International Mobility and World Development: Estimating the System-Level Impact of ECA and International Exchanges

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List of Abbreviations

ACES – Alumni Contact Engagement System

AF – Sub-Saharan Africa (region, as defined by DOS)

CUREC – The Central University Research Ethics Committee at the University of Oxford

DOS – U.S. Department of State

EAP – East Asia and Pacific (region, as defined by DOS)

ECA – Bureau of Educational & Cultural Affairs of DOS

EUR – Europe and Eurasia (region, as defined by DOS)

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

HDI – Human Development Index

ISM – International Student Mobility

IVLP – International Visitor Leadership Program

MELI – Monitoring, Evaluation, Learning and Innovation Unit (ECA)

NEA – Near East (region, as defined by DOS)

ODA – Official Development Assistance

PM – Professional Mobility

SCA – South and Central Asia (region, as defined by DOS)

SDGs – Sustainable Development Goals

SM – Student Mobility

SCS – Standardized Cumulative Stock

TM – Total Mobility

UIS – UNESCO Institute for Statistics

U.N. – United Nations

U.S. – United States of America

USAID – United States Agency for International Development

UNDP – United Nations Development Programme

UNESCO – United Nations Educational, Scientific and Cultural Organization

V-Dem – Varieties of Democracy

WDR – World Development Report

WHA – Western Hemisphere (region, as defined by DOS)

YALI – Young African Leaders Initiative

YES – Kennedy-Lugar Youth Exchange and Study

YLAI – Young Leaders of the Americas Initiative

YM – Youth Mobility

YSEALI – Young Southeast Asian Leaders Initiative

Definition of Key Terms

Agency: The capacity of individuals to act intentionally within structures by exercising discernment (evaluating priorities), deliberation (formulating strategies), and dedication (sustained commitment to goals). Agency enables participants to navigate and influence complex systems to address systemic challenges.

Critical Realism: A theoretical framework that explores the interaction between structure, culture, and agency, highlighting how systemic transformations are shaped by structural and cultural constraints and opportunities.

Discernment: A component of agency, referring to the ability to critically evaluate societal constraints and priorities for meaningful development initiatives.

Dedication: A component of agency, reflecting sustained commitment to implementing strategies despite obstacles or resistance.

Deliberation: A component of agency, encompassing the process of designing, refining, and enacting actionable strategies for societal transformation.

Home Country: The country where an individual was typically born and grew up, and where they have made systemic contributions while residing there.

Host Country: The country where exchange participants undertake their international mobility program. For all ECA programs covered in this report, which pertain exclusively to programs with foreign participants, the U.S. served as the host country.

Intercultural Competence: The ability to communicate effectively across cultures, combining openness, empathy, adaptability, and critical reflection. Developed through academic, professional, and social experiences, it can help individuals navigate cultural diversity, challenge biases, and support mutual understanding, enabling meaningful engagement and contributions to societal change.

International Mobility: The cross-border movement of individuals for purposes such as education, professional development, or cultural exchange.

International Professional Mobility (PM): Cross-border movement of professionals in fields like education, health, and entrepreneurship, to pursue professional development.

International Student Mobility (SM): Cross-border movement of students to undertake academic studies for degrees or credits.

International Youth and Cultural Mobility (YCM): Cross-border movement of young people to pursue academic and cultural development.

Long-Term Mobility/Exchange: Programs lasting more than three months.

Multiculturalism: The coexistence of diverse cultural groups within a society. In contrast to intercultural competence, which focuses on active engagement and exchange, multiculturalism highlights the parallel existence of cultures.

Reflexivity: The process of critically examining one's own experiences, beliefs, and assumptions to gain new insights and perspectives. Reflexivity encourages thoughtful engagement with complex societal issues, equipping individuals to adapt strategies and solutions to diverse and evolving contexts.

Short-Term Mobility/Exchange: Programs lasting up to three months.

Social Relations: Connections among individuals and groups that facilitate the exchange of ideas, resources, and support. These relationships, spanning professional, institutional, and community

contexts, can play a crucial role in enabling collaboration, supporting innovation, and addressing systemic challenges.

Standardized Cumulative Stock (SCS): In this report, this concept refers to a metric derived from the ACES database that quantifies the pool of ECA alumni over time as a potential resource for national development. It is calculated by aggregating the annual flow of ECA alumni since 1940 relative to each year's population size, offering a standardized measure of the potential influence of international mobility on societal development.

Structural Enablers (also referred to as Systemic Enablers): Factors that facilitate systemic change, including political readiness, community support, access to financial resources, and institutional partnerships.

Structural Obstacles (also referred to as Systemic Obstacles): Barriers, such as gender discrimination, cultural conservatism, and bureaucratic inefficiencies, that hinder alumni from implementing transformative initiatives.

Systemic Change (also referred to as Societal Development, Societal/Systemic Contributions): Broad transformations at the community, institutional, national, regional, or global levels achieved through policy reform, capacity building, innovation, advocacy, and collaboration. These changes address systemic challenges and reflect contributions that range from local improvements to initiatives tackling global issues.

Transnationalism: A concept used to describe and analyze the cross-border exchanges and sustained interactions that occur across nation-state boundaries. These exchanges involve ideas, practices, resources, and relationships that connect global and local contexts.

Transnational Mobility: The movement of individuals across borders that not only facilitates immediate engagement in diverse cultural, academic, or professional settings but also generates enduring processes and interactions. Transnational mobility highlights the exchange of knowledge, skills, and social relations that transcend national boundaries and create long-term linkages between home, host, and sometimes third-country contexts. Unlike international mobility, it emphasizes the lasting and interconnected influences that persist beyond the temporary physical relocation.

Transformative Learning: A process of questioning deeply held beliefs and assumptions through exposure to new environments and ideas. It encourages critical thinking, broadens perspectives, and develops independence, helping individuals address societal challenges and contribute to meaningful change in their communities and beyond.

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Executive Summary

In an era marked by increasingly restrictive mobility policies in major host countries, this report provides the first comprehensive, global assessment of whether and how U.S.-sponsored international exchange contributes to societal development. This study examines the systemic effects of educational and professional mobility programs administered by the Bureau of Educational and Cultural Affairs (ECA). Drawing on a unique mixed-methods design, the study integrates quantitative findings from a longitudinal dataset of 134 countries with qualitative insights from 704 interviews in 70 countries across Sub-Saharan Africa (AF), East Asia and the Pacific (EAP), Europe and Eurasia (EUR), the Near East (NEA), South and Central Asia (SCA), and the Western Hemisphere (WHA). In doing so, it not only presents an unprecedented empirical breadth but also underscores how transnational dimensions of mobility—emerging from international mobility experiences—spark transformative learning processes, thereby embedding global experiences in local contexts. By advancing an evidence-based understanding of if and how internationally mobile alumni adapt what they learn abroad to generate systemic change at home, this first-of-its-kind investigation proposes clear directions for policy and research.

The research design combines breadth and depth by blending robust quantitative and qualitative methods. Quantitatively, the study employs a longitudinal dataset covering eight decades of ECA alumni participation, enabling advanced statistical models—such as multilevel random slope techniques—to account for country-specific variations over time. These analyses provide compelling evidence of the association between international mobility and societal outcomes. Qualitatively, 704 semi-structured interviews enrich the quantitative findings by illustrating how alumni adapt or rework external knowledge to suit local conditions, negotiate obstacles, and build and sustain the transnational linkages needed to drive systemic reforms. By focusing on enduring connections and learning that arise from transnational mobility, the study provides a framework for capturing both global patterns and specific ways mobility shapes local contexts. By systematically integrating new theoretical perspectives—especially those that illuminate how individual agents navigate structural, cultural, and relational factors—the report offers innovative insights into how global engagement becomes embedded in local institutions and practices.

The research confirms a robust association between higher concentrations of ECA alumni and moderate but significant improvements in economic growth, population health, educational access, gender equity, and democratic development. Although the correlation does not establish causation, the associations hold when accounting for factors like GDP per capita, tertiary enrolment rates, and international trade. The quantitative data suggest that participants trained in the U.S., as opposed to those studying in less open environments, demonstrate clearer patterns of alignment with positive home-country outcomes—likely due to more flexible academic settings, stronger transnational social relations, and normative frameworks that support civic engagement.

Qualitative interviews shed light on four mutually reinforcing mechanisms by which alumni translate overseas experiences into local reforms. First, they enhance their agency, the capacity to identify systemic problems, prioritize solutions, and persist amid challenges. Second, they gain advanced knowledge and skills, ranging from technical competencies to policy insights and civic understanding, which they can apply to upgrade local institutions or pilot innovative solutions in areas such as public health and economic development. Third, they develop intercultural competence, sharpening their ability to navigate cultural differences, empathize with multiple perspectives, and negotiate reforms in sensitive local contexts. Fourth, they cultivate long-term social relations that continue well beyond their stay abroad, with many alumni drawing on peer or mentor networks for the resources and collaborative partnerships needed to enact policy innovations or community-level interventions. These mechanisms unfold in local contexts shaped by varied governance structures, cultural expectations, and resource

constraints. Although some alumni encounter obstacles such as gender discrimination and entrenched conservatism, others benefit from inclusive communities, viable funding, and political endorsement, which increase the odds of translating new ideas into durable institutional change.

Based on these findings, the report offers detailed policy recommendations to strengthen ECA programs as catalysts for systemic transformation. First, it calls for positioning ECA initiatives more explicitly as engines of deeper institutional reforms that align with both U.S. foreign policy priorities and global development goals, emphasizing robust metrics to document long-term effects and clearer narratives linking ECA outcomes to Sustainable Development Goals. Second, it encourages strategic integration of scholarships into broader development frameworks and alignment with host-country needs, so that alumni-driven innovations can complement long-term capacity-building efforts in areas like education, governance, and public health. Third, it highlights the need to cultivate individual agency by scaling reflexive learning opportunities and broadening community engagement in both the U.S. and home countries. Fourth, it addresses the structural barriers alumni face, urging new or expanded initiatives to combat gender discrimination, navigate resistance to change, simplify bureaucratic processes, and secure sustainable funding. Equally important are measures to fortify community-based partnerships, so that local stakeholders are invested in implementing and sustaining changes triggered by returning participants. By advancing equity and accessibility—particularly for marginalized groups—and strengthening evidence-based evaluations of program results, the report argues that ECA can deepen its developmental footprint worldwide.

These policy recommendations are best supported by further research on underexplored issues, including the dual contributions of alumni in both their home and host countries, the potential of hybrid or virtual mobility, and effective strategies for broadening access to overseas experiences. It also calls for deeper investigation into how host-country contexts shape alumni outcomes: while this study shows that participants in U.S.-based programs often achieve greater success in driving reforms, further research could pinpoint the host-institution practices and support structures most conducive to systemic change back home.

By clarifying how alumni leverage agency, advanced skills, intercultural fluency, and supportive social ties to enact reforms, the report demonstrates the utility of ECA-sponsored programs as critical vehicles for development. Even amid new barriers to international mobility, ECA alumni can function as a vital link for knowledge-sharing and innovation. By mapping the processes through which overseas experiences translate into domestic change, the study highlights how international mobility benefits not only individual participants but broader societal development. Overall, it provides a trailblazing theoretical and empirical framework—one that may guide policymakers, practitioners, and researchers in harnessing the full promise of global engagement for sustainable social transformation.

1. Introduction

1.1. Context

In today's increasingly polarized world, cross-border movements—including student, professional, and youth mobilities—reflect and shape the dynamics of global interdependence. Mounting tensions between domestic priorities, such as security, employability, and sustainability, and the need for global engagement have spurred a shift toward inward-looking policies, a trend evident in higher education (Marginson, 2024). Across countries that receive high volumes of in-bound international migrants, rising nationalism and enhanced government oversight are altering the landscape of international mobility. Many governments have implemented stringent measures, ostensibly to safeguard economic and public interests, yet these policies often constrain the broader goals of cross-border exchange.

The concept of "Global Britain," as explored by Brooks and Waters (2024), exemplifies this tension. While outward-facing rhetoric promotes the idea of global engagement and cosmopolitan aspirations, policy implementations often reflect a narrow nationalism, restricting meaningful reciprocal exchange. For instance, the Turing Scheme, introduced as a replacement for Erasmus+, prioritizes outward mobility while neglecting the mutual benefits of inward exchange, thereby limiting its potential to genuinely promote global interdependence. Such policies illustrate how rhetoric often diverges from practice, creating a fragmented and insular approach to mobility.

The United States has been at the forefront of facilitating global mobility through the Bureau of Educational and Cultural Affairs (ECA). For decades, ECA-supported initiatives like Fulbright, International Visitor Leadership Program (IVPL), and the Youth Ambassadors Program have exemplified U.S. leadership in building meaningful connections between people and driving societal change. While the U.S. continues to play this central role, restrictive measures in other major destinations illustrate the global challenge. The United Kingdom, for example, has limited student dependents and narrowed work visa pathways, triggering a 44% drop in international postgraduate enrolments in the first three months of 2024 (ICEF Monitor, 2024). Canada has imposed caps on study permits and reduced post-graduation work openings, further limiting opportunities for international students (Robitaille & Moosapeta, 2024). Australia has raised financial thresholds, reinstated work hour limits, and tightened language proficiency requirements, reflecting a broader trend of exclusivity in access (StudyAustralia, 2024). The Netherlands has implemented a two-thirds Dutch-language mandate for bachelor's programs, with exemptions only granted through ministerial approval. This policy, partly aimed at easing housing shortages and preserving the Dutch language, represents another instance of tightened regulations (Government of the Netherlands, 2024). Meanwhile, geopolitical tensions between the U.S. and China have exacerbated challenges, contributing to a significant 26% decline in Chinese enrolments in American institutions between 2019 and 2023 (IIE Open Doors, 2024).

Beyond the domain of student mobility, professional and youth exchanges represent other vital avenues for international collaboration. Programs designed for teachers, healthcare workers, and other professionals facilitate skill-sharing and capacity building, while youth and cultural mobilities cultivate leadership and cross-cultural understanding in younger generations. Together, these mobilities form a global framework for cooperation, one in which the U.S. plays a vital role through its wide-reaching ECA initiatives.

Restrictive mobility policies have ramifications far beyond national borders. International exchanges serve as conduits for sharing knowledge, skills, and values critical to tackling global challenges—whether promoting equitable access to education, enhancing healthcare systems, or supporting

economic development. The United States, as a longstanding leader in mobility programs, maintains significant influence in shaping these flows. Understanding how ECA-supported exchanges contribute to systemic change is crucial not only for U.S. foreign policy but also for broader global development. This report focuses on the interplay between ECA's initiatives and their capacity to drive societal change worldwide.

1.2. Rationale and Key Concepts

Growing insularity among key destination nations highlights the urgency of shifting the focus of international mobility discussions. While such programs are widely recognized for their contributions to individual education, professional growth, career advancement, and cultural awareness, their broader systemic effects remain underexplored. This study seeks to bridge that gap, examining how ECA-supported mobility programs generate outcomes that extend beyond personal gains to drive transformations across broader society.

