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Formal adult education and socioeconomic inequality: Second chances or Matthew Effects?

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Abstract

In countries around the world, population aging, technological change, and labor market transformations are leading to an increasing incidence of mismatch between the skills and credentials held by workers and those required by their jobs. This is leading large numbers of people to return to schooling to enhance their prospects in the workplace. Access to adult education is highly stratified, and the returns to educational re-entry vary across social categories. This state-of-the-art paper focuses on two aspects. First, it examines the degree to which adult education (specifically, degree-bearing education) most benefits the less advantaged and thus mitigates socioeconomic inequality (second chance effects). Second, it addresses the degree to which the benefits of adult education go primarily to those who are already advantaged (Matthew Effects). Our review adopts the perspective of the socioeconomic life course and is explicitly cross-nationally comparative.

KEYWORDS

adult education, educational attainment, Matthew Effects, social stratification, socioeconomic life course

Shortly before the acceptance of the final draft of the study my co-author, mentor, inspired sociologist, and my great friend, David B. Bills, passed away in 2021.

1 | INTRODUCTION

The decision of adults to return to formal education after having stepped away from school into work, family, or other roles has become a prominent feature of modern systems of social stratification and the life course (OECD, 2019, 2020). Several social and macroeconomic trends drive the increased incidence of adult education. Economic returns to advanced schooling are at historically high and often rising levels in many places. Increasingly, adults see their initial episodes of schooling as inadequate to the skill or credential demands of advancing their careers (Cronen et al., 2017) and turn to further schooling as a remedy for those skills gaps (Cunha et al., 2006). The demise of internal labor markets forces job seekers to pursue further credentials to signal their productive capacity to prospective employers, since they no longer have the opportunity to demonstrate this via traditional career lines within employing organizations. Further, the combination of rapid technological change in the workplace, occupational restructuring, the aging of the workforce, the mismatches between the skills and credentials of immigrants and the demands of the labor markets they are entering, and in many nations the declining rate of labor force participation among older workers all serve to intensify the need for adults to constantly and routinely upgrade their skills to remain competitive in the labor market. For a growing number of people in some countries (notably the United States), the pursuit of formal education after one has previously exited the educational system has become part of the normative life course. With notable exceptions, sociologists have been slow to appreciate the participation of adults in educational re-entry.

Comprehensive appraisals of the literature on adult education are now dated (Elman, 1998; Jacobs & Stoner-Eby, 1998). Recently, two competing narratives about adult education have emerged. The first—the Ameliorative—of these sees adult education as having the potential to diminish labor market inequalities. While many of the recognized signposts of the adult education literature emphasize its role as a social movement for self-improvement and personal empowerment (Jarvis, 2004; Richardson & King, 1988), other scholars emphasize its ability to enhance human capital (Jenkins et al., 2003; Kristensson Uggla, 2008). The emphasis here is on how adult education might help individuals overcome the disadvantages of educational "late starts" or "delayed completions," thereby serving as a "second chance" for those initially left behind (Jarvis, 2007, p. 191).

The Ameliorative narrative pays less attention to how participation in adult education perpetuates or even worsens inequality. Other scholars have begun to explore the stratifying consequences of adult education by being more accessible to those who are already in privileged educational or labor market positions (Elman & O'Rand, 2004; Hällsten, 2011; Kosyakova, 2018; Kosyakova & Gerber, 2019; Pallas, 2002). We can call this narrative Stratifying. This second narrative focuses on both the sources of inequality in access to adult education, and the outcomes of participating in it. Research here is often guided by the concepts of status maintenances (Jacob & Weiss, 2011; O'Rand & Henretta, 1999; Pallas, 2002), cumulative advantage/disadvantage (DiPrete & Eirich, 2006; Elman & O'Rand, 2004; O'Rand & Henretta, 1999) and the operation of Matthew Effects (Merton, 1968; see also Pallas, 2002).

Our goal is to critically assess the literature on adult education from the perspective of social stratification across the life course. We counter the argument that adult education ameliorates social inequality by providing a second chance to initially less educated labor market participants (i.e., Ameliorative narrative) with the argument that adult education worsens social inequality by being not only more readily available to but also more profitable for those who are already economically or socially advantaged (i.e., Stratifying narrative). We use this essay to weigh the evidence bearing on these two positions. Considering the literature on both access and returns to adult education permits us to offer a robust assessment of whether and how adult education contributes to social inequality in a broader sense.

