	0,50
ISCED 2 or below	0,06	0,24	0,05	0,23	0,10	0,30	0,05	0,23
<i>Macro-region</i>								
West	0,77	0,42	0,78	0,41	0,68	0,47	0,69	0,46
East	0,14	0,35	0,14	0,35	0,23	0,42	0,23	0,42
Abroad	0,09	0,28	0,08	0,27	0,09	0,29	0,08	0,27
<i>Wave</i>								
2007–2008	0,38	0,48	0,38	0,49	0,34	0,47	0,35	0,48
2009–2010	0,25	0,43	0,25	0,43	0,26	0,44	0,28	0,45
2010–2011	0,01	0,11	0,01	0,09	0,01	0,11	0,01	0,09
2011–2012	0,29	0,45	0,29	0,46	0,28	0,45	0,29	0,46
2012–2013	0,01	0,11	0,01	0,10	0,02	0,13	0,01	0,10
2013–2014	0,01	0,11	0,01	0,11	0,01	0,10	0,01	0,11
2014–2015	0,01	0,08	0,01	0,07	0,01	0,10	0,01	0,07
2015–2016	0,01	0,08	0,01	0,07	0,01	0,09	0,01	0,07
2016–2017	0,01	0,08	0,01	0,07	0,01	0,10	0,01	0,07
2017–2018	0,03	0,18	0,03	0,18	0,05	0,23	0,03	0,18
Number of strata: 760								
Number of matched strata: 285								

Appendix B. Robustness checks

Figs. B1–B4

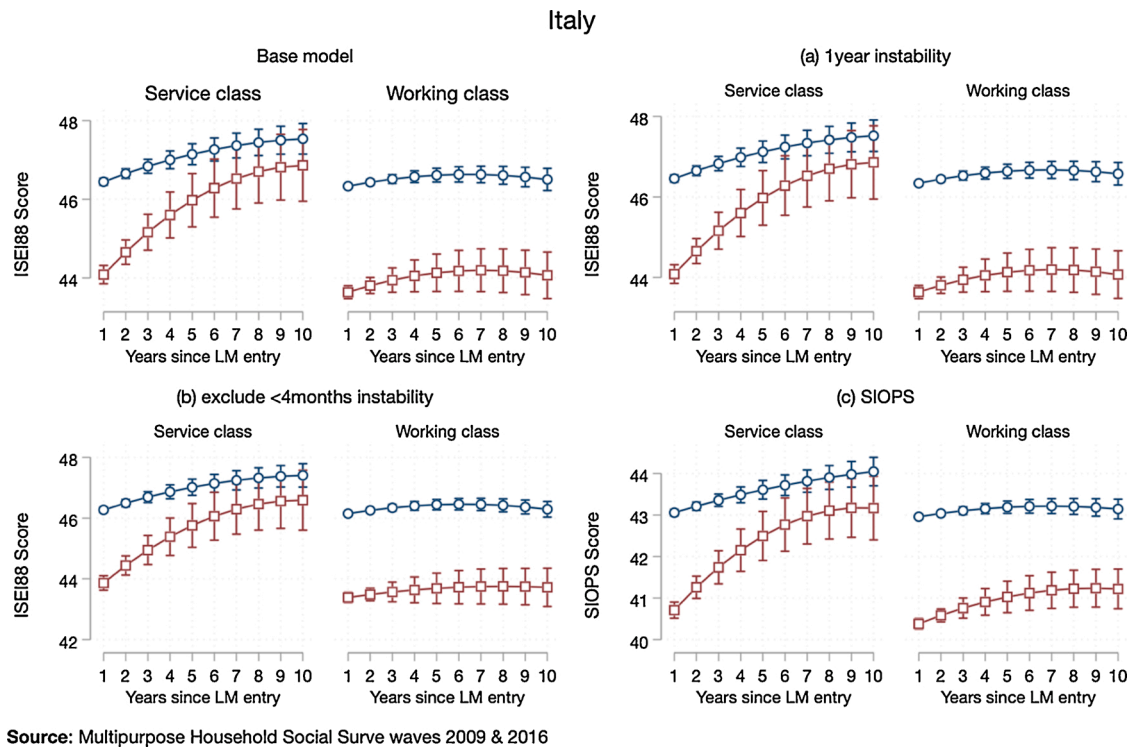


Fig. B1. Residual deso model for Italy (Fig. 1 in the core text) according to different treatment and outcome specifications.