International mobility is not solely about self-improvement; it can have ramifications for broad-based social change. Yet precisely how these cross-border experiences produce wider consequences remains under-examined. By zooming in on these mechanisms, we seek to clarify how mobility translates into systemic contributions, while also acknowledging the structural factors that support or impede these contributions.

We conceptualize societal development as multidimensional, encompassing social, economic, and political aspects. Drawing on longstanding global development discourses (UN, 2000, 2015; UNDP, 1990; World Bank, 2003), this study spotlights five priority areas: economic growth, gender equality, justice and freedoms, health, and education. These categories align with enduring global aims, such as supporting sustainable, inclusive economies, ensuring quality health and education for all, promoting gender parity, and strengthening governance through accountability and human rights. Aligned with the United Nations' framing of human development as the "expansion of people's freedoms to live long, healthy and creative lives… and to engage actively in shaping development equitably and sustainably on a shared planet" (UN, 2010, p. 2), we examine how international mobility can catalyze systemic change—broad transformations achieved through policy reform, capacity building, innovation, advocacy, and collaboration at the community, institutional, national, regional, or global levels. These systemic changes address societal challenges and range from local improvements to initiatives tackling global issues. Throughout the report, societal development, systemic change, and broader societal/systemic contributions are used interchangeably.

This study examines three forms of international mobility—student, professional, and youth and cultural. Each type of mobility aligns with programs administered by the U.S. State Department's Bureau of Educational and Cultural Affairs (ECA). The study focuses exclusively on physical cross-border mobility, without addressing virtual or hybrid exchanges.

International mobility involves cross-border movement for education, professional development, or cultural/youth exchange.

International Student Mobility (ISM) denotes cross-border movement of students to undertake academic studies for degrees or credits. Programs may include Fulbright Foreign Student or Global UGRAD, blending academic coursework with leadership and intercultural experiences.

International Professional Mobility (PM) refers to cross-border movement of professionals in fields like education, health, and entrepreneurship, to pursue professional development. Examples include IVLP,

Fulbright Visiting Scholar, and the Humphrey Fellowship, which combine mentorship, leadership training, and practical experience.

International Youth and Cultural Mobility (YCM) refers to cross-border movement of young people to pursue academic and cultural development. Programs such as Youth Ambassadors and TechGirls facilitate community immersion and skill-building.

1.3. Research Questions

This investigation is guided by a core question: Does ECA-supported international mobility shape system-level development outcomes, and if so, how?

It further addresses:

- What are the global patterns in the relationship between ECA-supported mobility and system-level development outcomes?
- In what ways do ECA alumni contribute to system-level development in their home countries?
- How do structural obstacles and enablers influence ECA alumni contributions?
- How do individual transformations experienced through ECA-supported mobility translate into broader societal contributions?

1.4. Theoretical Framework

The study draws on Critical Realism, Transnationalism, and Transformative Learning Theory to examine how international mobility influences individual and systemic change. Together, these theories offer an integrated theory of change for understanding how mobility experiences can contribute to societal change.

Critical Realism forms the core approach, highlighting structure, culture, and agency as mutually reinforcing but also malleable. It contests reductive views that reduce individuals to passive participants in larger systems. Here, study participants emerge as actors with strategic capacity, even under constraining norms or frameworks. International mobility acts as a potential catalyst, expanding opportunities for skill development, critical reflection, and relationship-building—but the extent of systemic change remains tied to how local institutions and cultures accommodate these new capacities.

Transnationalism contributes by focusing on mobility transcending national boundaries. Through global connections and cross-border ties, individuals gain access to new knowledge systems, pursue collaborations, and develop perspectives that bridge local and global. These relationships facilitate the flow of ideas and innovations, amplifying participants' agency—provided local conditions do not reject or marginalize externally inspired approaches.

Transformative Learning Theory explores how unfamiliar environments provoke deep shifts in worldviews, spurring individuals to reassess assumptions, adapt behaviors, and refine skills. Such transformations contribute not just to personal development but also expand the potential to support systemic innovations—be it through leadership, advocacy, or capacity-building back home.

By merging these theories, the research addresses two intersecting domains: first, how international mobility shapes individual formation; second, how individuals translate these experiences into system-level contributions. This dual emphasis illuminates the mechanisms, pathways, and constraints integral

to transformative change. As a result, large-scale quantitative patterns gain depth from qualitative narratives, ensuring that the study's conceptual foundation captures both macro-trends and concrete, local realities, while also recognizing that structural constraints can dampen even the most profound personal shifts.

1.5. Methodology

The study employs a mixed-methods design to investigate ECA-supported international mobility's systemic effects, blending quantitative data with in-depth qualitative inquiry. This comprehensive approach provides a robust and nuanced understanding of how mobility influences societies.

On the quantitative side, we assembled an original longitudinal dataset, "Longitudinal Data on International Mobility and World Development," integrating records from the Alumni Contact Engagement System (ACES) with development indicators from the UN, UNESCO, and the World Bank. Covering 134 countries from 1975 to 2020, the dataset comprises 721,017 ECA alumni engaged in student, professional, or youth/cultural programs. We focus on five key areas—economy, education, health, gender, and justice—and employ multilevel random slope modeling to analyze the relationship between ECA alumni presence and development, controlling for GDP per capita, tertiary enrollment, and international trade. This approach handles complex time-series data while adjusting for country-specific variations, ensuring sound statistical results.

On the qualitative side, we drew from 704 semi-structured interviews with changemakers in 70 countries across six regions: East Asia and the Pacific (EAP), Europe and Eurasia (EUR), the Near East (Middle East & Northern Africa) (NEA), South and Central Asia (SCA), Sub-Saharan Africa (AF), and the Western Hemisphere (WHA). Participants were selected for their documented efforts to improve society in the economy, education, health, gender, or justice domains. These interviews explore how alumni translate cross-border experiences—skills gained, intercultural insights, social relations, and expanded agency—into concrete systemic contributions. Thematic analysis ensures a consistent approach to coding and interpreting the data, supported by inter-coder reliability checks.

This mixed-methods design yields three notable advantages. First, it is comprehensive, blending broad quantitative trends with nuanced qualitative perspectives. Second, it provides precision, derived from advanced statistical tools and a rigorous analytical process. Third, it offers contextual depth, coupling large-scale patterns with the personal realities of participants. The combination of a longitudinal dataset and rich interview evidence therefore provides evidence on the systemic value of ECA-supported international mobility while acknowledging that structural and cultural contexts can overshadow or amplify alumni-driven reforms. The findings thus offer policy-makers a grounded, empirical basis for understanding—and shaping—the future of ECA-supported international exchange.

1.6. Structure of the Report

The report is organized into ten chapters. Chapter 1 introduced the study, outlining its context, rationale, and research questions. Chapter 2 reviews the existing literature on student mobility, professional mobility, and youth and cultural mobility, while Chapter 3 sets out the theoretical and conceptual framework underpinning the study. Chapter 4 describes the study's methodology, explaining the mixed-methods approach, sampling strategies, and data analysis techniques. The findings are presented across four chapters. Chapter 5 presents the quantitative data analysis findings. Chapter 6 examines the systemic contributions of study participants, analyzing levels, sectors, areas, and domains of contribution. Chapter 7 investigates systemic obstacles and enablers encountered by

alumni in their work for systemic change, while Chapter 8 explores the mechanisms through which alumni translate their mobility experiences into societal contributions. Chapter 9 summarizes and discusses the findings, highlighting the study's methodological and theoretical contributions. Finally, Chapter 10 offers implications for policy and research. It outlines recommendations to strengthen the systemic contributions of ECA programs and identifies critical areas for future research, ensuring the findings inform both practical strategies and scholarly inquiry.

2. Overview of Existing Literature

For the purposes of the study, we have undertaken three systematic reviews on the effects of student mobility, professional mobility, and youth mobility. It was the hypothesis of the present study that these forms of mobility, often supported by various funded programs, not only influence participants individually but also contribute to broader societal change.

2.1. Student Mobility

The existing literature on student mobility (SM) suggests that studying abroad may have transformative effects on both individuals and, to a certain extent, broader societal development. While some studies indicate that returnees contribute to areas such as firm growth, social development, higher education, research, and political culture in their home countries, the evidence remains fragmented. The literature review by Wang et al. (2024), conducted as part of the present study, identifies these contributions but also highlights key methodological limitations and a lack of comprehensive comparative studies. International student mobility is often shaped by economic, political, academic, and socio-cultural rationales, influencing both individual decisions and the strategic priorities of institutions and nation-states (Chankseliani, 2017). This interplay of motivations highlights the diverse potential of student mobility to address societal challenges.

There are indications that returnees may play a role in driving firm growth through firm innovation and international business connections. Returnees have introduced new technologies and management practices, enhancing the innovation capacity of local firms. However, most of the studies on returnees' contributions to firm growth focus on China and represent case studies, raising questions about their generalizability. While firm growth can contribute to economic development, this is rarely evidenced beyond individual case studies. Rasamoelison et al. (2021) employ region fixed-effects and instrumental-variables estimators to address potential endogeneity concerns related to student-migrant flows. Their study reveals significant and positive effects of student migration on per capita GDP in sending countries. These findings, observed consistently across various time lags and exhibiting an increasing trend over time, indicate that student migrants play a modest yet meaningful role in contributing to short-term economic development in their respective home countries.

In terms of social transformations, the literature points to isolated examples of returnees contributing to social justice, particularly in advancing gender equality, disability rights, and other issues affecting marginalized groups (Campbell & Lavallee, 2020; Jon & Fry, 2021). Returnees have also engaged in activities that benefited the common good, such as improving healthcare, promoting peace-building and rural development (Abimbola et al., 2016; van Houte, 2014). However, these contributions are often examined through small-scale qualitative case studies, which do not provide a comprehensive picture of long-term or systemic effects. The extent to which returnees catalyze sustained social change remains unclear, underscoring a notable gap in large-scale comparative research across contexts.

The role of returnees in higher education and research is similarly acknowledged in the literature, with some evidence that they help enhance academic capacity by introducing new research practices and cultivating international collaborations (Liao & Asis, 2020; Velema, 2012). They also promote the values of academic freedom and equal opportunity (Li, 2006; Zweig & Yang, 2014). In addition to improving research capacity and output, returnees transferred new knowledge to students through teaching at universities (Campbell, 2017; Jamison & Madden, 2021).

Some studies suggest that returnees, especially those educated in democratic contexts, bring back values that may support political liberalization and civil society engagement in their home countries (Atkinson, 2010; Chankseliani, 2018; Spilimbergo, 2009). However, the evidence remains limited, with few studies exploring how these political and civic impacts unfold on a broader scale. In contrast, Han (2013) shows that the return of students to China between the 1980s and 1990s had little influence on political culture, as the majority of returnees studied Science and Engineering disciplines, which limited their engagement with governance reform or civic participation.

Researchers have explored the varying impacts of short-term and long-term mobility. Long-term programs, lasting up to a year, have been shown to produce more significant and enduring effects on participants (Dwyer, 2004). However, even shorter study abroad experiences can support meaningful change, enhancing students' cultural self-awareness, broadening their perspectives on global political issues, and encouraging them to question their own stereotypes and beliefs (Chieffo & Griffiths, 2004; Lumkes et al., 2012; Makara & Canon, 2020; Scoffham, 2020).

While the literature acknowledges the potential for international student mobility to influence societal development, much of the available evidence is fragmented and constrained by case study or correlational design (Wang et al., 2024). Furthermore, comparison groups—individuals who did not pursue education abroad—are largely missing, hindering a deeper understanding of mobility's specific contributions. Existing studies also remain limited to specific global contexts. Investigating the diverse experiences of students across different host countries or evolving home contexts could provide valuable insights into the nuanced effects of international mobility. In sum, while international student mobility holds clear potential for societal contributions, the literature remains undertheorized and empirically incomplete, underscoring the need for more robust comparative analyses.

2.2. Professional Mobility

The research on professional mobility (PM) highlights its potential to create impact beyond the individual participants, influencing broader institutional and community structures when professionals return to their home countries. While much of the literature indicates that professionals gain enhanced skills, knowledge, and cultural awareness through these programs, the evidence on how these individual gains translate into systemic or societal impacts remains highly fragmented. Furthermore, the scope of these studies is often limited to specific sectors, with little comparative analysis across disciplines and regions (Hanley et al., 2025).

Several studies demonstrate that PM participants, particularly in sectors like education, healthcare, and social work, contribute to institutional improvements. For example, international experiences have been shown to influence higher education teaching practices significantly. Academics returning from PM programs often introduce innovative, student-centered pedagogies and inter-institutional collaborations that improve research capacity. In China, academics have integrated more interactive teaching methods, such as debates and discussions (Liu & Yumei, 2015), and similar trends have been observed in other countries, such as Turkey (Mede & Tuzun, 2016). Furthermore, professional development programs for school teachers have led to improved teaching strategies and increased cultural awareness, which are particularly beneficial for diverse student populations (He et al., 2017; Okken et al., 2019). While these outcomes are promising, they are primarily based on small-scale case studies, leaving gaps in understanding the long-term, systemic impacts of these changes.

In healthcare and social work, PM participants have been instrumental in adopting new practices and systems within their institutions. For example, social workers in the Australian and Israeli leadership programs pioneered organization-wide changes, including crisis intervention training and improved

client communication (Naleppa & Waldbillig, 2018; Soskolne, 1993). While these programs demonstrate notable institutional transformations, they are often limited in scale, and few studies examine the sustainability or diffusion of these changes at the societal level.

Moreover, the ripple effects of professional mobility extend into communities. PM programs have contributed to the establishment of new organizations and community initiatives. For example, a U.S. exchange program for leaders of disability organizations led to the creation of 11 new organizations and numerous partnerships that raised awareness on disability issues (Pate et al., 2020). Similarly, sports diplomacy programs in Jordan and Tajikistan supported community well-being by promoting trust-based coaching practices that shifted youth discipline approaches (Blom et al., 2020). These examples suggest that PM can drive community-level change, but broader comparative studies are needed to assess the scale, sustainability, and cross-sectoral reach of these impacts.

Another key contribution of PM is facilitating international collaborations and long-term partnerships that extend beyond the initial exchange. Networks established through PM programs, such as research collaborations or healthcare conferences, often serve as foundations for ongoing professional exchanges and innovation (Bridgwood et al., 2018; Nilsson & Wellington-Boyd, 2006). However, the extent to which these partnerships contribute to long-term societal change remains underexplored, with limited evidence on their transformative potential across regions.

While the literature on PM provides valuable insights into its potential to drive systemic change, much of the available evidence is limited to isolated case studies and sector-specific examples. A systematic review by Hanley et al. (2025), conducted as part of this study, highlights significant gaps in understanding the broader societal impacts of professional mobility, primarily due to the lack of rigorous comparative analysis. The review concludes that future research must move beyond anecdotal evidence to undertake large-scale, cross-sectoral studies that explore the pathways through which professional mobility contributes to institutional reforms and broader societal development.