2 | CONCEPTUALIZATION OF ADULT EDUCATION

We focus fairly narrowly on adult education earned in formal, credential-granting educational institutions (Elman & O'Rand, 2004). This is most often tertiary education, but many individuals also return to secondary schooling. We distinguish adult education from lifelong learning—the process by which individuals acquire and improve their

skills, knowledge, and competencies from various formal, non-formal, and informal learning activities throughout the life course, from pre-school to post-retirement, for personal, social, and/or professional reasons (Allmendinger et al., 2011; Kristensson Uggla, 2008). We are not concerned here with either programmatic or on-the-job-training (Bills & van de Werfhorst, 2017), non-credit bearing instruction, or other casual or non-formal learning.

Although any definition of adult education is inevitably somewhat arbitrary, a few common features emerge. Adult education is non-compulsory or voluntary. Adult education typically involves educational re-entry after one has attained and then left an initial level of formal education. Identifying the precise point of exit from the educational system is not always straightforward. One could think about leaving schooling to pursue work or family activities "full-time." Often, however, these roles are held simultaneously or episodically. A young person may temporarily enter the labor market to make enough money to finance the continuation of his or her interrupted studies. Similarly, family roles may intervene and lead to breaks in one's educational trajectory.

Empirical literature on adult education mostly defines adult learners as being above a traditional college-going age (often age 25). This can be a flawed measure, particularly since countries differ in their normative ages of educational exit and re-entry. In some nations many of those aged 25 are still pursuing their initial education level. The typical age of completing a first Bachelor's or equivalent degree is in the mid-twenties in such nations as Germany, Finland, Sweden, and Switzerland, and is higher in Israel (OECD, 2017, p. 419). On the other end of the age 25 cut-off, the educational re-entry of the less educated might be poorly measured. For instance, individuals with a maximum educational attainment of upper secondary level typically exit the education system between ages 16 and 20 (OECD, 2017, p. 419). Accordingly, their educational re-entry before age 25 will be underestimated. Recognizing the difficulties associated with age-related measures of adult education, recent studies have adopted a life perspective and now define adult learners as those who have completed their initial education by excluding educational (re-)entries in a typical age range (Blossfeld et al., 2014) and those before labor market entry (Kosyakova & Gerber, 2019; Witteveen, 2021). Thus, in nations in which the first Bachelor's (or equivalent) degree is normally obtained at age 23, individuals who gain these qualifications up to age 25 would be excluded from the analyses until they have graduated and entered the labor market.

Even with these definitional constraints, adult education remains extremely heterogeneous. Failure to consider this diversity underlies many of the inconclusive and inconsistent findings in the empirical literature. For instance, formal adult education may be distinguished by the qualification level over which transitions are taking place. These might include, for instance, tertiary versus non-tertiary (Hällsten, 2011; Kosyakova et al., 2016), university level versus sub-university level (Kosyakova, 2018) or academic versus vocational education (Bukodi, 2017; Elman & O'Rand, 2007). Other studies consider the type of adult education being pursued relative to the initial one and distinguish between upgrading (achieving higher formal level of education than initial one), sidestepping (achieving an identical or lower level of education than initial one) (Kosyakova & Gerber, 2019; see also Kilpi-Jakonen et al., 2012; Li et al., 2000; Vono de Vilhena et al., 2016) or downgrading (achieving lower level of education than initial one) (Moss-Pech et al., 2021). Other researchers have considered employers' involvement or support in adult education (Dämmrich et al., 2014). Participation rates in these various types of adult education appear to be driven by distinct motives, diverse stratification patterns, different returns prospects, and institutional regimes that vary across nations with different social welfare systems.

3 | THEORIZING ADULT EDUCATION AND LIFE CHANCES

Since Blau and Duncan (1969) status attainment models have documented the role of education in determining life chances. Still, while often adopting a socioeconomic life cycle model (Duncan et al., 1972), status attainment (and associated human capital models) for too long assumed a normative life course of predictable and sequential transitions. In this model, completed level of schooling affected entry and subsequent mobility through an occupational hierarchy.

While this provided a useful first approximation, the increasingly heterogeneous and even disorderly nature of the life course that emerged at the turn of the last century made evident the need for more refined models.

