

# SOCIO-DEMOGRAPHIC STRATIFICATION AND EDUCATIONAL ATTAINMENT: STRUCTURAL INEQUALITIES, MECHANISM AND POLICY IMPLICATION ACROSS CONTEXTS

ZAKARIA, Z.<sup>1</sup> – RAJASEGARAM, A.<sup>2\*</sup>

<sup>1</sup> *Faculty of Social Sciences and Humanities, Universiti Malaysia Sabah, Sabah, Malaysia.*

<sup>2</sup> *Faculty of Arts and Social Sciences, University of Malaya, Kuala Lumpur, Malaysia.*

*\*Corresponding author  
e-mail: dr.anuratha[at]um.edu.my*

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**Abstract.** Educational attainment remains one of the most powerful mechanisms through which social stratification is reproduced or challenged across societies. This study critically examines how socio-demographic profiles: comprising age, sex, household structure, ethnicity, migration background, socioeconomic status, and occupation; systematically shape educational trajectories and outcomes across diverse contexts. Drawing on comparative sociological literature and longitudinal evidence, the analysis moves beyond individualistic explanations of educational success to foreground the structural, cultural, and institutional mechanisms that condition access to learning opportunities. The findings demonstrate that disparities in educational attainment persist not merely between individuals, but across clearly patterned socio-demographic groups, with cumulative advantage operating across generations through family resources, cultural capital, institutional knowledge, and policy environments. Migration background, parental education, and socioeconomic positioning emerge as particularly salient determinants, influencing not only graduation rates but also field of study selection, credential accumulation, and long-term occupational mobility. Importantly, the study highlights substantial within-country heterogeneity, revealing that regional, cohort-based, and institutional variations often rival or exceed cross-national differences. While educational expansion has increased overall participation, it has not eradicated inequality; instead, it has reshaped stratification by redistributing advantage within increasingly differentiated systems. The analysis underscores critical gaps in current research, particularly the limited integration of cultural, institutional, and policy mechanisms within unified analytical frameworks and the scarcity of comparative data beyond high-income contexts. By synthesizing evidence across demographic, structural, and policy dimensions, this study contributes to a more nuanced understanding of educational inequality and emphasizes the necessity of equity-oriented, system-level interventions. Ultimately, the findings reaffirm that educational attainment is not simply an outcome of merit or effort, but a socially structured process deeply embedded in broader patterns of inequality.

**Keywords:** *educational attainments, social stratification, socio-demographic profiles, inequality, policy*

## Introduction

From enhanced educational opportunities but also fosters a more cohesive and equitable society on multiple interconnected levels. The landscape of educational attainment serves as a vivid and compelling illustration of an exceptionally pronounced degree of variation that stretches widely across an incredibly vast multitude of socio-demographic profiles, encompassing individuals from diverse backgrounds and rich experiences. These individuals are situated in various regions and cultures around the globe, reflecting an incredible tapestry of perspectives and realities that inform their educational journeys. This pronounced variation significantly mirrors broader societal patterns, which undeniably play a crucial role in influencing not only the methodologies through which educational success is traditionally attained but also the diverse and

nuanced ways in which this success is perceived and understood by a wide array of individuals and groups alike. Each group contributes their unique perspectives, insights, and lived experiences into the rich and multilayered conversation surrounding education, thereby fostering a sophisticated dialogue that enriches the collective understanding of its importance and relevance within contemporary society. These varied perspectives, rich in multifaceted context and depth, manifest themselves across an extensive and beautifully diverse spectrum of environments and sociocultural contexts throughout society and beyond. They present an intricate and richly woven tapestry of understanding that encapsulates the various implications and interpretations surrounding educational experiences at every conceivable level and stage. This allows for a closer examination of the essential role that education plays in shaping individual and collective potential in distinct and meaningful ways.

The stark disparities that are readily observable among these myriad groups exert a profound impact on societies across the globe, significantly influencing not only the various opportunities that are accessible to individuals but also substantially molding their income levels, career trajectories, and overall mental, emotional, and social well-being within the broader societal framework in which they reside and navigate daily. This emphasizes how interconnected these factors truly are in their complex interplay. The socio-demographic profile of an individual acts as a significant determinant, shaping the paths they traverse through the complex, layered, and varied educational landscapes they evolve through over time. This elaboration influences the life experiences that deeply resonate with their unique personal journeys, leading to outcomes that can differ dramatically based on these foundational elements. Differences in backgrounds, contexts, and available opportunities significantly affect the educational narrative that unfolds as individuals pursue their aspirations. This expansive discussion encompasses an extensive array of interrelated factors that intricately illuminate the intertwining aspects of these myriad elements with the multifaceted, often complex educational experiences that individuals navigate throughout their unique, personal, and varied educational journeys. In turn, it encourages a holistic view of what factors contribute to success across different contexts, namely social, political, and economic dimensions. Within this complex context characterized by diversity, it becomes imperative to thoroughly understand how the relationships among these factors intricately intertwine with one another, weaving together a comprehensive narrative of educational attainment that is both remarkable in its depth and, at times, troubling in its stark realities.