2.3. Youth and Cultural Mobility

The literature on youth and cultural mobility (YCM) programs suggests that these exchanges can have significant impacts on young participants, aged 12 to 19, particularly in the areas of personal growth, intercultural competence, and social responsibility. For this literature review, 21 studies published in peer reviewed journals were identified and analyzed, focusing on youth mobility programs lasting from one week to one year and involving exchanges predominantly between Germany, the U.S., Japan, and Australia. The activities undertaken during these exchanges often include cultural immersion, school attendance, home stays, community service, and leadership training, all of which aim to encourage intercultural understanding and skill development.

At the individual level, these studies consistently highlight enhanced personal growth, including increased independence, adaptability, and improved language skills. Participants frequently report a greater awareness of global issues, shifts in social dynamics, and the formation of international networks. Furthermore, these programs often contribute to identity formation, developing a sense of global citizenship and heightened social responsibility. Many participants also exhibit lasting personality changes, particularly increased open-mindedness and empathy, as they continue to engage in international activities and adopt transnational practices beyond the duration of the exchange.

While most of the literature focuses on individual transformations, some studies suggest that youth mobility can also contribute to broader societal impacts. Pramathevan & Garces-Bacsal (2012) found that overseas learning experiences helped gifted adolescent girls in Singapore develop a heightened sense of empathy and a commitment to community service, suggesting that such programs may

contribute to civic engagement. Similarly, Bachner & Zeutschel (2009) reported that alumni of youth mobility programs influence others in their communities, creating ripple effects that promote cultural understanding and global awareness. Cromwell (2019) also highlighted how youth mobility in Pakistan empowered participants to become community leaders and peacebuilders, addressing local issues such as poverty, health, and environmental concerns through various initiatives.

Despite the promising potential of YCM programs to cultivate socially responsible, globally minded individuals, literature remains limited in its exploration of their broader societal impacts. Most studies focus on short-term individual outcomes, with few examining how these experiences translate into sustained contributions to community development or social progress. Further research is needed to understand how these programs can drive systemic social change, particularly in underrepresented regions.

2.4. Conclusion and Transition to the Present Study

The literature on SM, PM, and YCM highlights the potential for international mobility to influence broader societal change, although evidence remains fragmented. While some studies indicate that mobility can contribute to outcomes such as policy reform, institutional capacity building, and community engagement, these broader societal outcomes are less clearly established compared to the more immediate personal benefits, such as increased professional expertise and intercultural competence. The challenge lies in systematically capturing and assessing how these individual-level transformations translate into long-term, systemic changes within institutions and communities.

Research highlights structural enablers and obstacles that influence whether individual mobility experiences translate into broader societal outcomes. Institutional support, access to professional networks, and collaborative opportunities upon return are crucial for enabling returnees to apply their skills effectively. PM programs, for example, often provide networks and opportunities that allow returnees to drive institutional changes (Naleppa & Waldbillig, 2018; Soskolne, 1993). Similarly, structured fellowships offer resources that support not only personal development but also wider contributions to systems (Gao & Liu, 2021; Liu & Yumei, 2015). In SM, returnees' influence on higher education and research depends largely on the support available within institutions (Wang et al., 2024). However, reintegration challenges—such as resistance to new ideas or weakened domestic networks—often limit the broader impact returnees can have (Abimbola et al., 2016; van Houte, 2014). These structural obstacles highlight the need for more effective conditions to facilitate the re-entry of mobile individuals, ensuring they can contribute to sustained societal change.

Furthermore, a critical review of the existing literature reveals a marked a significant gap in theorizing how individual transformations result in systemic change. While some studies offer promising findings, these remain descriptive and sector-specific. Thus, while there are certainly indications that returnees can contribute to firm growth, social development, higher education, and political culture, the literature remains tentative, and no single study has provided the kind of rigorous, systematic analysis that present study aims to achieve. By addressing the theoretical gaps and advancing a more integrative approach, this research aspires to move the study of international mobility forward, providing new evidence and theorization of its broader societal implications.

3. Theoretical and Conceptual Framework

This chapter outlines the theoretical and conceptual framework that underpins the study, exploring how international mobility drives individual and societal transformation. The chapter weaves together theoretical perspectives—Critical Realism, Transnationalism, and Transformative Learning Theory—and key conceptual mechanisms—agency; skills, knowledge, expertise, and civic understanding; intercultural competence; and social relations—to examine the interplay between individual actions and systemic change. Together, these elements provide an integrated theory of change for understanding how mobility experiences can contribute to societal change.

3.1. Theoretical Foundations

The theoretical foundations of this study integrate Critical Realism, Transnationalism, and Transformative Learning Theory to examine the dynamics of international mobility. Each perspective contributes distinct insights: Critical Realism highlights the interplay of structure and agency, Transnationalism explores cross-border exchanges and their societal implications, and Transformative Learning Theory focuses on individual growth through critical reflection. These theories provide an interconnected framework for understanding how mobility experiences drive personal transformation and systemic change. By situating these perspectives in dialogue, this section establishes the groundwork for analyzing the conceptual mechanisms that link individual actions to broader societal outcomes.

3.1.1. Critical Realism

Critical Realism serves as the central theoretical perspective of this study, offering a framework for understanding how social change emerges through the interplay of structures, culture, and agency. It acknowledges that while social structures and cultural systems shape human behavior, individuals possess the capacity to navigate, challenge, and transform these constraints, thereby creating opportunities for societal transformation.

Reflexivity—the ability of individuals to critically reflect on their circumstances, goals, and actions—is a cornerstone of this perspective (Archer, 2000, 2007). Marginson (2023) writes about the critical role of reflexivity within higher education, highlighting its importance in developing individual agency. He argues that higher education cultivates self-understanding and equips individuals with the capacity for transformative action. This aligns with Archer's (2010) view of reflexivity as a bridge between personal transformation with societal change. Through reflexivity, individuals discern priorities, deliberate on strategies for action, and commit to transformative projects. Reflexivity enables individuals to critically assess their circumstances, adapt their strategies, and overcome these challenges, ultimately aligning their actions with the specific needs of their local contexts.

Through reflexivity, individuals not only discern priorities and deliberate on strategies for action but also navigate the structural and cultural obstacles that shape their environments. Structural obstacles and enablers are factors that hinder or support transformative projects—intentional actions aimed at specific outcomes. These factors are meaningful only in the context of specific transformative projects: obstacles impede progress, while enablers facilitate it. Their influence depends on individuals' ability to navigate these structures effectively (Archer, 2010). For example, rigid institutional frameworks or cultural resistance can act as obstacles, while strong networks and accessible resources may serve as enablers.

A key focus of this study is the structural and cultural obstacles individuals face when applying mobility-acquired learning to drive societal change. Structural obstacles, such as rigid institutional frameworks or limited resources, and cultural resistance, such as entrenched norms or skepticism toward new ideas, can hinder efforts. Overcoming these challenges requires not only agency but also the ability to critically assess and adapt to specific constraints and opportunities.

In this study, these processes are examined through the lens of reflexivity, where individuals evaluate how to navigate obstacles and adapt resources and structures to their contexts. By leveraging global knowledge for local transformation, mobility participants can drive systemic change. This interplay of agency, learning, and structural conditions highlights how participants maximize their societal contributions.

The dynamic relationship between structure and agency lies at the heart of societal transformation. While structures shape human actions, they are not fixed and do not entirely determine outcomes. Human agency, exercised through reflexivity, can challenge and reshape structures, enabling both cultural and structural transformation (Archer, 1995). This interplay underscores the potential of individuals—such as participants in international mobility programs—to translate their experiences into societal contributions by navigating and altering their environments.

3.1.2. Transnationalism

Transnationalism refers to the enduring exchanges and interactions that penetrate and transcend nation-state boundaries, enabling continuous connections between individuals and institutions across countries. While international mobility involves the physical movement of individuals across borders, transnationalism focuses on the sustained relationships, shared practices, and collaborative processes that emerge both during and after such mobility. This perspective shifts the emphasis from relocation to the active co-creation of long-term linkages that extend across global and local contexts.

At its core, transnationalism navigates the constraints of national boundaries to enable dynamic flows of ideas, knowledge, and resources, shaping both individual trajectories and societal systems (Faist, 2010; Vertovec, 2009). These processes not only facilitate personal growth but also contribute to systemic transformations in home and host societies. For example, while international mobility may expose individuals to new cultural norms and professional practices, transnationalism ensures that these experiences evolve into enduring collaborations, the adaptation of innovative practices to local contexts, and reforms in institutional frameworks. This distinction highlights the dual focus of transnationalism on individual agency and the structures enabling societal change.

However, transnationalism is not without challenges. Power asymmetries within these spaces—such as unequal access to resources, knowledge, or influence—can hinder equitable participation and outcomes. Addressing these disparities requires inclusive partnerships and expanded access to mobility opportunities.

Ultimately, transnationalism provides a lens to understand how global experiences are embedded within local realities, bridging the divide between global aspirations and local transformations. By emphasizing co-creation and sustained engagement, it underscores the central role of transnational processes in catalyzing development and systemic change.

3.1.3. Transformative Learning Theory

Transformative Learning Theory enriches this framework by explaining how exposure to new environments leads to profound shifts in thinking, behavior, and identity. It emphasizes critical reflection as a means to challenge ingrained assumptions, enabling individuals to adopt more inclusive and critical perspectives (Mezirow, 1997, 2012). This process enhances individual growth and equips participants to act as changemakers within their communities.

While Mezirow's theory focuses on critical reflection and perspective transformation, it resonates with broader educational purposes outlined by Biesta (2009):

- Qualification, involving the acquisition of knowledge and skills to address societal challenges.
- Socialization, internalizing norms and values through engagement with new cultural and institutional contexts.
- Subjectification, developing autonomy and critical consciousness, empowering individuals to question and reshape societal norms.

Together, these dimensions align with the transformative processes described by Mezirow and help contextualize how participants engage with complex societal issues, driving both personal and systemic transformation.

Transformative learning incorporates an emancipatory element, enabling individuals to overcome constraints that limit their potential. This perspective underscores the importance of agency in navigating and reshaping structural conditions, thereby linking personal transformation to systemic change.

3.2. Conceptual Mechanisms of Mobility-Driven Change

The conceptual mechanisms explored in this section illustrate how international mobility facilitates both individual transformation and societal progress. These mechanisms—agency; skills, knowledge, expertise, and civic understanding; intercultural competence; and social relations—are the drivers of systemic change, connecting personal development with broader structural change. They illuminate the processes through which participants leverage their mobility experiences to challenge existing structures, lead innovation, and create new societal realities. By examining each mechanism in turn, this section highlights the dynamic and interdependent ways in which international mobility catalyzes societal change.

3.2.1. Agency

Agency represents a central force through which international mobility catalyzes both personal growth and societal transformation. Grounded in Critical Realism, agency is understood as the capacity to act within and upon social, cultural, and economic structures that both enable and constrain human action. While structural conditions shape behavior, individuals possess the ability to reflect on these conditions and engage in purposeful action. This reflective capacity, or reflexivity, forms the foundation of agency, enabling individuals to navigate, challenge, and reshape the structures that frame their lives (Archer, 2000, 2003).

Within this study, agency is conceptualized as a dynamic process that unfolds through three interconnected dimensions identified by (Archer, 2000): discernment, deliberation, and dedication. Discernment enables individuals to critically evaluate their circumstances and priorities, deliberation

involves formulating strategies for action, and dedication sustains commitment to implementing these strategies over time. Together, these dimensions reflect the iterative and transformative potential of agency, as evidenced in the experiences of ECA alumni interviewed for this study.

Transnational mobility plays a crucial role in enhancing agency by exposing participants to diverse perspectives, social norms, and problem-solving approaches. Through socialization in structured environments like universities or workplaces, as well as unstructured settings such as community engagements, participants broaden their understanding of societal constraints and opportunities. This process facilitates discernment, allowing individuals to identify systemic challenges and envision transformative initiatives tailored to their home contexts. The ability to critically reassess prior assumptions, combined with the integration of new knowledge, strengthens autonomous thinking and equips participants to approach societal challenges with fresh perspectives.

International mobility also enhances deliberation by providing access to diverse resources and examples of successful strategies. Participants develop innovative approaches through reflective engagement with transnational experiences, incorporating comparative insights into practical solutions. Exposure to collaborative practices and mentorship networks builds their capacity to design and refine strategies, ensuring that their initiatives are both contextually relevant and actionable.

Dedication, as the sustaining force of agency, enables participants to overcome obstacles and persist in driving systemic change. Social relations established during mobility experiences and alumni networks, coupled with the knowledge and skills gained, reinforce participants' ability to mobilize resources, build coalitions, and implement their transformative projects. The iterative interplay between discernment, deliberation, and dedication exemplifies how agency operates as a cohesive mechanism linking individual transformation to broader societal outcomes.

3.2.2. Knowledge, Skills, Civic Understanding, and Expertise

International mobility develops skills, knowledge, expertise, and civic understanding that enable individuals to make meaningful contributions to their professional domains and societal contexts.

Skills

Skills are transferable abilities essential for navigating complex challenges and leading changes. These include cognitive skills such as decision-making and problem-solving, as well as interpersonal and leadership skills that underpin collaboration and influence.

Decision-making and problem-solving are essential cognitive skills critical for addressing complex challenges, yet they differ in focus and process. Decision-making involves selecting an optimal course of action from predetermined alternatives to achieve specific goals. It emphasizes evaluation, choice, and strategy under conditions of certainty or uncertainty, often guided by normative and descriptive frameworks (Morelli et al., 2022; Taylor, 1965). Problem-solving, on the other hand, focuses on identifying root causes and generating solutions to bridge gaps between current and desired states. It is iterative and exploratory, incorporating analytical, creative, and trial-and-error approaches (Harris, 2024; Taylor, 1965). While decision-making prioritizes outcome-specific choices, problem-solving engages in diagnosing and resolving systemic issues, often employing a broader set of strategies. Together, these skills enable individuals to navigate ambiguity, implement effective solutions, and drive transformative outcomes.

Interpersonal skills are central to building relationships and navigating socio-cultural complexities, particularly in diverse professional settings. Yukl & Gardner (2019) define these skills as the ability to understand the emotions, attitudes, and intentions of others, facilitating teamwork, resolving conflicts,

and establishing trust. Core components include active listening, empathy, and effective communication. These capabilities are not limited to isolated situations but reflect a consistent practice of emotional awareness and social intelligence. Enhanced interpersonal skills enable individuals to form meaningful connections, manage collaboration effectively, and build inclusive environments.