More recently, sociologists have emphasized that the socioeconomic attainment process is socially structured in part by inequalities at the time of attaining initial education (Boudon, 1974). These inequalities are further reproduced and amplified over the career (Müller & Shavit, 1998), following the logic of the "Matthew Effect." This term was introduced into sociology in Robert Merton's attempt to explain the trajectory of scientific careers (Merton, 1968). Essentially the same process is often referred to as "cumulative advantage or cumulative disadvantage" (DiPrete & Eirich, 2006). The logic of the Matthew Effect—the term is taken from the passage from the Book of Matthew that states "For whoever has will be given more, and they will have an abundance. Whoever does not have, even what they have will be taken from them."—is that "a favorable relative position becomes a resource that produces further relative gains" (DiPrete & Eirich, 2006, p. 271). In other words, "the advantage of one individual or group over another grows (i.e., accumulates) over time, which is often taken to mean that the inequality of this advantage grows over time" (DiPrete & Eirich, 2006, p. 272).

In the context of adult education, the cumulative advantage thesis would predict that those holding favorable socioeconomic positions would increase their advantages over the less highly placed by pursuing adult education. Some analysts contest this Stratifying narrative, and maintain that by enhancing one's educational level and access to better jobs, adult education can potentially provide a means of reducing these initial inequalities and offsetting any Matthew Effects (Hällsten, 2011). Advocates of this Ameliorative narrative often describe adult education as a "second chance" that offers opportunities for those who failed in their schooling" or for those wo "never had a first chance" (Jarvis, 2007, p. 191).

Relying on rational choice and life course theories, Kosyakova and Gerber (2019) offered a theoretical model to conceptualize the decisions of adults to (re-)enter education in order to upgrade their initial education level or to attain education at the same level or below (sidestepping) as a consequence of resources and incentives associated with one's social position and the institutional arrangements to which adults are exposed. The authors structured their analysis around the relationships between social position and adult education and stressed the importance of differentiation among different types of adult education. They demonstrate that different kinds of adult education have different effects on social inequality (see also Hällsten, 2011; Virdia & Schindler, 2018).

Analyzing the impact of adult education on social stratification is further complicated by the choice of appropriate groups for making comparisons. Net of whatever controls one may apply, educational re-entrants may be advantaged relative to those who do not re-enter but disadvantaged relative to those whose schooling was uninterrupted. Some scholars have compared socioeconomic attainment between "early" graduates—that is, those who entered education system during typical ages—versus "late" or "mature" graduates—that is those who did so later in life. Scholars making such comparisons typically show that the later entries are more pronounced among disadvantaged individuals, for example, in terms of earnings or unemployment experience (Egerton, 2001a; Elman & O'Rand, 1998). More recent studies often compare participants in adult education with non-participants. This strategy generally shows that adult learners have rather advanced socioeconomic positions (Hällsten, 2011; Kosyakova & Gerber, 2019).

4 | SOCIO-ECONOMIC SELECTIVITY IN ADULT EDUCATION PARTICIPATION

For the most part, access to adult education is influenced by the same factors that influence access to other educational and socioeconomic outcomes. We discuss some of these factors next.

4.1 | Social origin

Social origin is a strong predictor of educational attainment in the early socioeconomic career (Breen & Jonsson, 2005). We know much about the relationship between social origin and educational attainment in the earlier life course, but social origin may also be implicated in stratification in educational transitions in the later life course.

Overall, individuals from higher class origins tend to gain access to higher education "on time"; while those from lower classes often postpone their educational involvement to later stages (Bozick & DeLuca, 2005; Egerton, 2001b; Weiss & Roksa, 2016). The contention here is that mature students from lower social classes are less constrained by origin effects in the later life course, as they become less dependent economically and socially from their families (Egerton, 2001b).

However, when comparing participants with non-participants, previous research identified that advantaged social origin is an important predictor of participation in adult education (Cincinnato et al., 2016; Elman & O'Rand, 2007). This is particularly the case for educational upgrading (Kosyakova & Gerber, 2019) or for a transition into academic adult education (Bukodi et al., 2019). The reasons for the positive relationships between social origin and participation in adult education are not immediately obvious, since this relationship could be expected to decrease as individuals age and their reliance on their families of origin declines. The proposed mechanisms behind this positive relationship include (a) available parental educational and occupational resources to cover (direct or opportunity) costs associated with re-entering education, and (b) the higher value attached to education as a marker of status or as an intrinsic good due to the class-based socialization earlier in the life course (Kosyakova & Gerber, 2019). As Carr and Sheridan (1999) showed, parental income increased the propensity of college enrollment in the later life course for men, although parental educational attainment had no effect. These results could imply that parents benefit their adult offspring more through the provision of material resources (perhaps in the form of absorbing opportunity costs) and less in the form of human capital.