Notes: Blue lines (and circles) indicate stable entrants; red lines (and squares) indicate unstable entrants. The top left panel reports the model as specified in the core text. Top right panel (a) defines the treatment condition (unstable entry) as starting flexibly and do not reach a permanent contract for during the first year in the labour market. Bottom left panel (b) builds on the core treatment definition (first 4 months as unstable), but the control group is composed only by labour market entrants with a permanent contract. Bottom right panel (c) adopts SIOPS as outcome variable instead of ISEI. In this last model, we controlled for the SIOPS score at the labour market entry to construct the *residual DESO* model.

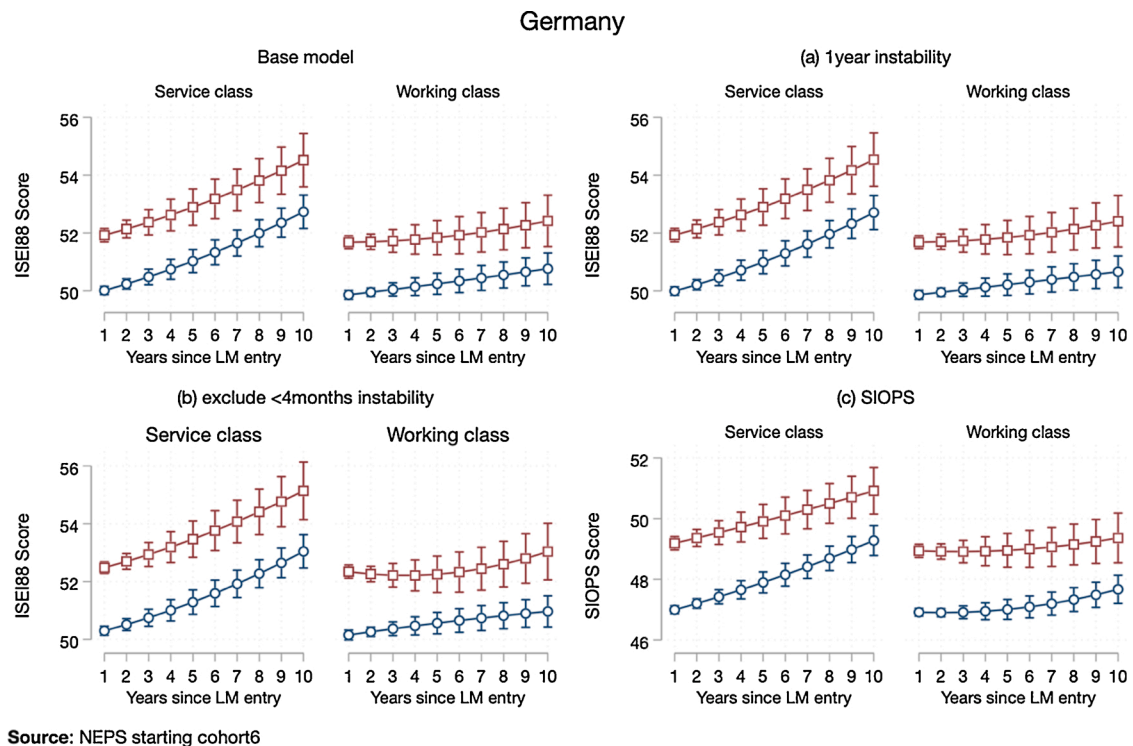


Fig. B2. Residual deso model for Germany (Fig. 1 in the core text) according to different treatment and outcome specifications.