This comprehensive understanding serves to highlight the multifaceted nature of educational access and success in different environments, exposing the challenges and disparities that persist within educational frameworks. This intricate and interconnected web of educational outcomes emphasizes the critical importance of obtaining a comprehensive and deep understanding of the multifaceted socio-demographic factors at play in shaping educational trajectories. Such understanding provides necessary insights that are crucial to tackling the ongoing disparities that many individuals face across various scales and sectors. These factors comprise a wealth of elements that interact in unique ways, including race, economic background, educational history and attainment, gender, age, migration status, and familial influences. Each of these factors plays crucial roles in shaping life trajectories, outlooks, and future prospects for individuals as they maneuver through their diverse and dynamic array of educational experiences and transitions in life. Ultimately, these elements influence their overall

success levels, engagement levels, and personal fulfillment profoundly. A thorough and comprehensive analysis embarks upon an in-depth exploration of the myriad ways in which differing socio-demographic characteristics interactively influence educational attainment and engagement, encompassing various pivotal phases of life that individuals traverse and maneuver through. Such exploration sheds light on both obstacles and potential solutions, actively illuminating not only the persistent challenges that loom large for numerous learners but also the emerging opportunities that beckon. It also highlights the existing gaps in educational access and support systems that undeniably require substantial systemic attention, especially in the face of escalating disparities that continue to affect learning opportunities on multiple fronts and levels. Critical aspects such as age, sex, migration background, economic status, geographical location, and educational involvement synergistically combine to form a complex matrix that significantly affects not only the accessible learning environments available to students but also the overarching accessibility of educational resources throughout their formative years.

This multifaceted dynamic profoundly influences the quality of education they receive, along with the depth of their academic engagement, thereby setting a foundational tone and pace for their lifelong learning journey. These interrelated elements ultimately shape the overall educational experience and outcomes for students in both substantial and meaningful ways. Thus, they facilitate a richer, more nuanced understanding of the educational landscape and the multitude of intertwining factors that shape it in a contemporary and ever-evolving context. This dynamic perspective offers insights that are observed not only within specific individual countries but also across an expansive tapestry of nations, each uniquely characterized by differing educational policies, cultural values, and societal expectations that collectively inform the very framework of educational opportunities and support structures available to learners. Such a diverse landscape impacts their academic success and personal development trajectories in significant ways, leading to variations in how education is perceived and implemented globally. In this manner, it maps a comprehensive overview of the international educational scenario. As these evolving policies and societal values dictate—with great nuance and detail, how education is valued, pursued, and ultimately experienced across various levels throughout the educational continuum and beyond, they cultivate diverse outcomes and experiences that can vary widely across different communities and cultural settings. This reality emphasizes the paramount importance of local contexts and individual experiences in understanding education within a global framework. This extensive and detailed analysis draws upon a wide-ranging spectrum of meticulously gathered international survey data, with sources that span various reputable and authoritative channels, thereby enriching our understanding of educational dynamics and the intricate factors at play.

These sources encompass comprehensive government reports from a multitude of nations, well-established educational institutions, reputable independent research organizations, and an array of diverse educational datasets that illuminate key trends while revealing underlying patterns associated with educational success and failure. They provide vital insights into the reality of educational experiences worldwide, thereby highlighting the pressing need for reforms and equitable practices that are tailored to address specific community needs. This rich and diverse body of data encapsulates a concerted effort toward clarifying the core dimensions and key theories that establish meaningful connections between distinct socio-demographic profiles and

the resultant educational outcomes derived from such profiles, thereby linking the variables that influence educational equity. Understanding context is not just valuable but crucial for fostering inclusive educational environments. By laying a robust groundwork for actionable insights and data-informed strategies, this analysis can guide vital improvements in educational practice and policy aimed at developing effective interventions that directly address the persistent challenges woven into educational systems. This ensures that the core factors of equity and inclusivity remain continually at the forefront of educational reform and development. By effectively highlighting these intricate relationships and their far-reaching ramifications on learning opportunities, student engagement, and overall developmental outcomes, the study aims to foster a deeper, richer, and more comprehensive understanding of the multifaceted factors that significantly contribute to educational success and equity in educational access and opportunities. This pursuit calls for collaborative initiatives that bridge gaps and foster an environment conducive to all learners.