Another possible mechanism is that individuals from more advantaged social origins who were unable to reach the social position of their parents early in their working lives eventually "catch up" in the later life course (Hällsten, 2011). In this way they compensate for a "false" step in their early educational career (Bernardi, 2012). Gerber and Hout (2004) called this "regression toward origins," a process in which previously downwardly mobile individuals (relative to their origins) improve their occupational position over the life course. In this sense, adult education works as an engine for elite reproduction by enabling individuals with advantaged family background—who struggle initially in the labor market—to regain their original elite status (Kosyakova & Gerber 2019) or to achieve "counter-mobility" back to their social origin (Bukodi, 2017; Bukodi et al., 2019).

4.2 | Educational resources

Many researchers have reported a positive relationship between previous educational attainment and adult education (Carr & Sheridan, 1999; Cruce & Hillman, 2012; Elman & O'Rand, 2007; Jenkins et al., 2003; Kilpi-Jakonen et al., 2015). While lower or medium educated individuals often participate in formal schooling later in life (Egerton, 2001b), it is clear that the more education that people have, the more likely they are to get even more (Denice, 2017; Hällsten, 2011; Pallas, 2002). Of course, the claim of human capital theorists that "learning begets learning" (Becker, 1964; Heckman, 2000) is perhaps too simple, and researchers have identified many mechanisms that underlie the linkage between early and late education (see, for instance, Ainsworth & Roscigno, 2005; Maralani, 2013).

There are interesting nuances in the research literature. For instance, studies examining different types of adult education point to the greater propensity of the initially mid-educated to upgrade and of the initially higher educated to sidestep (Kosyakova & Gerber, 2019), that is, to attain another higher degree (Kosyakova, 2018). Similarly, earlier episodes of adult education increase the propensity of individuals to pursue another round of adult education (Cruce & Hillman, 2012; Elman & O'Rand, 2007; Jenkins et al., 2003). While this finding is secure, there is some ambiguity

about why education begets education. It could be that positive experiences with education lead to a growing appreciation of further education and to a growing sense that higher education is achievable and realistic. Alternatively, those who attained high levels of education earlier in their lives are likely to have moved into labor market positions or professions that require routine or occasional educational upgrading.

4.3 | Labor market attainment

Those who pursue adult education are more likely than those who do not to be initially employed (Cruce & Hillman, 2012; Kilpi-Jakonen et al., 2012; Kim et al., 2004), have higher earnings (Hällsten, 2011), and hold higher occupational status (Elman & O'Rand, 1998; Kim et al., 2004; Pallas, 2002). Participants not only have the economic resources to return to time- and cost-intensive formal adult education, but may also have a stronger need for keeping their skills up to date (Carr & Sheridan, 1999) or for maintaining their occupational status (Hällsten, 2011). Adults who are educationally underqualified for their current occupation are particularly prone to upgrading (Kosyakova & Gerber, 2019), perhaps in order to retain or even regain their competitive advantage in the labor market.

Many individuals in less-favorable economic circumstances are also responsive to adult education as a way to improve their labor market status. For instance, lower wages (Jepsen & Montgomery, 2012; Stenberg, 2011), and unemployment experience (Denice, 2017; Hällsten, 2011; Stenberg, 2011) often "push" individuals toward adult education. Higher occupational aspirations may contribute to these patterns. As Carr and Sheridan (1999) showed, secondary segment workers who aspire to mobility into the primary segment often put more effort into adult education. Among those initially tertiary-educated, particularly unemployed adults are more likely to attain another tertiary degree than those employed (Kosyakova et al., 2016). There is also some evidence that underqualified employment results in higher rates of sidestepping (Kosyakova & Gerber, 2019). These patterns suggest that a combination of "unsuccessful" labor market position and initially advantaged educational attainment may propel adults to (re-)enter the educational system to presumably change their qualifications by acquiring new credentials because their current qualifications have proven unhelpful in securing a desirable labor market position.

Summing-up, individuals from advantaged social origins and those who have already achieved high levels of schooling and high-status occupations are more likely to pursue additional schooling than are those in less privileged positions. On balance, these findings provide greater evidence for the prevalence of Matthew Effects than they do for the second chance effects in the world of adult education. Some reservation regarding causal relationships should be preserved since few studies have addressed potential unobserved factors as aspirations, motivation, or ability. Indeed as Bukodi et al. (2019) have shown, cognitive abilities moderate to some extent the positive effect of advantaged social background on chances to obtain more qualifications in adulthood.