Notes: Blue lines (and circles) indicate stable entrants; red lines (and squares) indicate unstable entrants. The top left panel reports the model as specified in the core text. Top right panel (a) defines the treatment condition (unstable entry) as starting flexibly and do not reach a permanent contract for during the first year in the labour market. Bottom left panel (b) builds on the core treatment definition (first 4 months as unstable), but the control group is composed only by labour market entrants with a permanent contract. Bottom right panel (c) adopts SIOPS as outcome variable instead of ISEI. In this last model, we controlled for the SIOPS score at the labour market entry to construct the *residual DESO* model.

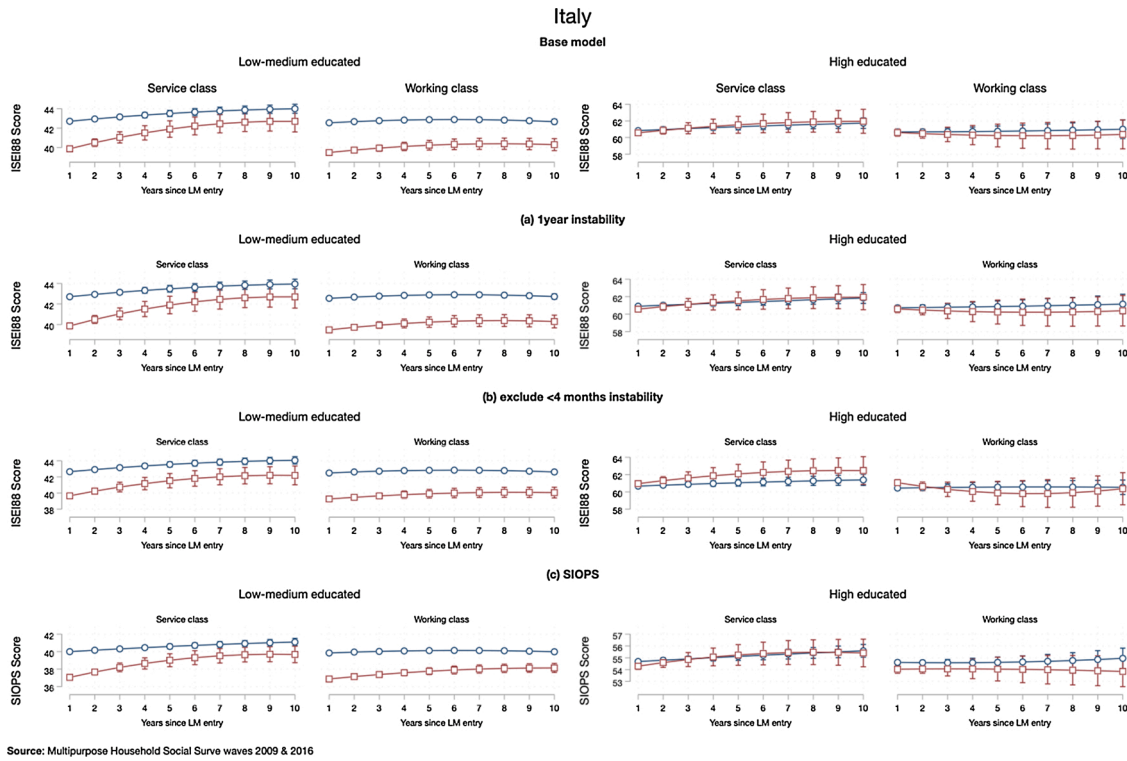


Fig. B3. Educational moderation of residual deso model for Italy (Fig. 2 in the core text) according to different treatment and outcome specifications. Notes: Blue lines (and circles) indicate stable entrants; red lines (and squares) indicate unstable entrants. The top left panel reports the model as specified in the core text. Top right panel (a) defines the treatment condition (unstable entry) as starting flexibly and do not reach a permanent contract for during the first year in the labour market. Bottom left panel (b) builds on the core treatment definition (first 4 months as unstable), but the control group is composed only by labour market entrants with a permanent contract. Bottom right panel (c) adopts SIOPS as outcome variable instead of ISEI. In this last model, we controlled for the SIOPS score at the labour market entry to construct the *residual DESO* model.