Leadership skills integrate interpersonal, conceptual, and technical abilities to inspire and guide collective action. As Yukl & Gardner (2019) highlight, effective leadership involves influencing others towards shared objectives, leveraging emotional and cognitive resources to sustain motivation and align efforts. These skills vary depending on hierarchical roles, with top-level leaders requiring strategic foresight and middle managers balancing diverse competencies. With enhanced leadership skills, participants are better prepared to turn their vision and ideas of influencing or revolutionizing systems into practical actions and bring others along to join their efforts.

Knowledge

International mobility enhances participants' capacity to drive societal transformation by equipping them with diverse forms of knowledge. This knowledge, acquired through immersive learning experiences, can be categorized as technical, policy-related, entrepreneurial, and advocacy-oriented. These theoretical dimensions emphasize the transformative potential of international mobility.

Technical knowledge involves proficiency in specialized methodologies, tools, and systems across disciplines such as engineering, medicine, environmental science, biology, chemistry, physics, and mathematics. Yukl & Gardner (2019) define this knowledge as the understanding of processes, methods, and techniques essential for specialized activities. It enables participants to address critical societal needs by integrating advanced practices and innovations into local contexts (Wang et al., 2024). For example, it may facilitate the development of context-specific solutions in disaster management, public health, or applied technological advancements.

Policy analysis and research knowledge equips participants with methodologies like data collection, scenario planning, and needs assessments to design evidence-based solutions addressing societal priorities. Exposure to international frameworks develops both broad and specialized knowledge applicable to areas such as policy reform, advocacy/activism, community engagement, and capacity building. By adapting global best practices, participants are empowered to overcome systemic obstacles and enhance transparency, accountability, and intersectoral collaboration in their home contexts.

Entrepreneurial knowledge refers to the capacity to identify opportunities and develop innovative solutions that create economic and social value. Prince et al. (2021) conceptualize entrepreneurship as the creation of new means-ends relationships, encompassing the ability to envision and implement novel approaches to address unmet needs or emerging challenges. This form of knowledge is critical for supporting innovation and driving systemic change. Social entrepreneurship, a subset of entrepreneurial knowledge, integrates profitability with sustainability and inclusivity, offering pathways to address pressing societal issues through business ventures. Mobility programs can support entrepreneurship by cultivating entrepreneurial knowledge, equipping individuals with insights into resource allocation, strategic planning, and market dynamics. These programs can also expand participants' capacity to align entrepreneurial initiatives with societal priorities, enabling transformation of local economies and communities.

Knowledge of advocacy and activism encompasses recognizing pressing societal issues, influencing policies, and engaging in direct action to address systemic challenges. McKeever (2013) and McKeever et al. (2023) describe awareness as understanding societal problems, advocacy as influencing attitudes and policies, and activism as effecting systemic change. Mobility programs enrich participants'

understanding of successful strategies, enabling them to apply tools like public speaking, community mobilization, and campaign design effectively within local contexts.

Expertise

Expertise, as cultivated through international mobility programs, is distinguished from technical or procedural knowledge by its depth, breadth, and strategic application. While technical knowledge focuses on proficiency in specific methodologies or tools, expertise integrates deep, domain-specific insights to address complex challenges, innovate, and lead systemic change. It develops through cumulative professional experience, advanced education, and deliberate practice—structured, iterative efforts to refine performance over time (Ericsson & Pool, 2016; Schmidt & Boshuizen, 1993).

A defining characteristic of expertise is the transformation of foundational knowledge into advanced cognitive frameworks that enable experts to recognize patterns, anticipate outcomes, and generate innovative solutions. Expertise also includes interdisciplinary fluency, synthesizing insights across domains to design cross-sector solutions, and adaptive problem-solving, adjusting approaches to meet evolving demands. Unlike technical knowledge, expertise encompasses strategic insights, such as a deep understanding of global trends, systemic interdependencies, and market dynamics.

This depth is achieved through access to advanced research, immersion in diverse academic and professional contexts, and collaboration with scholars, policymakers, and industry leaders. Expertise transcends mastery of procedures, equipping individuals to lead transformative initiatives, devise innovative strategies, and inspire systemic change. By turning advanced knowledge into actionable frameworks, expertise enables participants to tackle societal challenges, influence policy, and promote sustainable practices and institutional innovation.

Civic Understanding

Civic understanding refers to individuals' capacity to engage actively and meaningfully within social and political structures, advancing both personal and collective responsibility for societal progress. This concept encompasses two interrelated processes: socialization and subjectification (Biesta, 2010, 2014). Socialization involves integrating individuals into established cultural, social, and political frameworks, developing their ability to navigate and contribute to existing structures. Subjectification, in contrast, emphasizes independent thought and critical engagement, empowering individuals to challenge, reimagine, and potentially transform societal norms. Together, these processes create a foundation for active citizenship, balancing respect for established systems with a capacity for innovation and change.

International mobility has the potential to cultivate civic understanding by exposing individuals to diverse cultural, institutional, and governance models, as well as opportunities for collaborative learning and experiential engagement. This exposure operates across three interrelated domains: Community Resilience and Empowerment, Education and Capacity Building, and Policy Innovation and Governance.

Through their exposure to inclusive governance models and community-based initiatives, mobility participants gain invaluable insights into developing collective action and addressing societal challenges at the grassroots level. Experiences such as workshops, community dialogues, and collaborative projects provide practical tools for building trust, cohesion, and resilience within communities. By learning to mobilize collective action, participants are equipped to drive local initiatives that not only tackle immediate challenges but also inspire community ownership and establish the groundwork for sustainable societal development.

Civic understanding also encompasses the capacity to design and implement educational programs that empower others to engage meaningfully in governance and community development. Mobility

experiences often expose participants to innovative civic education practices, inclusive curriculum design, and pedagogical strategies. These insights enable them to adapt educational approaches to local contexts, creating resources that promote informed participation and empower communities to take active roles in decision-making processes.

A further domain of civic understanding involves applying these insights to influence systemic change through participatory governance and policy-making. Mobility participants gain exposure to effective governance systems and policy frameworks, learning how to advocate for and implement reforms that address structural inequities. By promoting transparency, equity, and inclusivity in decision-making processes, they develop the capacity to shape policies, support collaborative governance, and drive institutional innovation. These efforts contribute to broader societal transformation, embedding civic understanding within frameworks of equitable and inclusive governance.

By integrating these domains, civic understanding cultivated through mobility enables individuals to connect their learning with action, empowering them to address challenges, inspire change, and contribute to the transformation of communities, institutions, and governance systems.

3.2.3. Intercultural Competence

Intercultural competence is a key mechanism through which international mobility contributes to personal transformation and societal contributions. Defined as the ability to communicate effectively and appropriately across cultural contexts, intercultural competence integrates attitudes, knowledge, and skills that enable meaningful engagement with diversity (Deardorff, 2008; Deardorff, 2006). Unlike multiculturalism, which highlights the coexistence of cultures, intercultural competence involves active interaction and exchange, supporting a deeper understanding of cultural perspectives (Arasaratnam, 2013).

Building on Spencer-Oatey & Dauber (2019), the development of intercultural competence can be conceptualized as occurring through three interrelated pathways: academic, professional, and social integration. Academic integration enables participants to engage critically with diverse perspectives, stimulating dialogue, self-awareness, and exposure to varied methodologies. Professional integration allows participants to apply intercultural knowledge and skills in real-world contexts, promoting adaptability, problem-solving, and innovation. Social integration, often occurring outside formal settings, nurtures deeper cultural exchange through interpersonal relationships, shared experiences, and informal learning. Together, these pathways create opportunities for reflection, skill acquisition, and transformative learning.

At the core of intercultural competence are attitudes of openness, respect, and curiosity, which create the foundation for meaningful engagement with cultural diversity (Deardorff, 2006, p. 256). These attitudes lead to essential skills—adaptability, flexibility, empathy, and ethnorelative perspective—each contributing to the process of navigating and responding effectively within culturally diverse contexts. Adaptability focuses on external behavioral adjustments, such as learning to bow in cultures where bowing is customary, to integrate effectively. Flexibility, by contrast, emphasizes internal cognitive processes, enabling individuals to choose contextually appropriate responses, such as determining whether a bow, nod, or handshake is suitable. Together, these skills support both integration and critical cultural engagement.

Empathy plays a critical role in intercultural competence by enabling individuals to understand and integrate diverse perspectives. Through empathetic engagement, individuals move beyond their own worldview to appreciate the cultural complexity experienced by others. Critical reflection and transformative learning (Mezirow, 1997) underpin these processes by encouraging individuals to

evaluate their assumptions, challenge ingrained cultural biases, and reassess their frames of reference. This reflective process supports a shift from an ethnocentric worldview, where one's own culture is perceived as central and superior, to an ethnorelative perspective, which acknowledges and appreciates cultural diversity (Bennett, 2004).

Together, adaptability, flexibility, empathy, and ethnorelative perspective enable individuals to develop intercultural competence as both an internal transformation and an external skillset. This dynamic process equips individuals to navigate cultural complexity with confidence and sensitivity, facilitating a shift toward ethnorelative understanding and enabling them to act appropriately and effectively within diverse cultural settings. By integrating new perspectives and engaging in transformative learning, individuals become better prepared to contribute to societal change in meaningful ways.

By developing intercultural competence, individuals enhance their ability to contribute to societal change. By integrating newly acquired knowledge, skills, and cultural insights they influence and reshape cultural practices in their home societies. The interaction between human agency and cultural systems demonstrates how intercultural competence, cultivated through international mobility, supports both personal transformation and broader societal contributions.

3.2.4. Social Relations

Social relations are key mechanisms through which international mobility translates into societal contributions. From a Critical Realist perspective, these relations are not just connections but have unique qualities that emerge from interactions. They generate essential outcomes—such as trust, cooperation, and shared norms—that drive collective action and societal transformation (Donati & Archer, 2015). Unlike transactional views, which focus narrowly on how networks benefit individuals—such as advancing career success—this approach highlights the broader reflexive and ethical responsibilities within these relations. These responsibilities extend beyond immediate personal gains to include wider societal benefits. Social relations bridge the gap between individual efforts and broader structural opportunities, creating pathways for meaningful change. Through relationships formed in transnational spaces, participants gain access to diverse perspectives, practices, and resources. These resources are mobilized to address local challenges and support systemic reforms, illustrating how international mobility can contribute to society.

Transnationalism provides a lens for understanding how mobility experiences shape the interplay between global and local contexts. These spaces are dynamic arenas where norms, practices, and ideas are co-constructed (Fauser & Bada, 2024), creating diverse opportunities for knowledge exchange, cultural capital transfer, and collaborative innovation. Participants leverage these resources within transnational spaces to address systemic challenges and implement reforms.

Social relations represent dynamic, relational systems that underpin cooperation, shared learning, and collective action. Donati (2010) emphasizes that these relations generate trust and reciprocity essential for sustaining partnerships and achieving systemic change. Trust, emerging through repeated interactions during mobility, strengthens both formal and informal collaborations, enabling participants to mobilize resources and establish enduring partnerships.

Networks, as emergent configurations of social relations, play a mediating role between individual agency and broader societal structures (Donati & Archer, 2015). They act as dynamic systems of interdependence that facilitate knowledge exchange, resource mobilization, and collaborative initiatives. For example, ECA alumni networks exemplify how such configurations sustain relational interdependencies, enabling participants to leverage global expertise and enact transformative contributions in their home contexts.

Social relations cultivated during mobility, such as mentorships and collaborative networks, empower participants to critically reflect on entrenched norms, acquire specialized knowledge, and adapt global practices to their local contexts. This aligns with Symbolic Interactionism, which highlights the role of significant others—mentors and peers—in shaping behaviors and worldviews (Blumer, 1986; Mead, 1972). Through these interactions, participants develop adaptive capacities and innovative approaches to address societal challenges.

Transnational social relations also provide participants with access to financial, human, and operational resources essential for implementing systemic reforms. These resources are mobilized through structured alumni networks, institutional partnerships, and grassroots collaborations, reinforcing participants' ability to tackle pressing needs.

Through these relations, participants establish collaborative frameworks that enable them to scale systemic change by balancing flexibility with structured coordination. These partnerships emerge as relational mechanisms that bridge local and transnational capacities, facilitating co-created outcomes tailored to specific societal contexts. In line with Critical Realist perspectives, as articulated by Donati & Archer (2015), partnerships are not static arrangements but dynamic processes shaped by relational interdependencies and the interplay of agency and structure. These partnerships facilitate cross-sector collaboration and mobilize diverse resources, enabling participants to navigate structural constraints and address complex societal issues effectively.

The transformative potential of social relations is evident in their ability to enhance participants' critical consciousness and agency. Mezirow (1981, 1997) concept of emancipatory learning highlights how transnational social relations expose participants to alternative norms and practices, empowering them to challenge existing structures and reshape societal orders. Biesta (2010) complements this by emphasizing the role of learning in developing autonomy and the capacity for societal transformation. These processes equip participants to challenge entrenched systems while innovating solutions for their home contexts.

Moreover, the interconnectedness of these relations within transnational spaces catalyzes systemic change by challenging existing power dynamics. Grabowska (2024) shows how returnees, equipped with entrepreneurial skills developed through mobility, drive economic and social innovations in their home countries. Transnational spaces act as platforms for systemic transformation, amplifying participants' societal contributions.

In the context of international mobility, social relations are not incidental but integral to societal transformation. They provide the relational infrastructure through which participants navigate structural constraints, mobilize resources, and enact change. By integrating Critical Realism, Symbolic Interactionism, and Transnationalism, this framework situates social relations as emergent properties with transformative capacities. These relationships empower participants to leverage their mobility experiences for meaningful societal contributions, aligning individual agency with structural opportunities.

3.3. Theory of Change

The theory of change guiding this study posits that international mobility experiences transform participants into agents of societal change. By navigating diverse transnational environments, individuals acquire new knowledge, skills, social connections, and intercultural competence, enabling them to critically engage with and reshape existing structures and norms. These transformations extend beyond personal development, creating pathways for systemic contributions.

Key mechanisms—agency, social relations, intercultural competence, and the application of knowledge, skills, and civic understanding—bridge the personal and the societal. These four mechanisms demonstrate how international mobility experiences contribute to personal transformation and societal change. Understanding this process requires attention to emergent properties: outcomes that arise from the interactions within social structures and cultural systems, exceeding the sum of individual efforts (Elder-Vass, 2008).

Emergent properties are the result of the dynamic interplay between agency, structural conditions, and cultural contexts. For example, institutional programs and international partnerships provide pathways to mobility, equipping individuals with resources and opportunities to develop their skills and knowledge. However, these structures do not act alone; their impact depends on how participants make use of them during mobility and apply their learning upon return.

A central focus of this study is the obstacles that participants face when attempting to translate their mobility-acquired learning into meaningful societal contributions. Structural obstacles, such as gender discrimination limiting leadership opportunities, bureaucratic inefficiencies stalling implementation of reforms, or cultural conservatism resisting new practices, can significantly hinder progress. Reflexivity enables individuals to critically engage with these challenges, adapt their strategies, and align their actions with the specific needs of their local contexts (Archer, 1995).