5 | ADULT EDUCATION AS AN AVENUE TO LABOR MARKET SUCCESS

The previous section demonstrated sources of inequalities in access to adult education. The extent to which these inequalities are sociologically important is largely contingent on the benefits that are derived from adult education. That is, if the returns to adult education are negligible, who participates and who does not becomes less important. What does the literature have to say about the returns to adult education? Answering this question presents challenges. Analysts need to be clear about the group to which adult learners are being compared. Specifically, the success of adult learners might be measured against mature graduates, or against non-participants. Most of the studies that compare early to mature graduates have found a disadvantage for mature graduates in terms of earnings (Egerton, 2001a, 2001b; Elman & O'Rand, 2004; Kmec, 2011; but, see Egerton, 2000).

In contrast, studies that compared adult learners to non-participants revealed returns that although not typically large are reasonably prevalent. Adult education improves employment probabilities (Hällsten, 2012; Jenkins

et al., 2003; Kilpi-Jakonen et al., 2012), particularly for women (Jenkins, 2006). Others have reported that adult education facilitates exit from unemployment (Jenkins, 2006; Jenkins et al., 2003), and from precarious labor market positions (Vono de Vilhena et al., 2016). A few researchers have found that compared to non-participants in adult education, adult learners experience upward career mobility (Felmlee, 1988; Kosyakova, 2018; Tuijnman et al., 1988) and increased wages (Blanden et al., 2012; Hällsten, 2012; Stenberg, 2011), although others find no such relationship (Jenkins et al., 2003; Silles, 2007; Tuijnman et al., 1988).

Owing to data restrictions, most empirical studies focus on the overall returns to adult education. Only several studies delved deeper by looking at various sources of heterogeneity in returns to adult education. For instance, Bukodi et al. (2019) found that high ability men and women from disadvantaged origins are more successful at gaining access to vocational rather than academic adult education, but that it is academic adult education that provides the surest route to upward mobility. They concluded that academic adult education is limited in its ability to provide second chances (see also Bukodi, 2017). Kosyakova (2018) showed that adult education is an efficient tool for career mobility, but is more so for those in initially advanced career stages. In this way, adult education, rather than ameliorating social inequality, exacerbates or maintains it. In turn, Jenkins et al. (2003) presented evidence that the least educationally qualified may indeed benefit from formal adult education, suggesting an ameliorating effect on social inequality. Hällsten (2012) pointed to greater returns in the middle than upper income levels. Similar conclusions have been reported by Vono de Vilhena et al. (2016) looking at the variation of the adult education effect by job precariousness of (non-)participants.

The returns to formal degrees attained in mature ages also differ by gender, being higher for women (Blanden et al., 2012; Felmlee, 1988; Hällsten, 2012) and often null (non-existent) for men (Blanden et al., 2012; Silles, 2007). In contrast, Kosyakova (2020) revealed a double disadvantage for women: they were not only less likely to participate in adult education than men but also experienced lower returns to their participation for employment outcomes. Perales and Chesters (2017) additionally reported heterogeneous returns across different types of educational transitions, but little evidence of gender differences. Stenberg and Westerlund (2016) found that many of the economic returns to adult education only emerged several years after re-entry.

Of course, the relationship between participation in adult education and labor market outcomes could be spurious and attributed to unobserved characteristics that drive both participation in and returns to adult education. For instance, highly motivated adults are more likely to opt for educational re-entry for purpose of higher wages. Because of these endogenous choices it is unclear whether the effect of adult education on wages simply reflects self-selection into adult education or whether adult education has a causal effect. Applying various estimation methods to address self-selection into adult education, previous studies have shown that adult education benefits participants in terms of employment prospects (Hällsten, 2012), higher wages (Blanden et al., 2012 for women; Stenberg & Westerlund, 2016) and exit from precarious jobs (see Vono de Vilhena et al., 2016 for the United Kingdom and Russia).

Turning to the question whether adult education can compensate for pre-existing inequalities in labor market outcomes, our review shows that adult learners enjoy improved career prospects compared with non-participants. While this implies that adult education might be a powerful instrument to lessen social inequalities by narrowing the gap between educational groups, the necessary condition for such a conclusion would be either equal or higher returns to adult education for initially educationally or economically disadvantaged individuals compared with the initially advantaged. We find no unequivocal evidence that this is the case: While some studies suggest higher returns for those initially educationally disadvantaged, there is more evidence that adult education either pays off equally for all groups or benefits predominantly those who are initially already advantaged. We maintain that existent social inequalities endure with or can even be boosted by adult education.