Simultaneously, it shines a spotlight on the pervasive inequities that unfortunately exist within the educational landscape on a global scale, inviting discourse and dialogue about strategies that can be innovatively implemented to effectively address these disparities. It underscores the crucial importance of inclusive practices that authentically involve communities and individuals at all levels of the educational journey, thereby ensuring that every student—regardless of their background, unique challenges, or the complex circumstances they face—receives the adequate support they need to thrive in today's increasingly diverse contexts and situations. This approach offers fruitful pathways for improvement in teaching methodologies and policy systems tailored to diverse needs and learning styles prevalent in varying educational settings, adapting to the nuances of each learner's context. Pinpointing potential pathways for directly addressing these disparities serves as an essential guide for policymakers, educational leaders, and engaged stakeholders who are fully dedicated to transformative change. Such guidance aims toward the progressive development of more equitable educational practices that can substantially amplify opportunities and positive outcomes for all individuals, irrespective of their unique backgrounds and specific circumstances they may encounter throughout their educational and life journeys. Thus, this vision underpins a comprehensive strategy for inclusivity that resonates throughout society and underscores the shared responsibility to foster an equitable educational landscape. This approach not only seeks to illuminate the significant barriers faced by underrepresented groups—notably those of low-income students, first-generation learners, refugees, immigrants, and individuals from marginalized communities—but also aims to recognize, uplift, and celebrate the inherent strengths and potential that lie within these richly diverse communities of learners. By fostering collaboration and mutual support among various groups, this inclusive approach encourages the cultivation of an enriching educational environment for everyone involved. These foundational strengths indeed play an essential role in contributing to a richer, more engaging educational environment capable of fostering the vital connections and collaborations that can ultimately benefit all students across the educational system and the broader society as a whole. Through focused analysis, rigorous research, and passionate advocacy, the study aspires to create actionable insights which inform strategic initiatives specifically designed to cultivate a more just and inclusive educational setting. This setting ultimately aims to appreciate and deeply value diversity across all facets of humanity and every social experience available to learners. By promoting a comprehensive

understanding of the complexities inherent in education today, the field can advance significantly in its efforts. By underscoring the fundamental importance of inclusivity, equity, and comprehensive understanding within educational practices, the central aim remains focused on substantially enhancing the learning experiences and future successes of every student regardless of their initial standing in life, socioeconomic background, or the multitude of challenges they may face along their educational paths. This unwavering commitment to inclusivity and equity not only benefits individuals poised to gain enhanced educational opportunities but also strengthens the fabric of communities and society at large. It fosters the potential for a truly cohesive and equitable social dynamic

Socio-demographic distinctions such as age, sex, ethnicity, nativity, migration background, socio-economic status, and occupation are fundamental to research on educational attainment. Age, sex, and household composition define an individual's demographic profile, while ethnicity, nativity, and migration background indicate group affiliation and potential discrimination. Socio-economic status, defined by parental occupation, parental education, and household income, and occupation, shaped by educational attainment and career choice, signal social stratification and access to resources. These profiles affect educational decisions, experiences, and aspirations through their influence on family support, school quality, peer contact, and cultural and institutional factors. Such mechanisms have been studied for decades in developed countries; corresponding analysis in Africa, Asia, Latin America, the Middle East, and the Pacific is comparatively scarce (Fei et al., 2009; Breslau et al., 2008; Casanova et al., 2005).

## **Results and Discussion**

### ***Conceptual framework and research questions***

Educational attainment remains one of the best predictors of future labor market opportunities (Sakız and Aftab, 2019; North and Emmett, 2000). A comprehensive understanding of educational attainment in Canada first requires an appreciation of the various socio-demographic profiles along which analyses can be conducted. Socio-demographic profiles constitute fan-width ways of grouping the population into different categories in the hopes of revealing systematic differences across categories that might otherwise be overlooked.