For example, participants who gain advanced expertise in public health during mobility may return to environments where entrenched gender biases limit their ability to assume influential roles, or bureaucratic red tape delays the introduction of new evidence-based healthcare practices. By leveraging reflexivity and strategic adaptability, participants can navigate these obstacles, such as engaging with stakeholders to build alliances or framing reforms in ways that align with local cultural values. Through these efforts, emergent properties arise, such as the development of collaborative networks, shifts in institutional practices, or changes in community attitudes toward health equity. These emergent properties amplify the influence of individual actions, driving systemic transformations like reducing maternal mortality rates or expanding access to preventative care. This illustrates how agency and reflexivity, in interaction with structural and cultural conditions, generate new social realities that contribute to societal progress.

Emergent properties also highlight the ripple effects of systemic change. Educators, for example, who implement innovative pedagogical practices acquired during mobility may create a culture of collaboration and critical thinking within their institutions. Over time, this culture strengthens engagement among students and colleagues, contributing to broader societal transformation. Similarly, professionals returning from international programs may establish new business practices or enhance industry standards, leveraging their acquired expertise to reshape economic landscapes. These transformations surpass individual contributions, representing systemic changes that influence institutional norms and societal priorities.

This framework integrates Critical Realism's structure-agency dynamic, transnationalism's cross-border influences, and Transformative Learning Theory's focus on personal transformation. It highlights how systemic change emerges from the interplay between individual actions and broader structural and cultural contexts, driven by participants' ability to navigate obstacles and apply global insights to local needs. This theory of change illustrates how international mobility catalyzes personal growth and societal transformation, enabling sustainable development and enduring societal progress.

4. Methodology

This chapter describes the methodology used to examine the systemic outcomes of ECA-supported international mobility. Employing a mixed-methods design, the study combined quantitative and qualitative approaches to provide deeper insights into how international mobility contributes to societal development. The sections that follow outline the research design, data collection methods, analytical strategies, ethical considerations, as well as the strengths and limitations of the study.

4.1. Research Design

4.1.1. Research Aim and Questions

The study aimed to explore the links between ECA-supported international mobility and system-level development of ECA participants' home countries to address the following core question: Does ECA-supported international mobility shape system-level development outcomes, and if so, how?

This core questions is further broken down into sub-questions, each addressed in the findings chapters:

- What are the global patterns in the relationship between ECA-supported mobility and system-level development outcomes?
- In what ways do ECA alumni contribute to system-level development in their home countries?
- How do structural obstacles and enablers influence ECA alumni contributions?
- How do individual transformations experienced through ECA-supported mobility translate into broader societal contributions?

4.1.2. Theory-Driven Nature of the Research Design

This study is grounded in a theoretical framework that combines Critical Realism, Transnationalism, and Transformative Learning Theory. Critical Realism provides a lens to explore the interaction between structure, culture, and agency in social change, helping to explain how ECA-supported mobility influences both personal and systemic transformations. Transnationalism and Transformative Learning Theory deepen this understanding by showing how cross-border interactions and transformative learning experiences lead to profound shifts in thinking, behavior, and social engagement. This theory-driven approach informs both the quantitative and qualitative elements of the study, ensuring that the analyses are consistently grounded in a clear conceptual foundation.

4.1.3. Mixed-Methods Approach

This study employs a mixed-methods approach, combining quantitative and qualitative analyses to examine how international mobility contributes to societal development. While each method addresses distinct aspects of the research questions, together they provide a fuller understanding of the links between mobility and development. Quantitative analysis focuses on identifying broad patterns and trends over time, capturing associations between ECA-supported mobility and development indicators across 134 countries. Qualitative analysis, by contrast, explores personal experiences, uncovering the mechanisms that explain how mobility influences individual and systemic outcomes in specific contexts.

The quantitative data offers generalizable insights, highlighting long-term trends and large-scale patterns across diverse contexts. The qualitative data provides rich, in-depth accounts that reveal how alumni navigate challenges, adapt external knowledge to local settings, and contribute to systemic changes. While these two components are distinct, their combined use allows the study to explore both the breadth and depth of mobility's outcomes.

The quantitative component employs advanced statistical models, such as multilevel random slope techniques, to explore trends and variations in development outcomes. These models account for country-specific factors and time-based differences, ensuring the robustness of findings. The qualitative component uses thematic analysis guided by the study's theoretical framework, rooted in critical realism, transnationalism, and transformative learning theory. This framework ensures that qualitative findings are interpreted consistently, revealing the processes through which mobility shapes broader societal contributions.

This methodological design is a core strength of the study. By employing complementary quantitative and qualitative approaches, the research addresses both large-scale patterns and the nuanced dynamics underlying them. This dual approach ensures that the study not only captures overarching trends but also provides deep, contextualized insights into the transformative potential of international mobility.

4.1.4. Key Challenges

The ambitious scope of this study, covering over 60 years of data from 134 countries in the quantitative analysis and 70 countries in the qualitative analysis, presented significant challenges. The complexity of managing such extensive data from diverse sources required careful coordination and the implementation of advanced data management strategies to ensure consistency and reliability throughout the research process.

Another significant challenge arose in the acquisition and validation of ECA alumni data. While the ACES database developed by ECA serves as a valuable quantitative resource for centralizing some alumni records, discrepancies were identified, particularly in participant numbers, when compared to the archival data stored in the U.S., such as annual reports from the Fulbright Foundation. To address the discrepancies, we digitized the archival data and compared it with the ACES database. The research team ensured that these inconsistencies did not significantly affect the study's conclusions (see Appendix 1 for the robustness check).

For the interview data analysis, the team planned to use NVivo Collaborations to facilitate real-time coding across multiple researchers. However, technical issues with syncing persisted for several months, complicating the process. To overcome these hurdles, the team switched to using separate NVivo files and merged them twice a week. This adaptation allowed the team to maintain the coding schedule while ensuring consistency and rigor.

Technical challenges arose in areas with limited access to technology, where participants experienced issues that interrupted interviews, requiring flexible scheduling and follow-up efforts.

In countries experiencing ongoing conflict, recruitment and data collection were significantly delayed or disrupted. To address this, the research team employed an adaptive strategy of reallocating interviews to countries less affected by conflict, which ensured that the target sample size within each region was met without compromising the integrity of the research.

These challenges required ongoing adaptation, flexibility, and coordination across the research team to ensure that the ambitious aims of the present study were met. Through consistent efforts, the team was

able to streamline the analysis of both qualitative and quantitative data, resulting in coherent and reliable data that effectively supports the study's objectives.

4.2. Quantitative Data and Analysis

4.2.1. Data and Sample

The quantitative dataset, titled "Longitudinal Data on International Mobility and World Development", was meticulously constructed using a combination of the ACES database and various public data sources, such as the UN World Population Prospects, UNESCO Institute for Statistics, and the World Bank. The quantitative dataset was compiled with the aim of investigating the long-term associations between international exchanges and national development across different regions and periods. For a detailed overview of the data sources used in constructing the quantitative dataset, including publication details and coverage, please refer to the data biography in Appendix 2.

To build this dataset, the initial data source was the ACES database, which encompassed anonymized records of 721,017 alumni from 289 ECA-sponsored programs spanning student mobility, professional mobility, and youth/cultural mobility from 1940 to 2024. The preparation process involved several steps:

- Data Cleaning and Structuring: U.S. citizens were excluded from the dataset to focus on international participants, reducing the total to 704,821 alumni across 263 programs. The alumni were then categorized by year, home country, and mobility type (SM, PM, YCM). The data were reshaped into a long format, where each row corresponds to one year per home country, with separate columns for the number of alumni in each mobility type.
- Sample Selection: The sample was refined to ensure robust analyses. Initially, the quantitative dataset included data on ECA alumni from 221 countries between 1940 and 2024. However, to maintain consistency and reliability in the analysis of development indicators over time, only countries with comprehensive data across all five development indicators from 1975 to 2020 were included. Further, countries with fewer than three data points within the specified period were excluded to meet the requirements of the multilevel random slope model, which necessitates at least three observations per country for accurate slope estimation. Outliers such as Iceland was also removed to avoid distorting the regression analyses, as detailed in Appendix 3. As a result, the final sample includes 134 countries.

The study used five development indicators as dependent variables, each representing a distinct area of national development:

- Economy: Measured by real GDP per capita (constant 2015 U.S. dollars), reflecting economic growth and prosperity.
- Gender: Assessed via the female gross tertiary enrollment ratio, indicating the proportion of female students enrolled in tertiary education. This measure not only captures gender parity in education but also suggests broader societal shifts towards gender equality, as evidenced by its strong correlation with the Historical Gender Equality Index (r=.624 across 105 countries from 1975 to 2003).
- Justice and Freedoms: Evaluated using the Liberal Democracy Index from the V-Dem dataset, which considers the existence of electoral democracy and the protection of individual and minority rights.
- Health: Represented by life expectancy at birth, measuring the average lifespan of a newborn.

- Education: Measured by the gross enrollment ratio for primary and secondary education, reflecting the extent of basic education provision.

Key independent variables include the Standardized Cumulative Stock (SCS) of SM, PM, and YCM, derived from the ACES database. This measure indicates the population-standardized pool of potential contributors to national development through their experiences and skills acquired during international mobility. The SCS is calculated using the formula:

$$SCS_t = \sum_{t=1940}^{t} f_t \Big/ \frac{pop_t}{1{,}000{,}000}$$

where SCS_t is standardized cumulative stock at year t; f_t is flow of ECA alumni at year t; and pop_t is population at year t. The SCS provides a metric for assessing the relative intensity of ECA-sponsored mobility's potential influence on development. Detailed data on SCS across 134 countries can be found in Appendix 4.

Control variables incorporated into the analysis to account for alternative explanations include the gross tertiary enrolment ratio, international trade as a percentage of GDP, GDP per capita, year, and region. These controls help isolate the specific influence of international mobility on development indicators, considering both domestic and global economic influences. Detailed information on all variables is provided in Appendix 5.

4.2.2. Analytical Method

The primary analytical technique employed is the multilevel random slope model, chosen to examine the association between ECA mobility and development across 134 countries from 1975 to 2020. This model is well-suited for analyzing cross-sectional time-series data where observations, such as country-year clusters, are not independent. The standard errors from ordinary least squares (OLS) models could be underestimated due to this clustering, leading to inaccurate results. By using a multilevel model, which treats variances at the country level independently, we achieve more accurate parameter estimates and standard errors (Snijders & Bosker, 2011). Additionally, the model accounts for heterogeneous time trends across countries, allowing the slope of time to vary per country. This is essential for precisely estimating the relationship between ECA-sponsored mobility and development indicators while considering long-term trends. Furthermore, the multilevel random slope model is particularly appropriate for handling unbalanced panel data, which occur when data points are unevenly distributed across countries due to missing data (Singer & Willett, 2003). The model can be expressed as:

$$D_{it} = \beta_0 + \beta_1 M_{i(t-5)} + \beta_2 TE_{i(t-5)} + \beta_3 Trade_{it} + \beta_4 GDPC_{it} + \beta_5 T_{it} + \beta_6 T_{it}^2 + \mathrm{d}\beta_7 Region_i + u_{0i} + u_{1i} T_{1i} + u_{2i} T_{2j}^2 + e_{it},$$

where D_{it} is one of the development indicators (economic development, gender development, justice and freedoms, health improvement, and educational expansion) for country *i* at year *t*; $M_{i(t-5)}$ is the five-year lag of one of the ECA-sponsored mobility measures (SM, PM, YCM) for country *i* at year *t*; TE_{it} is the five-year lag of the gross tertiary enrollment ratio for country *i* at year *t*; $Trade_{it}$ is the sum of exports and imports of goods and services measured as a percentage of GDP for country *i* at year *t*; $GDPC_{it}$ is GDP per capita for country *i* at year *t*; T_{it} is time variable (t − 1975, so year of 1975=0) for country *i*; T_{it}^2 is the time-squared variable for origin country *i*; $Region_i$ is binary regional variables (AF, NEA, EAP, SCA, and WHA with EUR as reference); u_{0j} is the random effect of origin country *i* on the development indicator; u_{1j} and u_{2j} are the random effects of country *i* on the effect of the time and time-squared variables on the development indicator; and e_{it} is the country-year-level error.

The robustness of these findings was verified through robustness analyses, including checks for potential confounding factors such as U.S. international aid. Further details on the robustness checks and confounders are available in Appendix 1.

4.3. Qualitative Data Collection and Analysis

The qualitative component provides critical insights into the experiences of individuals and the mechanisms through which international mobility influences both their personal development and contributions to their home countries. For the purposes of this study, the home country is where an individual was typically born and grew up, and where they have made systemic contributions while residing there. This section primarily focuses on the qualitative dataset, which consists of original data collected from semi-structured interviews with 704 changemakers from 70 countries in all six regions.

4.3.1. Selection of Countries

The selection of countries for semi-structured interviews in each region followed a two-stage process, combining representative and purposeful sampling approaches. In the first stage, countries were classified into four groups based on their level of development as measured in 1990, what we originally planned as the midpoint of the study period. The level of development was assessed using the Human Development Index (HDI), a composite index that includes indicators for a long and healthy life, expected and mean years of schooling, and gross national income per capita. Based on their HDI scores from 1990, countries were categorized into Very High, High, Medium, or Low human development groups. The HDI serves as a strong alternative to GDP growth measures for assessing development, as it provides a more holistic view that extends beyond purely economic factors (Colclough et al., 2014).

In the second stage, we selected countries so that the number of countries chosen from each HDI category matched their share within the region, resulting in a 12-country sample that reflected the region's overall distribution of development levels. This approach ensured that the sample reflected the overall distribution of countries by development level within each region. While striving for proportionality, the selection process also considered the researchers' countries of expertise and networks. This allowed for a sample that not only mirrored the HDI classification but also leveraged the team's in-depth country knowledge.

Overall, 70 countries were selected: 12 each from AF, EAP, EUR, NEA, and WHA, and 10 from SCA, due to the smaller number of countries in the SCA region. See Appendix 6 for the full list of countries included in the qualitative study.

4.3.2. Selection of Participants

The interview participants were drawn from 1,921 biographical profiles of changemakers who had made significant contributions to their home countries since 1960. These contributions spanned five key areas: economy, gender equality, justice and freedoms, health, and education. These biographical profiles were compiled through a three-stage process of familiarization, identification, and synthesis (detailed in Appendix 7). Within the biographical profiles, 26 percent of the changemakers were confirmed ECA alumni, 39 percent had non-ECA mobility experiences (including to the U.S.), and 35 percent had indeterminate mobility status.

Building on this foundation, our interview sample included 704 participants, ensuring a diverse representation of mobility types and regional contexts. As shown in Table 1, the sample includes

participants from six global regions, reflecting the study's commitment to capturing a broad spectrum of experiences. ECA alumni represent 59.5 percent of the qualitative sample, non-ECA participants account for 35.9 percent, and individuals with no mobility experiences make up 4.5 percent. This distribution aligns with the study's objective to explore how various forms of international mobility contribute to societal change across diverse contexts.