6 | HOW NATIONAL INSTITUTIONS SHAPE ACCESS AND RETURNS TO ADULT EDUCATION

The "systemic environment" of institutions often plays an important role in individual choices and decisions to participate in education as well as in constraining or facilitating educational returns to the labor market (Allmendinger, 1989). Similarly, institutional contexts may shape inequality in both participation and returns to adult education (Saar et al., 2013). Nations with less pronounced inequality of opportunities for adult education tend to have greater participation rates in adult education (Groenez et al., 2007; Jung & Cervero, 2002; Kilpi-Jakonen et al., 2015). Research on this is scarce, in large part because suitable data remain limited. For both sociological and policy purposes, we need to better understand which institutions may promote or build barriers for adults to (re-)enter educational systems. Among the most important and perhaps the most promising for future research, the recent literature distinguishes educational and employment systems and the role of the welfare state.

6.1 | Educational systems

Adult education rates are shaped to a great extent by the interdependence of educational and employment systems (Blossfeld et al., 2014; Kilpi-Jakonen et al., 2012, 2015; Saar et al., 2013; Wolbers, 2005). There is some consensus that adult education rates are lower in countries with more stratified, vocationally oriented, and highly standardized educational systems (e.g., Germany). This is because of the lower need to upgrade skills and to compensate for the lack of specific skills. Further, such countries offer few possibilities to accommodate adult learners' needs once they are enrolled. As Weiss (2019) argued: while the German higher education system is almost as open for adult learners as the American or the Swedish systems, there are few possibilities for part-time studies, credit transfers, or summer courses (Weiss, 2019). At the same time, educational systems oriented around the production of more general skills (e.g., the United States) have a stronger common core in the curriculum, thereby becoming less time consuming and demanding for adult learners. In support of that Groenez et al. (2007) showed that more comprehensive education systems result in growing participation rates in adult education (though, see Wolbers, 2005 for contra-evidence).

The openness of educational systems towards mature students has a positive association with both enrollment rates in and returns to adult education (Kilpi-Jakonen et al., 2012). Although the age gradient seems to be reduced in education systems with a lower focus on youth, they continue to be important drivers for reproduction of educational inequalities (Blossfeld et al., 2014). Sweden is an interesting case. Swedish tertiary education is intentionally open to adult learners and labor market legislation supports employees who take a leave to study, providing exceptional incentives for educational re-entry. Hällsten (2012) found that educational re-entry in this environment does in fact pay off, although more in the middle than upper income levels, and more for women than for men. This probably explains why Sweden demonstrates one of the highest prevalence of adults engaged in learning (Blossfeld et al., 2014; Kilpi-Jakonen et al., 2015).

Nations with relatively less-educated populations have more need to (re-)invest into education and, hence, to encourage adult education (Kilpi-Jakonen et al., 2014). A "learning begets learning" hypothesis, however, also suggests higher participation rates in countries with more educated populations (Dieckhoff, 2007). On balance, evidence is more in line with the Matthew Effect prediction (Jung & Cervero, 2002). At the same time, access to adult education seems to be less stratified in countries with more educated populations, probably owing to the necessity for the lower-educated to catch-up with their more-educated peers (Kilpi-Jakonen et al., 2015).

Technological change, globalization, and innovations in the deployment of labor can lead to the deterioration of skills. These structural changes may increase the incentives of firms and workers to (re-)invest in adult education in order to meet the requirements of changing labor markets (Bartel & Sicherman, 1998; Kosyakova & Gerber, 2019). Similarly, countries' openness towards adult learning measured via greater innovation rate, expenditures on research

and development, and the coherence and comprehensiveness of their adult learning framework go hand-in-hand with proliferating participation rates in adult education (Dämmrich et al., 2014; Groenez et al., 2007).

6.2 | Welfare state

The openness of the national welfare system has a strong impact on the role of the state in contributing to the individual's options for education and employment for vulnerable groups (Esping-Andersen, 1990; Lassnigg, 2005; Rubenson & Desjardins, 2009). In this sense, opportunities to rely on the welfare support or social security system enable adults to undertake time- and cost-intensive education in the later life course (Rillaers, 2001), particularly of vulnerable groups like women, older workers, migrants, and the unemployed (Blossfeld et al., 2014; Rubenson & Desjardins, 2009). Indeed, greater expenditures on social protection or more generous welfare policies have been found to promote adult education (Dämmrich et al., 2014; Kilpi-Jakonen et al., 2012). Empirical tests of the heterogeneity of the welfare protection effect on the propensity to undertake adult education are scarce.