Understanding educational attainment through the lens of socio-demographic profiles reinforces the importance of analyzing wider, more complex systems instead of merely the level of individualism to which a society aspires. In Satici and Can (2016) sociological overview that draws from education literature spanning several decades and thousands of studies, an emphasized focus on broader social and structural factors through socio-demographic profiles predicts educational outcomes more accurately than mere individualistic accounts. A socio-demographic profile includes a grouped categorical variable with a systematic interrelation to educational attainment. Key variables such as age, sex, and marital status can highlight emerging profiles (Thiele et al., 2016; Shen and Saijo, 2008) as can more complex variables such as nativity, immigration, and migration history. Socio-economic data including parental income, number of siblings, and household composition further illustrate the interplay of broader systems.

Educational attainment analyses must also consider which educational credentials matter for which occupations at which levels—a question that only more complex models can navigate (Wickersham et al., 2021; Westin et al., 2018). Examining only the highest educational attainment reached explains barely a quarter of the pattern, while delimiting analysis to credentials and specific educational attainments associated with certain socio-demographic profiles greatly improves predictive scope and accuracy (Wickersham et al., 2021). Therefore, socio-demographic profiles and educational attainment together combine multiple educational levels (e.g., degree or diploma) across indicators (e.g., graduation status, field of study) to account for the complex interplay between economy and education dynamics that vary strikingly across discipline and state (Westin et al., 2018).

A central guiding question delves into not only what diverse socio-demographic profiles exist within a given population but also how these various profiles interact and correlate with the levels of educational attainment achieved by individuals. Further guidance and inquiry consider questions such as these: Which distinct profiles emerge from the various population groups that we observe and study? What specific educational attainments are found to predominate among these identified profiles? What effects persist and remain significance even after controlling for geographic variations or other fundamental economic variables that might influence outcomes? Which based assumptions and perceptions might inadvertently misguide and distort analyses (e.g., regarding the selection of the potentially wider and often mischaracterized socio-demographic distribution that ought to be considered in our examination)?

Educational attainment represents an important dimension through which socio-demographic profiles influence individuals' lives. Socio-demographic variables have generated a large and diverse literature spanning many disciplines and theoretical perspectives (Shen and Saijo, 2008). The perspective adopted here primarily draws from sociology, exploring the relationship between socio-demographic profiles and educational attainment from the late 1940s onwards. The focus is on profiles defined by demographic composition, social stratification, and territorial distribution; theoretical frameworks relating exclusion to patterns of educational attainment; and respected, evidence-based gaps in the literature.

The lack of internationally comparable data significantly restricts the potential use of country or regional aggregates when it comes to framing the selection of sectoral and variable considerations. This inherent limitation becomes particularly pronounced when one seeks to draw comprehensive and meaningful conclusions across different contexts. As a consequence, the specification is ultimately confined to three notable country-cases that are situated in Continental Europe—namely Austria, Germany, and Switzerland. These specific countries were selected with care due to their geographical proximity to the core of the socio-demographic and educational attainment discussions, as well as the corresponding availability of exceptionally high-quality longitudinal datasets. Such invaluable datasets are essential for thoroughly investigating the intricate interrelationships that exist among a variety of individual-level variables and their far-reaching implications for broader societal trends and outcomes that affect diverse populations in various ways.

### ***Socio-demographic profiles: Demographic composition and social stratification***

Educational attainment plays a significant role as a critical determinant influencing social stratification within societies. Socio-demographic profiles, which encompass a

variety of factors, refer to the demographic composition of distinct groups that can include aspects like age structure, sex composition, household structure, ethnicity, nativity status, migration history, socioeconomic standing, and occupational roles. In contrast, social stratification involves the complex, unequal distribution of social opportunities and resources that arise from the interplay of these various factors. It is essential to recognize that attainment levels differ notably not just among individuals according to their own socio-demographic characteristics but also across broader sub-population groups. These groups can be categorized by regions, provinces, municipalities, and even entire countries. Each of these areas presents its unique complexities and disparities in educational access and achievement (Fei et al., 2009; Breslau et al., 2008; Casanova et al., 2005).

Canada's diversity, encompassing a mix of demographic backgrounds such as age, religion, ethnicity, and language, contributes to the complexity of its population structure. The country's population characteristics have evolved since Confederation, making it a rich environment for studying social stratification and comparing different groups. Canada ranks among the highest on the Global Retention Framework Variable for educational attainment. Despite this, serious gaps in educational attainment persist between socio-demographic groups at different levels—sub-populations, provinces, and individuals. The examination of sub-population groups based on socio-demographic profiles and the sub-groups they characterize constitutes a strong entry point for understanding the relationship between social stratification and education, given that populations in Canada possess the requisite demographic diversity.