Table 1. Sample by region

	ECA alumni (N=419)		Non-ECA group (N=253)		No mobility (N=32)		Total (N=704)	
	n	%	n	%	n	%	n	%
AF	79	18.9%	33	13.0%	4	12.5%	116	16.5%
EAP	80	19.1%	34	13.4%	3	9.4%	117	16.6%
EUR	60	14.3%	54	21.3%	6	18.8%	120	17.0%
NEA	67	16.0%	45	17.8%	5	15.6%	117	16.6%
SCA	72	17.2%	43	17.0%	2	6.3%	117	16.6%
WHA	61	14.6%	44	17.4%	12	37.5%	117	16.6%

Of the 704 interview participants, 31 percent were sourced directly from the 1,921 biographical profiles, while 12 percent were recruited through snowball sampling, and 57 percent were identified through additional recruitment efforts. Snowball sampling involved asking participants to recommend others meeting the study's criteria. Participants were included if they:

1. Played a crucial role in the initiation, implementation, or advocacy of systemic changes (Role).
2. Made demonstrable efforts to influence society (Influence).
3. Contributed at institutional/community, national, regional, or global levels (Level of Contribution).
4. Worked in one of the five key areas of development: economy, gender equality, justice and freedoms, health, or education (Relevance).
5. Resided in their home country at the time of their contribution (Residence).

The research team also leveraged personal networks and public information to identify further candidates. A rigorous screening process was applied to the additional 3,715 potential participants identified, resulting in 80 percent being excluded due to unmet criteria. The core selection criteria ensured consistency and rigor across the recruitment process.

While the list of 1,921 biographical profiles primarily included individuals identified through tracing key national-level events, subsequently the approach was broadened, using both established methods—such as reviewing key events—and new methods, including personal referrals and network-based searches. This ensured that the sample included not only national leaders but also changemakers at the regional, provincial, district, municipal, and community levels. This inclusive approach reflects the understanding that systemic change occurs through both top-down and grassroots efforts.

In addition to these criteria, the team considered factors such as significant accomplishments, recognition through awards or positions of influence, and the scale of societal contributions. These

considerations ensured that the sample represented a wide range of changemakers actively driving systemic change across various contexts.

4.3.3. Interviews

Semi-structured interviews were conducted between May 2023 and September 2024 to explore how participants' international experiences contributed to societal development in their home countries. A detailed description of the sample, including its distribution across levels, sectors, areas, and domains of societal contributions, is provided in Chapter 6. The interviews captured how participants contributed through initiatives such as creating or leading organizations, shaping policies, driving advocacy, and engaging communities. Many participants focused on capacity building and training, while others worked on raising awareness, empowering communities, or offering thought leadership. The interviews also examined how personal development—such as gaining skills, building social relations, developing agency and intercultural understanding—supported these contributions. The heart of the study lies in understanding how individual experiences abroad translate into meaningful changes in their societies.

Semi-structured interviews are particularly well-suited to this type of research because they allow for flexibility in probing topics that are most relevant to each participant, helping to explore and explain the underlying reasons and mechanisms behind their experiences and contributions. While offering this flexibility, semi-structured interviews also provide a consistent framework to compare responses across interviews. This approach ensured that the data collected was both rich and comparable, capturing a wide range of experiences and perspectives while allowing deeper insights into how participants' personal transformations led to societal contributions.

Interview questions were carefully crafted to cover a range of topics, including:

- The nature, duration, and purpose of participants' international exchange experiences.
- Higher education and other key formative experiences that shaped their development.
- The perceived influence of these experiences on their formation.
- Specific instances where they believed their international experiences influenced their ability to contribute to systemic change in their home countries.

We piloted the semi-structured interview instrument to assess its effectiveness in capturing how international mobility experiences influence individuals' contributions to their home countries. The pilot refined questions, evaluated flexibility, and tested multilingual use (English, Arabic, Russian, and Spanish) to ensure inclusivity. Of 77 invited participants, 10 interviews were conducted in May-July 2023. The pilot yielded critical insights that enhanced the instrument's design and informed outreach strategies. Following the instrument revisions, full-scale interviewing commenced.

To ensure depth and accuracy, interviews were conducted in participants' preferred languages, with professional consecutive interpreters used when needed. This approach allowed participants to articulate their experiences fully. The research team, composed of interdisciplinary experts with command of several key languages and deep knowledge of the regions and areas covered by the study, played a vital role in ensuring cultural and contextual sensitivity throughout the process. The distribution of interviews by language was as follows: 507 interviews were conducted in English, 102 in Spanish, 31 in French, 33 in Russian, 9 in Chinese, 9 in Portuguese, 4 in Korean, 3 in Arabic, 2 in Ukrainian, 2 in Japanese, 1 in Khmer, and 1 in Polish. This linguistic diversity reflects the study's commitment to inclusivity, enabling participants to share insights in ways that felt natural and authentic.

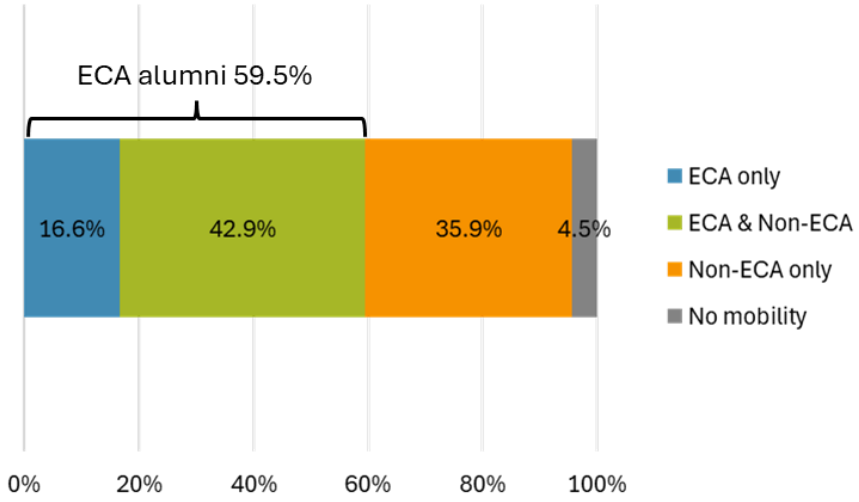
The interviews averaged 58 minutes in length.

Detailed qualitative data biographies document the collection, ownership, and context of these semi-structured interviews, including the rationale for data collection, participant contributions, and the transcription and translation process.

4.3.4. Profile of ECA Alumni in the Sample

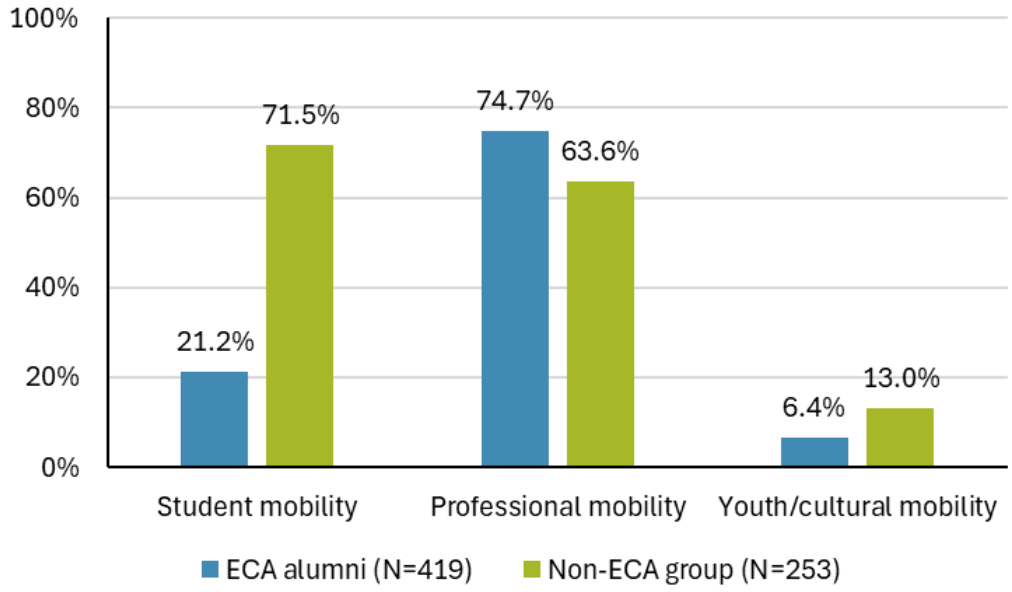
Of the 704 interviewees, 16.6 percent (n=117) participated exclusively in ECA-sponsored international mobility programs, while 42.9 percent (n=302) engaged in both ECA and non-ECA mobility programs, resulting in 59.5 percent (n=419) of the sample being ECA alumni. The remaining 35.9 percent (n=253) had participated in international exchanges unrelated to ECA, and 4.5 percent (n=32) had no international mobility experience. Figure 1 illustrates these proportions.

Figure 1. Proportion of ECA alumni in the Sample (N=704)



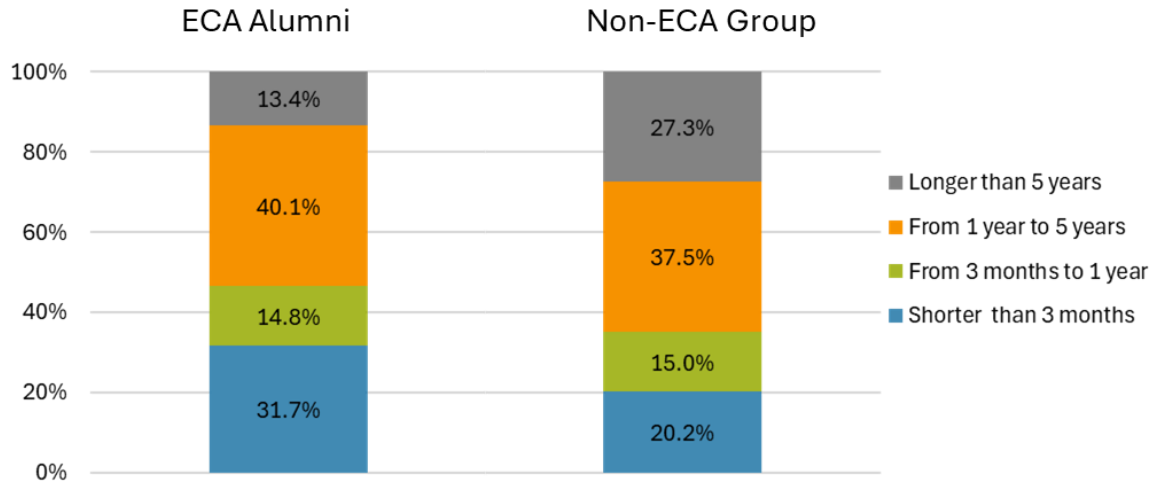
Among ECA alumni, professional mobility (PM) is the largest category at 74.7 percent, followed by student mobility (SM) at 21.2 percent and youth and cultural mobility (YCM) at 6.4 percent (Figure 2). In contrast, for non-ECA group, SM dominates at 71.5 percent, followed by PM at 63.6 percent, with YCM as the smallest category at 13 percent. This reflects a key difference: PM is the predominant type among ECA alumni, whereas SM is the largest category for non-ECA participants.

Figure 2. Mobility Types of ECA Alumni (N=419) and Non-ECA Group (N=253)



Approximately 31.7 percent of ECA alumni participated in short-term mobility programs lasting less than three months, while 68.3 percent engaged in long-term programs lasting more than three months (Figure 3). Within the long-term category, 14.8 percent stayed abroad for more than three months but less than a year, 40.1 percent for 1 to 5 years, and 13.4 percent for more than 5 years. For the purposes of this report, mobilities lasting up to three months are classified as short-term, while those exceeding three months are classified as long-term. On average, ECA alumni had an international mobility duration of 27 months, compared to the 44-month average for non-ECA participants.

Figure 3. Mobility duration of ECA alumni (N=419)



In terms of gender, 53.9 percent of the ECA alumni are women, with similar gender balance across comparison groups in the sample.

Regarding the destination countries of the sample, the UK emerged as the most popular international mobility destination for ECA alumni beyond the U.S. across all three mobility types (Table 2). Although the overall share remains relatively small, ECA alumni also gained mobility experience in China and Russia: 2.7 percent for SM, 1.7% for PM, and 3.3 percent for YCM. For non-ECA mobility participants,

the U.S. was the most popular international destination across all three mobility types: 32.7 percent for SM, 26.6% for PM, and 33.3% for YCM. The UK and France ranked second and third, respectively, for SM and PM. China and Russia accounted for 2.9 percent for SM and 3.7 percent for PM destinations, while there was only one non-ECA YCM mobility participant overall.

Table 2. Countries Where Participants Gained Mobility Experience, by Mobility Type and Participant Group (ECA Alumni and Non-ECA Alumni)

ECA Alumni								
SM (incidence=301)			PM (incidence=674)			YCM (incidence=60)		
Country	Inc.	%	Country	Inc.	%	Country	Inc.	%
US	124	41.2%	US	411	61.0%	US	41	68.3%
UK	63	20.9%	UK	28	4.2%	China	2	3.3%
Australia	9	3.0%	Germany	26	3.9%	Canada	2	3.3%
France	9	3.0%	France	16	2.4%	Japan	2	3.3%
Netherlands	9	3.0%	Japan	11	1.6%	New Zealand	2	3.3%
Spain	7	2.3%	China	9	1.3%	UK	2	3.3%
Canada	6	2.0%	Thailand	9	1.3%	Other countries	9	15.0%
Russia	6	2.0%	Sweden	8	1.2%			
Germany	5	1.7%	Australia	7	1.0%			
Italy	5	1.7%	India	6	0.9%			
Hungary	4	1.3%	Singapore	6	0.9%			
Thailand	4	1.3%	Switzerland	6	0.9%			
India	3	1.0%	Austria	5	0.7%			
Switzerland	3	1.0%	Canada	5	0.7%			
USSR	3	1.0%	South Korea	5	0.7%			
China	2	0.7%	Finland	4	0.6%			
Other countries	39	13.0%	Ghana	4	0.6%			
			Kenya	4	0.6%			
			Netherlands	4	0.6%			
			Poland	4	0.6%			
			Rwanda	4	0.6%			
			Senegal	4	0.6%			
			South Africa	4	0.6%			
			Russia	3	0.4%			
			Other countries	81	12.0%			
Non-ECA Mobility Participants								

SM (incidence=312)			PM (incidence=297)			YCM (incidence=42)		
US	102	32.7%	US	85	28.6%	US	14	33.3%
UK	91	29.2%	UK	22	7.4%	Czech Republic	2	4.8%
France	18	5.8%	France	12	4.0%	India	2	4.8%
Australia	7	2.2%	Germany	11	3.7%	Israel	2	4.8%
Sweden	7	2.2%	Belgium	8	2.7%	Switzerland	2	4.8%
Canada	6	1.9%	Netherlands	8	2.7%	China	1	2.4%
Spain	6	1.9%	China	8	2.7%	Other countries	19	45.2%
India	5	1.6%	Australia	5	1.7%			
Thailand	5	1.6%	Canada	5	1.7%			
China	5	1.6%	India	5	1.7%			
Russia	4	1.3%	Italy	5	1.7%			
Other countries	56	17.9%	Japan	5	1.7%			
			Singapore	5	1.7%			
			Spain	5	1.7%			
			Denmark	4	1.3%			
			South Africa	4	1.3%			
			Russia	3	1.0%			
			Other countries	97	32.7%			

Note: 'Incidence' refers to the number of distinct mobility experiences reported by participants. ECA alumni may have mobility experiences beyond their ECA program.