By supporting a combination of education and/or work with family life, family policies can shape educational trajectories in the later life courses (Chang, 2000). These policies may be particularly efficacious for women (Dämmrich et al., 2015; Rubenson & Desjardins, 2009). Unfortunately, there is limited evidence on the role of family policies on the propensity to (re-)enter schooling later in life. Studies that consider the welfare regime (Esping-Andersen, 1990) might shed some light here: female participation rates in formal adult education without employer support in the Nordic countries, that facilitate combining work and family and that emphasize gender equality, are more pronounced relative to Southern and Central European countries, characterized by the male breadwinner model (Dämmrich et al., 2014; Rubenson, 2006; Rubenson & Desjardins, 2009). Despite growing evidence of gendered participation in adult education (Astone et al., 2000; Cruce & Hillman, 2012; Denice, 2017; Fouarge & Schils, 2009; Pallas, 2002), also from a cross-comparative perspective (Blossfeld et al., 2014; Kilpi-Jakonen et al., 2012), this research often relies on general welfare state categories and fails to examine systematically the importance of various aspects of family policies, for example, leave policies, flexible work arrangements, childcare support, and measures that increase father involvement.

6.3 | Employment systems

Labor market institutionalization and employment regulation may also shape access to adult education (Blossfeld et al., 2014; Dieckhoff, 2007; Kosyakova, 2018; Vono de Vilhena et al., 2016). In general, stronger institutional boundaries, limited movement between occupations, and lower labor market dynamics restrict opportunities for labor market improvements. Hence, lower (expected) adult education rewards make adult education investments less attractive. At the same time, countries with stronger institutional boundaries are likely to have more equalized institutional support for various groups to participate in adult education. In contrast, more liberalized employment systems create fewer obstacles for the positive impact of adult education on employment outcomes. In these systems, labor market success is strongly determined by individual resources such as performance and recent education and employment history, while initial educational attainment recedes into the background (DiPrete et al., 1997). Correspondingly, human capital investments become better proxies for individual motivation, skills and productivity, making adult learners more attractive to employers. In such a context, however, stratification in access to adult education is also likely to be more pronounced.

To assess the impact of labor market institutionalization, the cross-comparative literature considered countries' union density, labor market flexibility, and wage compression (Dämmrich et al., 2014), though only a few of these indicators have been tested for participation in formal adult education. In contrast to theoretical predictions, empirical research considering all types of educational activities finds positive impacts of the degree of labor market

institutionalization (Groenez et al., 2007), whereas no such relationship has been established if only formal adult education is taken into account (Dämmrich et al., 2014). Our suspicion, which awaits empirical test, is that countries with high rates of job changing have higher rates of re-entry into education and training (Estévez-Abe et al., 2001). No study thus far has examined whether labor market institutionalization shapes inequality in access to adult education for various vulnerable groups.

Sievertsen (2016), using Danish data, reported that the propensity of adults to (re-)enter education correlates positively with labor market prosperity. This may be because of the potentially higher certainty of future positive returns (Groenez et al., 2007). Higher unemployment rates are also likely to increase the propensity of adult education as a result of individuals' effort to improve or to secure labor market position. Here again empirical evidence implies either negative or no effects (Blossfeld et al., 2014; Groenez et al., 2007). A recent study by Witteveen (2021) finds that the patterns may be more complex than this. American and European youth differ in their responsiveness to economic conditions when making decisions about educational reentry, with American being generally more risk-averse because of their uncertainty about the expected benefits from further schooling (Witteveen, 2021).

The findings of cross-comparative research are not easily summarized. Adult education usually pays off, but more for some groups than for others, and more in some institutional environments than in others. Perhaps most importantly, the weight of the evidence seems to point towards Matthew Effects, although these effects are not persistently large, and their import is very often conditional on other variables. Put simply, we need to know much more about the impact of adult education on socioeconomic outcomes across different employment, educational, and welfare state institutional regimes.