### *Age, sex, and household structure*

Socio-demographic profiles significantly affect educational attainment in many fundamental and crucial ways. A greater understanding of these intricate relationships may very well inform policy efforts that demand and strive for greater equality in student success across various demographics. Factors such as age, sex, household structure, ethnicity, nativity, migration background, and a range of socioeconomic characteristics are among the most frequently examined aspects in this rich field of study. Several major research questions delve into whether educational graduation rates or overall levels vary significantly by group and, when discrepancies arise, why these differences occur. The access to resources and different levels of academic preparedness, as well as variations in languages spoken, aspirations held, expectations surrounding educational success, or previous experiences within the education system are the most commonly studied mechanisms behind these disparities; additionally, the broader policy context also plays an important role in shaping these outcomes. However, evidence of the links between socio-demographic factors and educational attainment remains mixed, indicating that more detailed and thorough analyses are warranted to gain a clearer understanding of these complex dynamics.

These mechanisms and why they do not universally drive attainment inequality are poorly understood, the evidence base is limited, and many countries show sharp within-group differences. The focus here probes patterns of educational attainment across groups, considers the main factors that explain these disparities and the full breadth of that explanation across countries, and highlights implications for policy, practice, and educational equity. Age and sex are key variables. The educational resources required for highest-level graduation generally increase with age. For sex, evidence indicates that girls outperform boys in most countries; female students are also preferred in fields such

as health and education, where graduation rates at the highest levels are relatively high. The implications of household structure for educational attainment are less clear.

### ***Ethnicity, nativity, and migration background***

Students with a migration background remain less educationally advantaged than their native peers, with substantial variation across origin groups. In Germany, the immigration-specific standardized share of both native-born and foreign-born second-generation migrants captures educational attainment differences between German natives and second-generation migrants well. The secondary-school graduation probability of children of parents from the large non-EU immigration wave of the 1990s is approximately four percentage points lower than that of German natives. A metaanalysis of studies examining educational outcomes of native or second-generation children of migrants finds that in a number of receiving countries—including Canada, France, Italy, Germany, the Netherlands, Spain, and the United Kingdom—second-generation children of immigrants from predominantly Muslim countries show low educational attainment relative to minorities from non-Muslim countries.

### ***Socioeconomic status and occupation***

Socioeconomic status (SES) represents a cluster of interconnected variables, including income, occupation, and education level. Cumulative advantage—those with the fullest building blocks of education being even better positioned to obtain additional, higher education—suggests that education can also be viewed as a contingent component of SES rather than a foundational one (Fei et al., 2009; Breslau et al., 2008; Casanova et al., 2005). Cumulative advantage operates similarly for occupational position; having an education credential may channel graduates into credentialed positions as opposed to lower tier occupations that do not demand such prior preparation. The SES measure thus also accounted for the highest occupational category based on the longest-held job using the occupation classification system in the U.S. Census. Each occupation was coded into a three-category classification managerial/professional, non-managerial, and not in the labour force—aiming to approximate the full spectrum of occupations.

### ***Patterns of educational attainment across groups***

Educational attainment varies greatly between socio-demographic groups over time. Respondents with a university degree tend to concentrate among younger age cohorts, non-visible minorities, and children of higher-education parents (North and Emmett, 2000). A clear downward educational trend exists across cohorts related to parental educational background. Significant differences persist, reflecting longer-term processes of social stratification and variable expansion of egalitarian policies.

### ***Graduation rates and highest education level***

Dropout rates from various institutions of higher education are an important indicator of the equity of educational opportunity for all social groups, taking into account the social stratification of the population. Graduating from an institution of higher education is often viewed as an indicator of social mobility and achievement. The enormous costs associated with college, university, and professional schooling, combined with a

growing number of institutions of higher education, provide evidence of increased interest in schooling beyond high school. The substantial differences by race, ethnicity, and nativity level at which individuals complete secondary school or attain an equivalent degree, the substantially reduced likelihood of completing post-secondary schooling among those who attain the secondary level at a lower age compared to groups that accomplish that goal at an older age, and the lack of equivalent completion rates for first-generation college attenders all indicate that access to high-quality elementary and secondary schooling is a major determinant of post-secondary attainment.