4.3.5. Data Analysis

The qualitative data from the interviews was analyzed using thematic analysis, a method chosen to identify, analyze, and report patterns (themes) within the qualitative data. In this context, *codes* refer to specific labels assigned to sentences or phrases in the interview transcripts that represent key ideas emerging from the data. These codes acted as the foundational units of analysis, often focusing on specific aspects of the data. As the analysis progressed, *themes* were developed by clustering similar codes together, offering broader insights that helped to interpret the data in relation to the research questions. Thematic coding was selected for its ability to explore complex and diverse data in a nuanced way, making it well-suited to the study's aim of developing rich explanations of trends observed in the quantitative analysis. In addition to coding, a portion of the qualitative data was quantified to derive measurable insights, which were then used to complement the qualitative findings.

Interview data coding adhered to clearly defined procedures to ensure methodological rigor. NVivo 14 was used to organize and retrieve coded data from a centralized location, streamlining communication, managing data efficiently, and enabling updates and refinements throughout the process.

The initial codebook was developed based on predefined codes, informed by the interview questions and the theoretical framework. This codebook underwent continuous refinement to incorporate

emerging codes and ensure that the analysis remained firmly rooted in the data. Regular team meetings and discussions supported these ongoing refinements, allowing new codes to be rigorously integrated into the analysis. This iterative process enhanced the robustness of the findings.

More specifically, the thematic analysis followed a structured process, broken down into several key stages:

1. Familiarization with the data was the foundational step. In this initial stage, researchers thoroughly read and re-read the interview transcripts to gain a deep understanding of the content. This comprehensive review was crucial for identifying initial codes.
2. Generating initial codes followed. During this stage, researchers systematically coded the data using NVivo, tagging sections of text with codes based on both a priori codes derived from the interview protocol and the theoretical framework, as well as emergent codes identified through close engagement with the data.
3. Quantification of qualitative data was employed to complement the coding process. Significant portions of the qualitative data were quantified, categorizing responses into metrics related to systemic changes and mobility experiences. This approach allowed for a more integrated analysis, balancing narrative depth with statistical insight.
4. Identifying broader themes came next. Researchers clustered related codes to form overarching themes that captured the core patterns in the data. This step was critical in moving beyond individual codes to a more cohesive understanding of the major themes.
5. Reviewing themes was a vital step to ensure accuracy and relevance. Researchers carefully reviewed and refined the themes, ensuring they accurately represented the data and meaningfully addressed the research questions.
6. Producing the final report was the last stage, where findings were compiled into a comprehensive narrative. This process involved writing up the themes, supported by direct quotes from interviews, to illustrate each theme and provide a rich understanding of the links between international mobility and systemic change.

In analyzing the qualitative data, we coded the contributions made by ECA alumni according to four key dimensions: level of contribution, area of contribution, sector of contribution, and domain of contribution. The levels of contribution were categorized as individual, institutional, national, regional, and global, reflecting the scope of alumni influence. The areas of contribution were coded based on the specific societal issues addressed by the alumni, including education, poverty and economic growth, justice/freedom, health, and gender. To provide further granularity, we also coded sectors of contribution, which captured the professional or societal fields in which these contributions took place (civil society, institutional politics, scientific innovation, culture, media, entrepreneurship, social entrepreneurship). Finally, we classified the domains of contribution, which detailed the specific actions taken by alumni, such as initiating/leading a new initiative/ organization, leading an existing initiative/organization, leading/contributing to community engagement/empowerment, policy changes, advocacy/awareness campaigns, capacity building/training, advocacy/activism for change, legislative change, thought leadership/being a public intellectual. By coding contributions in this systematic way, we ensured a comprehensive understanding of both the breadth and depth of participant contributions.

For the evidence reported in Chapters 7 and 8, establishing the categories that structure each chapter involved an iterative process aligned with these chapters' analytical objectives. In Chapter 7, initial coding focused on identifying obstacles and enablers to alumni contributions, clustering these into broader patterns that captured both global trends and regional dynamics. Frequency analysis was used

to quantify obstacles and enablers; the NVivo frequency outputs were cross-referenced with team members' regional expertise to ensure contextual accuracy.

In Chapter 8, the development of categories centered on organizing empirical data into analytical frames that captured the complexity of alumni experiences. This process combined deductive and inductive approaches, with both theory and interview data guiding the categorization. For example, the sections on agency and intercultural competence used theoretically informed frames to categorize data, while ensuring that the categories reflected the empirical evidence. Meanwhile, the sections on knowledge and skills and social relations began with emergent patterns from the data, which were then refined using analytical frames. Across all sections, the aim was to use these frames as structured "nets" to organize and interpret the rich empirical data systematically and rigorously. Collaborative discussions throughout the process ensured that the categories were robust, contextually grounded, and reflective of the nuanced contributions alumni made at different levels.

To ensure the analysis was rigorous, several quality assurance measures were put in place. The coding process began with a pilot phase, where team members independently coded the same interviews. They then discussed and reconciled their interpretations, aligning their approaches and refining the coding framework. Any subsequent discrepancies in the coding were systematically reviewed in weekly team meetings, leading to a shared understanding and greater consistency across the analysis.

Regular inter-coder reliability checks were conducted, with multiple researchers coding a subset of transcripts to assess consistency. Any differences were discussed and resolved in meetings, further refining the codebook as needed. Reflective memos were also an important part of the process, with each researcher documenting their thoughts, decisions, and potential biases throughout the analysis. These memos were shared and discussed in team meetings, promoting reflection on how individual perspectives might affect data interpretation.

By incorporating these rigorous practices such as regular reliability checks, continuous refinement of the coding framework, and reflexive analysis, the study ensured a robust analysis. This approach minimized bias and enhanced the reliability of the findings.

4.3.6. Ethical Considerations

The qualitative component of this study followed stringent ethical standards, ensuring the protection, confidentiality, and dignity of all participants. Ethical approval was obtained from the Central University Research Ethics Committee (CUREC) at the University of Oxford. All participants provided informed consent, with explicit assurances regarding the confidentiality and anonymity of their responses throughout the research process. Participants were fully informed of the study's purpose, their right to withdraw at any point, and the measures taken to protect their data.

Participants were offered the choice to keep their responses confidential or not, and 28% opted to keep their responses confidential. In this report, no participant is named directly, and details about participants and their contributions are only revealed where they have given explicit consent to do so.

The study faced particular ethical challenges due to the sensitive nature of some discussions, especially those concerning political and social issues. In countries with restrictive political environments or heightened cultural sensitivities, participants expressed concerns about confidentiality and potential repercussions. In contexts like China, Saudi Arabia, and Qatar, there was hesitation to discuss sensitive topics related to freedom and justice due to perceived political risks. To address these concerns, the research team adapted to participants' preferences by avoiding audio recordings and relying on detailed notetaking when requested. Transparent communication was key, with researchers

sharing interview questions in advance and clearly outlining the study's objectives to develop trust. Additionally, participants were offered the opportunity to review and approve their interview transcripts before the analysis began.

Participant well-being and ongoing consent were carefully monitored throughout the interviews. Participants were regularly reminded that they could pause, skip questions, or withdraw from the study at any time without any repercussions. The research team was trained to be culturally sensitive and responsive to participants' needs, ensuring a safe and respectful interview environment. All data were securely stored on encrypted servers accessible only to authorized researchers, adhering to strict institutional and legal standards to protect participant information. By implementing these comprehensive ethical measures, the study safeguarded participant rights and well-being while upholding the integrity and credibility of the research process.

Building on this strong ethical foundation, the qualitative data collected in this study offers valuable insights into the experiences of changemakers, highlighting the diverse pathways through which international mobility influences their contributions to home country development. This component adds depth and richness to the overall findings of the research, offering a nuanced perspective on the mechanisms through which international mobility and development are interlinked.

4.4. Strengths and Limitations

4.4.1. Strengths

1. The study's comprehensive mixed-methods approach provides rich insights by integrating both quantitative and qualitative analyses to thoroughly assess the influence of international mobility on home country development. The quantitative component spans from 1940 to 2024 and includes data on ECA student, professional, and youth/cultural exchanges and development indicators across 221 countries. This extensive temporal and cross-national coverage allows for an in-depth exploration of how international exchanges influence developmental trajectories. Complementing this, the qualitative component involves 704 semi-structured interviews with changemakers from 70 countries, which provide rich insights and contextual depth. These interviews explore the personal experiences of ECA alumni and comparison groups, enhancing the understanding of the varied and nuanced ways in which international mobility affects individual contributions to systemic change in their home countries. By combining these methods, the study offers a holistic view of the observed statistical relationships and the real-world outcomes of international exchanges.
2. The study is strengthened by its longitudinal perspective and rigorous analytical framework, which are crucial for examining trends and patterns over time. The construction of a cross-national time-series dataset facilitates a detailed analysis of long-term associations between ECA-sponsored mobility and development indicators. Additionally, the use of a multilevel random slope model effectively manages the nested structure of the data—where observations are grouped within countries—and accounts for its unbalanced nature due to missing data points, allowing for precise estimation of the relationships. This sophisticated statistical approach, combined with meticulous data collection and the careful selection of control variables to account for socio-economic factors, ensures the validity and reliability of the findings. Furthermore, the qualitative interviews employ a semi-structured approach that allows for flexibility while maintaining a focus on key topics, ensuring a thorough exploration of participant experiences and contributing to the overall robustness of the study.

3. The study effectively incorporates diverse perspectives by including a wide range of participants, such as ECA alumni, non-alumni with mobility experiences, and individuals without international mobility. This diversity enriches the analysis by providing a comprehensive view of the influence of various types of mobility on development outcomes. The inclusion of comparison groups enables a thorough examination of the effects of international exchanges by contrasting different experiences, ensuring that the study captures a broad spectrum of experiences and outcomes.
4. The methodological transparency, reflexivity, and comprehensive documentation throughout the study enhance its credibility and reproducibility. The study demonstrates a strong commitment to transparency through thorough documentation of data collection and analysis processes. This meticulous approach not only ensures the reproducibility of the research but also upholds rigorous ethical standards, as evidenced by careful management of participant confidentiality and adherence to ethical considerations throughout the study. The inclusion of detailed data biographies for both the quantitative and qualitative components further reinforces this transparency. For the quantitative data, the biographies provide a thorough account of the data sources, collection methods, and coverage, while the qualitative data biographies detail the process, rationale, and translation/interpretation/transcription details for each interview. Additionally, the researchers' practice of reflexivity, as documented in their reflective reports produced as part of the research process, allowed for continuous self-evaluation and adaptation throughout the study, ensuring that biases were minimized.

4.4.2. Limitations

1. While this study highlights significant associations between ECA-sponsored mobility and development indicators, it opens avenues for causal investigations. The current analysis focuses on correlations, offering a comprehensive overview of long-term trends and patterns in the relationship between international exchanges and national development. However, these findings also underscore the importance of pursuing further research that examines causality more explicitly.
2. While the ACES database serves as a valuable resource for this study, there is room for greater transparency and consistency in the data it provides. Some discrepancies were identified between the ACES data and other published sources. Despite this, the robustness checks have ensured that these discrepancies do not substantially affect the study's conclusions. By standardizing data collection practices and ensuring better alignment across sources, the ACES database could become an even more powerful tool for evaluating the outcomes of ECA programs and facilitating more detailed and reliable future research.
3. The selection of development indicators and control variables was strategically guided by the best available data, ensuring that the study maintained a broad and inclusive scope. However, the exclusion of some potentially relevant variables, such as Foreign Direct Investment (FDI) or government expenditure on education, due to data limitations, suggests that certain dimensions of the relationship between international mobility and development may not be fully captured. Future research could address this by incorporating additional variables as data availability improves, enabling a more nuanced analysis. Additionally, using more localized or specific datasets could uncover important regional or country-specific dynamics that the current global approach may not fully reflect, thereby enhancing the understanding of how international mobility interacts with various development contexts.

4. The potential for selection bias in qualitative sampling was acknowledged due to the method of identifying key changemakers primarily through available public information and networks, which may have favored more visible individuals. To counteract this bias, the research team employed snowball sampling techniques and sought referrals from a diverse array of contacts to include less prominent yet engaged changemakers. This approach helped to ensure a more representative sample by tapping into underrepresented networks and broadening the diversity of perspectives included in the study.
5. The reliance on self-reported data from interviews inherently introduces the potential for bias, as participants may present themselves more favorably or withhold sensitive or negative experiences. To mitigate this, the research team employed a semi-structured interview format that encouraged open and honest dialogue, allowing participants to share their experiences in their own words. Additionally, interviewers were trained to build rapport and create a safe environment, which helped to reduce social desirability bias and encourage more candid responses.

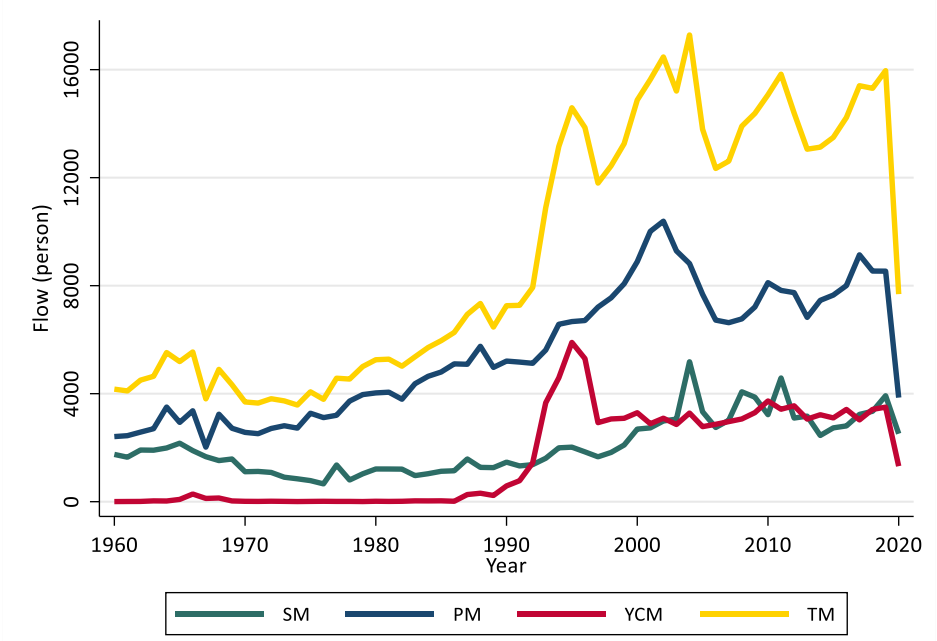
5. What are the Global Patterns in the Relationship between ECA-Supported Mobility and System-Level Development Outcomes?