7 | CONCLUSION AND AVENUES FOR FUTURE THEORETICAL AND EMPIRICAL WORK

We began this paper with reasons to anticipate increased enrollments in adult education. Among others, the demands for new technology-generated skills, an aging workforce, transformed occupational structures, and migration will continue to put pressure on labor markets. As important perhaps as any of these factors is educational expansion itself. The human capital claim that "learning begets learning" (or perhaps more accurately, "credentials beget credentials") captures the behavior of highly schooled populations. Net of everything else, a population of well-educated people creates its own demand for even greater levels of schooling.

From a sociological viewpoint, adult education is a potentially important tool for lessening social inequalities that emerged in the earlier life course. It creates the possibility of improving an initial educational level, changing a qualification, and updating skills and knowledge. All these adjustments, in turn, might be essential for enhancing one's labor market position and opportunities for career development. As our review has shown, this "second chance" perspective of adult education is, however, disputable. Individuals from advantaged social origins and those in privileged labor market positions—higher prior levels of schooling, more desirable jobs, more skills on which to build—are able to leverage these advantages for further access to human capital. This has been demonstrated for various levels and types of formal adult education and across various countries. In short, Matthew Effects are ubiquitous in the world of adult education.

This conclusion sustains when considering the benefits of adult education. Adults benefit economically from returning to school. "Second-chance" schooling significantly raises the likelihood that individuals will achieve more secure jobs with higher wages than had they remained out of the educational system. At the same time, the evidence that adult education either pays off equally for all groups or benefits predominantly those who are initially already advantaged is more often manifested than the evidence for greater labor market benefits for those initially disadvantaged. We maintain that existent social inequalities endure with or can even be boosted by adult education. Even after people have completed their initial spells of schooling, there is a remarkable accumulation of educational and occupational (dis-)advantages across the life course in which the already advantaged gain further ground. We agree with

Pallas (2002, p. 351) that "those who are already 'rich' by virtue of attending college do get richer." There may be some selection effects at work as well, if returns are low in part because of the lower participation rates of less educated people, although those few studies that have the requisite data to detect selection effects generally do not find them (e.g., Blanden et al., 2012; Hällsten, 2012; Vono de Vilhena et al., 2016).

We need research that provides deeper understanding of how Matthew Effects operate in the realm of adult education. Essentially, this means building models that illustrate the changing effects of social background and first spell of education over the life course. We need to ask if initial advantages or disadvantages grow or diminish as careers develop, for instance, by means of examination of the cumulative social origin effects at each educational and labor market transition. Moreover, individuals' subsequent economic and non-economic outcomes throughout their life course are contingent on the previous decisions and experiences made along these social pathways. Participation in and returns to adult education reveal a highly selective process which in turn requires more sophisticated theoretical grounding than any simple micro-, meso-, and macro-perspective. The theoretical task for sociologists is now to more fully account for both access to and outcomes of educational re-entry in life course models of stratification and to think about how best to model the selection processes underlying the timing of different educational transitions and factors shaping these processes.

Matthew Effects are unlikely to appear independently of other sources of disadvantage such as gender, race/ethnicity, age, or migrant status. Later educational trajectories may rely heavily on earlier educational trajectories, but access to earlier educational trajectories themselves depend on a range of ascribed and achieved factors. There may be instances too of adult education weakening the link between ascription and achievement. Hence, an intersectional lens on access to adult education is necessary.

While the benefits of adult education seem to be disproportionately captured by those already advantaged, there is some evidence for adult education to have the potential to bring marginalized actors into the socioeconomic mainstream, at least beginning to turn some outsiders into insiders. Again, context is crucial. Vono de Vilhena et al. (2016), for instance, suggested greater possibilities for adult education policy in the United Kingdom and Russia than in Spain. Our review further highlights the complexity of adult education related to individual education and work experience during times of societal changes. However, solid empirical evidence is still scarce. We need greater efforts to relate participation in and the outcomes of adult education to national institutions and policies going beyond the use of—in many cases outdated—general welfare state categories. We therefore strongly endorse cross-comparative research on adult education helping in understanding the potential of institutions and policies to shape stratification in access to and benefits of adult education. One possible avenue would be to rely on cross-comparative data sources such as the Programme for the International Assessment of Adult Competencies and examine the potential of various education, labor market and welfare policies to reduce stratification in access to adult education between initially advantaged and disadvantaged.

We believe that well-designed and carefully targeted adult education has the potential of being a powerful policy tool and hope that this essay helps establish the empirical base for the design and delivery of such programs.

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CONFLICT OF INTEREST

Not applicable.

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