### ***Field of study and credential types***

Across Australia, New Zealand, and the United States, most higher-education students major in fields related to health or education. Even when controlling for socioeconomic background, age, previous academic performance, and current financial status, women remain significantly more likely to choose these areas of study. While factors discouraging women from pursuing STEM degrees have been widely debated, the influence of personal or family characteristics on subject selection remains poorly understood. Examining interactions for selected major groupings reveals that Asian-background students in New Zealand are less likely than Māori or European-background students to study a STEM-related major. However, Asian-background students in Australia are about as likely as those with a non-English-speaking background to be enrolled in a STEM-related major and more likely to be studying Information Technology than those with a native English background. In contrast, Indigenous students are overrepresented in health and education areas.

Research consistently shows that first-generation university students are less likely than their peers to complete their degree on time. Differences in completion rates are also apparent when examining parental levels of attainment: only 52 per cent of degree-seeking students whose parents do not hold any postsecondary qualification complete their degree within six years when attending a four-year college, and only half of those enrolled in a two-year college complete their program within three years. However, from a student's perspective, higher education is not binary; when considering educational outcomes in more depth, completion results appear less dramatic. Indeed, almost no differences remain when the analysis examines whether students earn any college credential associate or bachelor degree within an extended time frame. Key analyses, nevertheless, remain near a completion falsehood whenever examining outcomes by major category or intended course of study.

### ***Temporal trends in educational attainment***

Changes in the educational landscape of Pakistan have occurred at varying temporal rates across demographic cohorts. Concerning gender, a pronounced decline in the percentage of individual educational attainment restricted to only primary schooling is observed, alongside an upsurge in representation at the secondary educational tier when transitioning from the 60–64 to the 15–19 demographic range. The gender distribution exhibits a more negatively skewed tendency for males compared to females upon this longitudinal progression. Further, when contrasting the 60–64 and 20–24 cohort periods, a persistent trend is identified where younger females demonstrate heightened proclivity towards university-level qualifications. These developments imply a gradual

abatement of prevailing economic and social impediments that previously inhibited female access to tertiary education in Pakistan. In the context of older cohorts born between 1919 and 1945 in West Germany, the highest academic qualification attained by individuals at age 40 reveals notable temporal shifts. The peak of academic degree acquisition for the middle and upper strata occurred around 1950, followed by a noticeable decline, which remained true despite continuing educational expansion. Conversely, the acquisition of vocational and tertiary diplomas showed a discernible overall increase among lower social tiers. Apart from the 1930 cohort, the longitudinal alterations in upper social strata were modest for educational degrees.

### ***Mechanisms linking profiles and attainment***

An extensive literature presents a broad array of mechanisms that tie various socio-demographic profiles to numerous educational indicators. These mechanisms fall into three main areas: resource access and academic preparation; cultural and institutional factors tied to experiences; and policies and educational systems operating at student, institutional, or system-wide levels. Investigating the relationships among socio-demographic profiles, educational attainment indicators, and the mechanisms linking them reveals gaps in the literature. Policy and educational systems most frequently characterize the mechanisms analyzed in education systems worldwide. The absence of an explicit analytical framework often hampers the relevant discussions, highlighting a need to strengthen the theoretical foundation and underpin the empirical analysis. The socio-demographic profiles studied frequently align with students' access to resources—income, wealth, assets, capital, support, skills, and experience—and to prior academic preparation. The subsequent literature exists among diverse bodies of empirical inquiry emphasizing only specific profiles. The relationships observed in the patterns of educational attainment explored exhibit broad variation according to each distinctive framework.

### ***Resource access and academic preparation***

Established theories indicate that socio-demographic factors affect access to educational resources, which subsequently impacts student achievement and educational outcomes. The production framework posits that the cultivation of students' abilities reflects varied access to educational resources before, during, and after schooling; students from disadvantaged households benefit less from families, communities, and institutions than do more advantaged peers. Family socioeconomic, cultural, and social backgrounds engender differing levels of material, information, advice, and emotional support. Other sources highlight how cultural capital, educational institutions, and academic or employer networks further separate different groups. In addition, three agnotological approaches emphasize how familiarity with the education system and institutional knowledge about further education options or admission requirements shape students' chances of obtaining higher or desired qualifications. Poor knowledge of the education system constrains the pursuit of desired educational options and thus further opportunity. In turn, these agnotological mechanisms differ between demographic groups, assisting or disadvantaging access to their own or wider networks. In a nation without compulsory education, access to formal knowledge depends on prior exposure, including family exposure and educational resources. A production-function perspective identifies four key factors determining the stock of knowledge: prior

knowledge, learning effort, coverage of educational institutions, and quality of learning environments. Accordingly, income influences education via access to preparatory knowledge rather than the value of the education system itself. Access to educational (learning) resources thus remains a key explanatory variable.