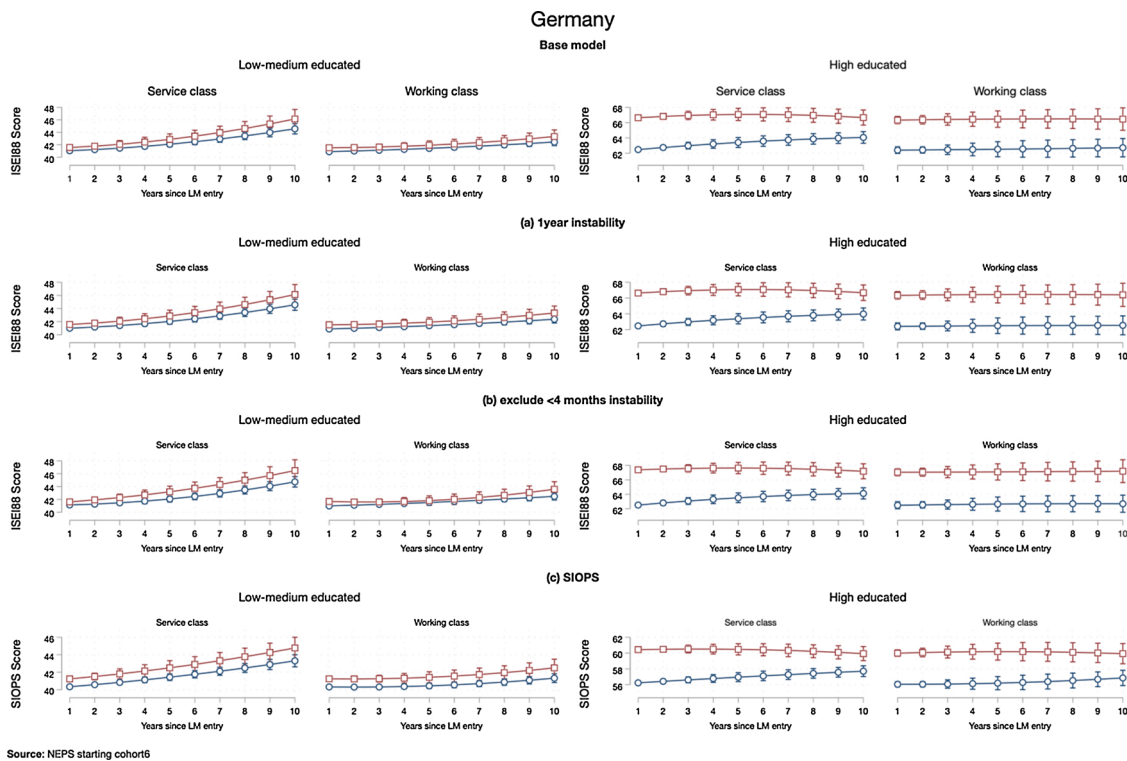


Fig. B4. Educational moderation of residual deso model for Germany (Fig. 2 in the core text) according to different treatment and outcome specifications. Notes: Blue lines (and circles) indicate stable entrants; red lines (and squares) indicate unstable entrants. The top left panel reports the model as specified in the core text. Top right panel (a) defines the treatment condition (unstable entry) as starting flexibly and do not reach a permanent contract for during the first year in the labour market. Bottom left panel (b) builds on the core treatment definition (first 4 months as unstable), but the control group is composed only by labour market entrants with a permanent contract. Bottom right panel (c) adopts SIOPS as outcome variable instead of ISEI. In this last model, we controlled for the SIOPS score at the labour market entry to construct the *residual DESO* model.

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