### ***Cultural and institutional factors***

Educational achievement is a primary determinant of economic status and social stratification. Theories of social stratification and cumulative advantage suggest that socio-demographic profiles shape educational attainment through cultural and institutional factors. Socio-demographic characteristics and educational attainment were measured for young adults aged 25 to 34 in Canada and the United States for the year 2016. Cultural and institutional factors, themes that dominate the analysis of socio-demographic patterns of educational attainment, are among the factors for which data are not available. The Canadian Education and Training Survey and the American Educational Longitudinal Study provide a rich source of information to address this gap and explore further the broader institutional context and the mechanisms linking socio-demographic profiles to educational attainment. The cultural dimension encompasses the respondent's spiritual and religious beliefs and the values and practices supported by those beliefs. Cultural-separation theory posits that adherence to ethnic-religious norms inhibits educational attainment. Institutional factors refer mainly to guidance and support from parents. According to the institutional theory of the family, the availability of resources from kin influences educational participation. Two empirical studies model the influence of spiritual-religious and guidance-support factors on educational attainment across ethnic-religious groups of adolescents and young adults in Canada and the United States.

### ***Policy and educational systems***

Since the fall of communism in Central and Eastern Europe (CEE), educational attainment has grown markedly across the region, yet significant inequalities persist. As part of a broader examination of educational inequalities, analyse inequalities in educational attainment across CEE countries and the extent to which these disparities are explained by differences in offspring's educational attainment or other family background characteristics. They focus on the educational systems of the region to understand how they shape inequalities in access to post-secondary education and to highlight the emergence of two distinctive patterns. The educational systems of CEE countries differ markedly from those in Western Europe, a consequence of the earlier transition from socialism and the historical circumstances surrounding it. These systems are characterised by a post-secondary expansion that began in the 1990s and a secondary vocational orientation. In Hungary, Poland, and Slovenia, the expansion of the tertiary system has proceeded relatively fast, leading to a small degree of vertical differentiation within the tertiary education sector. By analysing how educational systems affect the social selectivity of post-secondary education, the authors offer useful insights for other countries of the former Soviet Union, which are still constrained by inherited educational systems.

### ***Regional variations and global comparisons***

Different countries are characterized by diverse socio-demographic profiles, with varying compositions of age, sex, migration status, ethnicity, socioeconomic background, and occupation, which in turn influence educational attainment. Within-country disparities can be as significant as those found across different nations or regions, as indicated by examples from nation-wide datasets across high-, middle-, and low-income countries.

### ***Within-country heterogeneity***

The documented relationship between socio-demographic profiles and educational attainment highlights considerable within-country variation in the strength and direction of the association. Educational gaps differ across countries by cohort, but substantial within-country heterogeneity persists. For example, a British analysis identifies a stronger influence of family background on educational attainment in some regions, including the East of England, compared to others, such as London and the North East. Evidence indicates a growing digital divide among adolescents in Switzerland, with family background and the educational level of the primary caregiver increasingly shaping access to computers and the Internet. Differences in educational attainment by age group are evident at the national level, with older generations accumulating lower qualifications across many European countries. However, these gaps cannot be directly linked to the influence of country-level characteristics, and country-specific analyses reveal opposing trends in attainment among younger populations in certain nations.

### ***International perspectives***

The educational attainment of young people has become a focal point for policy-makers throughout the European Union. Initial schooling is largely under government control, with local authorities exercising important implementation and planning functions. However, as young people approach the end of compulsory schooling, both national and local governments are increasingly concerned about educational attainment, participation, and progression through and beyond educational systems. Available international indicators on the percentage of 15-year-olds achieving specific standards reveal widely differing attainment levels between member states. This study compares these educational systems and their relationships with qualifications and skill needs using a detailed analysis of six member countries and accompanying case studies. The importance of understanding educational systems and qualifications has been recognized consistently in international discussions on education, and particularly within the Conference. A distinction can be made between compulsory schooling (formal schooling up to the minimum age at which young people may leave school) and the attainment of formal qualifications, although the two have interrelationship. The analysis concentrates on the attainment of formal qualifications rather than the levels of skill possessed, since much information is already available on the changing skills required in the countries under examination.

### ***Implications for policy, practice, and equity***

Educational attainment varies widely by socio-demographic characteristics, with structural inequalities creating large disparities over time. Policies working toward greater equality are urgently needed. Policy initiatives aiming for educational equality must adapt to rapidly changing patterns of inequalities owing to social stratification and

diversity. Socio-demographic profiles are strongly linked to educational attainment across various backgrounds and contexts. Inequalities exist within racial and ethnic categories and at times are greater than those between groups. Studies find that socio-demographic profiles best predict socio-economic status, with field of study following second, and certain profiles consistently leading to lower attainment and credentials, irrespective of other factors and cultural context. Persons from marginalized backgrounds exhibit the lowest attainment and credentials. Educational attainment by profile varies more regionally than globally. Most underlying mechanisms—access to resources, preparation, cultural factors, and governmental systems—are comparatively similar globally but stronger in certain regions, suggesting education policy may play a more significant role in those settings.

### ***Limitations and directions for future research***

Linking educational attainment to socioeconomic status and family background can contribute to the understanding of the mechanistic underpinnings of educational inequality and help policymakers implement just educational policies and social interventions.

### ***Final thoughts and summary***

In an increasingly interconnected world, socio-demographic factors profoundly influence educational attainment across regions. Scholarship emphasizes the interplay of age, sex, migration background, ethnicity, socio-economic and occupational status in shaping resources, behaviours and ultimately education paths. Financial capital, cultural and linguistic characteristics, and indirect policies are pivotal in structuring these educational journeys, while global and local heterogeneities further complicate discussions. Considerable information exists on the impact of these components on attainment, yet significant gaps remain on provincial and municipal, temporal and field-related variations. Engagement with these themes has immense potential to bolster educational access, thus improving equity while benefitting society.

### **Conclusion**

This study reaffirms that educational attainment is fundamentally shaped by socio-demographic stratification rather than individual capacity alone. Across regions, cohorts, and institutional contexts, socio-demographic profiles consistently condition access to resources, academic preparation, and opportunities for credential accumulation. Age, sex, ethnicity, migration background, and socioeconomic status operate not as isolated variables but as intersecting dimensions that structure educational pathways over the life course. The persistence of educational inequality, even within systems characterized by expansion and formal equality, highlights the limitations of policy approaches that prioritize access without addressing deeper structural mechanisms. A central contribution of this analysis lies in its emphasis on cumulative advantage. Educational systems tend to reward those already positioned with cultural capital, institutional knowledge, and economic resources, reinforcing intergenerational transmission of advantage. First-generation students, children of migrants, and individuals from lower socioeconomic backgrounds consistently face barriers not only in access to education but in navigating its institutional demands,

selecting fields of study, and completing credentials within normative timeframes. These patterns suggest that educational attainment functions simultaneously as a mechanism of mobility and reproduction, depending on an individual's socio-demographic positioning.

The findings also challenge overly generalized narratives of progress. While aggregate indicators often suggest rising levels of educational attainment, disaggregated analysis reveals persistent and sometimes widening gaps within countries and sub-populations. Regional disparities, cohort effects, and institutional differentiation complicate simplistic interpretations of educational expansion as inherently egalitarian. In several contexts, expansion has coincided with increased stratification by credential type, field of study, and occupational returns, thereby reshaping rather than eliminating inequality. From a theoretical standpoint, the study underscores the need for more integrated analytical frameworks that connect demographic composition, social stratification, and institutional design. Much of the existing literature examines these dimensions in isolation, limiting explanatory power. A stronger synthesis of resource-based theories, cultural capital perspectives, and policy analysis is necessary to fully capture how educational inequalities are produced and sustained. Methodologically, the scarcity of internationally comparable, longitudinal data, particularly from low- and middle-income contexts—remains a critical constraint on comparative scholarship.

Policy implications are substantial. Efforts to reduce educational inequality must move beyond access-based interventions toward strategies that address preparation gaps, institutional navigation, and differentiated support across educational transitions. Equity-oriented policies must be sensitive to within-group heterogeneity and responsive to local contexts, rather than relying on uniform national solutions. Interventions targeting early-life conditions, parental engagement, institutional guidance, and post-secondary persistence are especially crucial. In conclusion, educational attainment should be understood as a socially embedded outcome shaped by intersecting socio-demographic forces and institutional arrangements. Addressing inequality in education therefore requires systemic, evidence-based reforms that recognize diversity not as a deficit but as a structural reality demanding targeted, inclusive, and sustained policy responses.

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### **Conflict of interest**

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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