This chapter summarizes global findings on the link between ECA-sponsored mobility—representing alumni of ECA foreign exchange programs—and development outcomes in their home countries. The analysis, based on the quantitative data, highlights key trends in ECA alumni flows, their distribution across country income groups, and their connections to development outcomes, as estimated through multilevel random slope models. The broader implications of student mobility are then discussed, comparing the outcomes of exchanges to the US, China, and Russia.

5.1. Trends in ECA-Sponsored Mobility to the United States

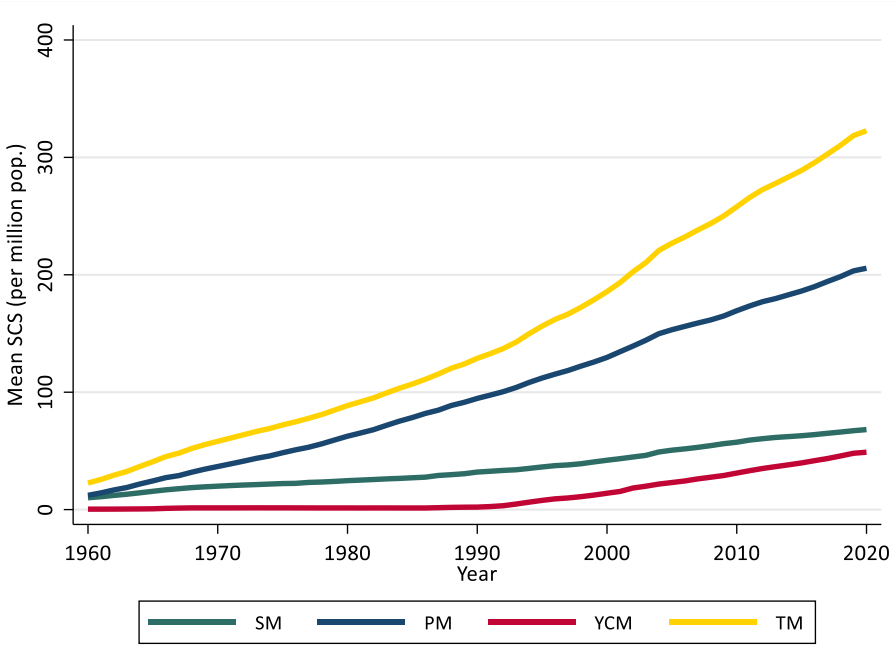
The flow of ECA-sponsored exchange participants increased significantly from 1960 to 2020, reflecting growing investment in international mobility programs. Despite fluctuations, such as a sharp decline in in-person exchanges in 2020 due to the COVID-19 pandemic, total mobility (TM)—comprising student mobility (SM), professional mobility (PM), and youth/cultural mobility (YCM)—has grown steadily over six decades (Figure 4). PM consistently represented the largest type of ECA-supported exchanges by number of participants, underscoring its strategic emphasis on professional capacity building. By 2019, the flow of PM participants was more than double that of SM and YCM. The dominance of PM reflects its extensive reach across a wide range of sectors and professions. Notably, PM and YCM flows surged after 1990, driven by a sharp increase in mobility from post-Soviet countries such as Russia, Ukraine, Belarus, Kazakhstan, and the Kyrgyz Republic. This trend coincided with geopolitical shifts following the dissolution of the Soviet Union, which opened new opportunities for engagement under U.S. public diplomacy initiatives. These increases highlight how global events have shaped the trajectory of ECA-sponsored mobility over time.

Figure 4. Flow of ECA Exchange Participants by Year and Type of Exchange (134 Countries, 1960-2020)



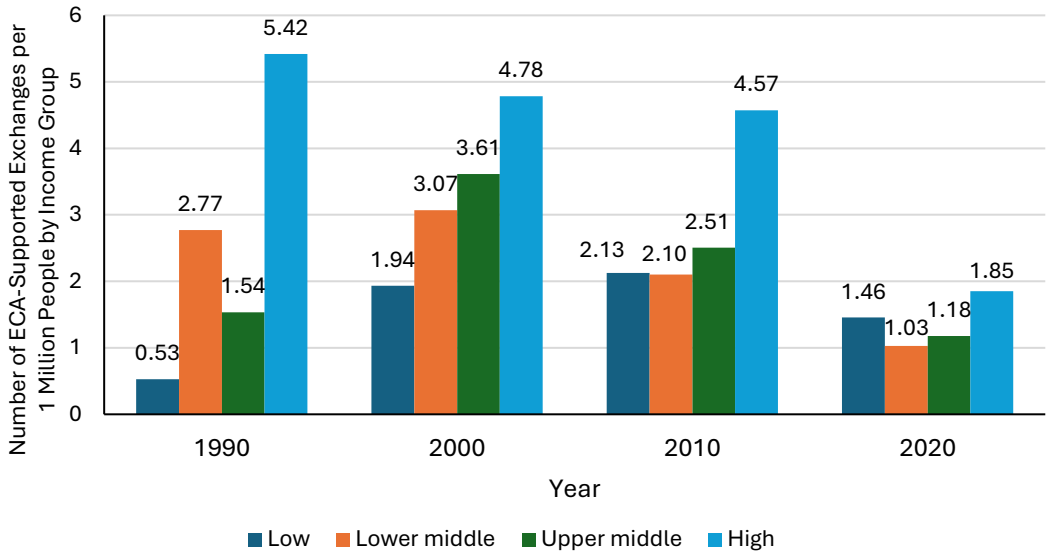
To facilitate meaningful cross-country comparisons, this study uses the standardized cumulative stock (SCS) measure. The SCS represents the number of ECA alumni per one million people in a given country, adjusted for population size. This approach ensures that alumni contributions are evaluated relative to national contexts, enabling a more accurate assessment of their potential to support systemic change. Globally, PM has the highest mean SCS of all mobility types, followed by SM and YCM (*Figure 5*). Over time, the SCS of PM alumni has risen more rapidly than SM and YCM, reflecting both the scale and consistency of PM initiatives. This trend clearly shows the significant potential of PM alumni to contribute to the development in their home countries.

Figure 5. Global Mean of Standardized Cumulative Stock of ECA Exchange Alumni by Year and Type of Exchange (134 Countries, 1960-2020)



These trends reflect the evolving dynamics of ECA-sponsored exchanges, highlighting both their expanding reach and the changing patterns of resource distribution across countries with varying income levels. While differences across mobility types (e.g., professional, student, and youth exchanges) highlight variation in program distribution, examining how exchange flows are allocated across low-, lower-middle-, upper-middle-, and high-income countries provides insights into the reach of ECA-sponsored mobility. Figure 6 captures these patterns, standardizing the number of ECA-supported exchanges per million people by the country income group to allow for meaningful comparisons.

Figure 6. Number of ECA-Supported Exchanges Per 1 Million People by Country Income Group



Notes: The categorization of countries by income level is based on the annual classification provided by the World Bank. As classifications may change each year, the categorization is not consistent over time. Countries without ECA alumni are excluded from the estimation. Cook Islands, Guadeloupe, Martinique, Tibet, and Vatican City are excluded due to missing income classification data from the World Bank. The ACES dataset includes 689 cases categorized as "European Union"; these cases were excluded from the main analysis while other cases within the EU have been assigned to their respective countries.

Figure 7 highlights several important trends in the distribution of ECA-supported exchanges per capita across different income groups. First and foremost, high-income countries have consistently been and remain the largest beneficiaries of ECA exchange funding per capita, with 5.42 exchanges per million people in 1990 and 1.85 in 2020. Despite this decline over time, they still outpace all other income groups by the end of the period.

Second, by 2020, low-income countries emerged as the second-largest per capita beneficiaries, surpassing both lower-middle and upper-middle-income groups. This represents a significant shift compared to 1990 when low-income countries had the lowest per capita participation rates, with only 0.53 exchanges per million people.

Third, upper-middle-income countries overtook lower-middle-income countries in per capita participation rates around 2000, and this trend has persisted to date. This reflects changes in resource allocation and geopolitical dynamics, particularly in regions such as post-Soviet countries, where upper-middle-income nations saw a surge in participation.

Finally, all income groups saw a sharp decline in per capita ECA-sponsored exchanges in 2020, largely due to the COVID-19 pandemic, with possible contributions from broader geopolitical shifts. Despite remaining the largest beneficiaries, high-income countries have seen their relative advantage diminish over time. Notably, low-income countries—once the least represented—emerged by 2020 as the second-largest recipients of ECA exchanges per capita. This shift reflects a gradual but meaningful trend toward greater inclusion of low-income countries in ECA-sponsored mobility, even amid an overall decline in absolute numbers.

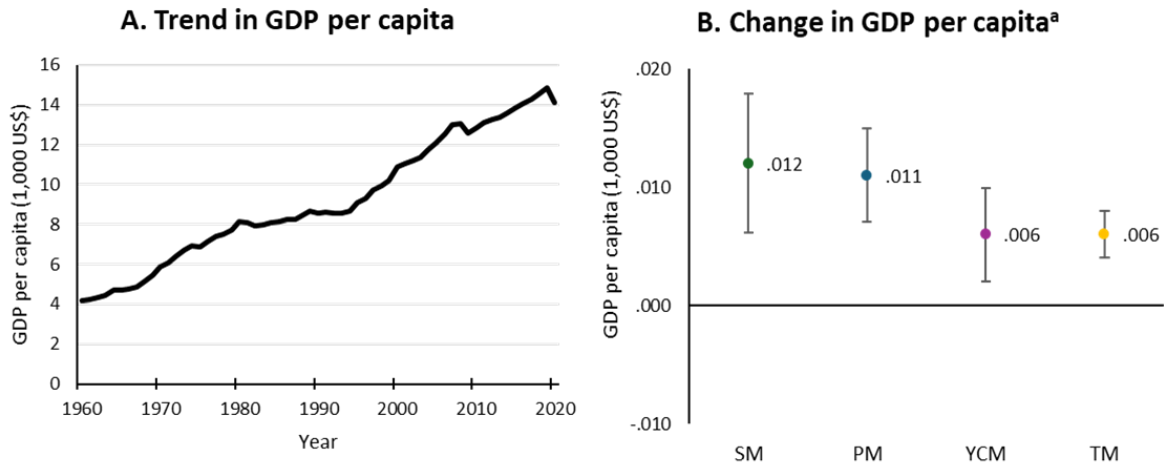
5.2. The Link Between ECA-Sponsored Mobility and Home Country Development

This section explores how ECA-sponsored mobility, measured by SCS, correlates with development outcomes in alumni home countries. Findings from multilevel random slope models reveal significant associations between ECS-sponsored mobility and five key development areas: economy, gender, justice and freedom, health, and education.

5.2.1. Economy

Economic development, measured by GDP per capita (constant 1,000 U.S. dollars in 2015), has shown consistent growth on average across the 134 countries analyzed since 1960 (Figure 7). The analysis of the link between ECA-sponsored mobility and economic development reveals that TM and its subcategories (SM, PM, YCM) are positively associated with economic growth (Figure 7). Specifically, every additional ECA alum per million people in a country is linked to an increase of $6 in GDP per capita. This significant correlation underscores the role of mobility programs in supporting economic growth by equipping alumni with skills, connections, and agency to drive productivity, innovation, and entrepreneurship in their home countries.

Figure 7. Trend and Change in Economy (134 Countries)



a—Unstandardized coefficient with 95% confidence intervals. Each model includes one mobility covariate (SM, PM, YCM, and TM) at a time. Controls for the following variables are included in all models: gross tertiary enrollment ratio$_{t-5}$, international trade$_t$, year$_t$, year squared$_t$, and dummy variables for regions. The dot with error bars crossing the x-axis indicates a statistically non-significant correlation at the $p < .05$ level (two-tailed tests).

Poverty reduction is another potential indicator of economic development; however, this analysis does not include it due to limited data coverage, which restricts meaningful comparisons with other areas of development. To address this gap, we conducted a separate study examining the impact of general SM—both self-funded and scholarship-sponsored (ECA- and non-ECA-sponsored) degree exchanges—on poverty reduction across 43 low- and middle-income countries from 1998 to 2018. The findings indicate that general SM is positively associated with long-term poverty reduction, highlighting the potential of international higher education to support poverty alleviation in developing nations (Kwak & Chankseliani, 2024). Further details on this research are provided in

Appendix 8.

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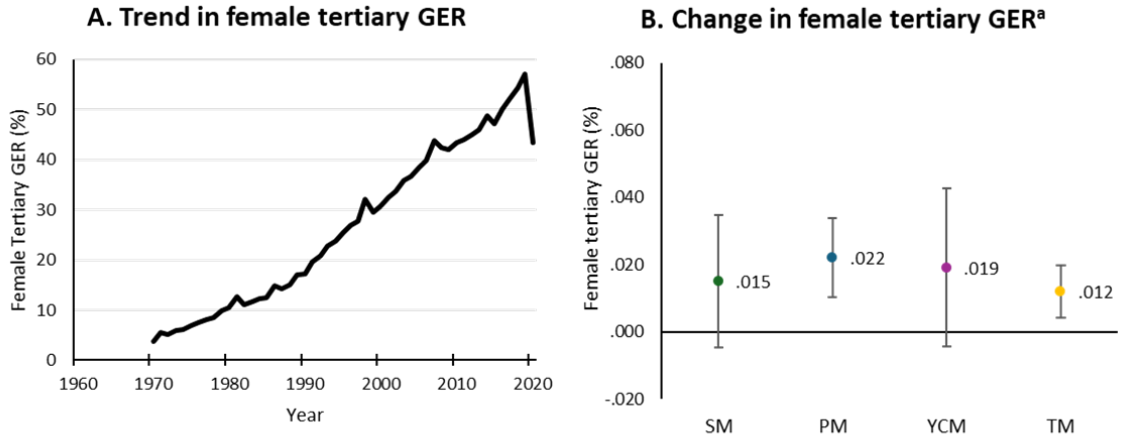
5.2.2. Gender

Progress in gender equity, reflected in the female tertiary gross enrollment ratio, has improved steadily since the 1970s (Figure 8). In the regression analysis, PM demonstrates the strongest link to this expansion, with TM also showing a positive association (Figure 8). Each additional PM alum per million people correlates with a .022 percentage point increase in the female tertiary enrollment ratio. This finding highlights the transformative potential of PM programs in increasing educational opportunities for women.

Figure 8. Trend and Change in Gender (134 Countries)

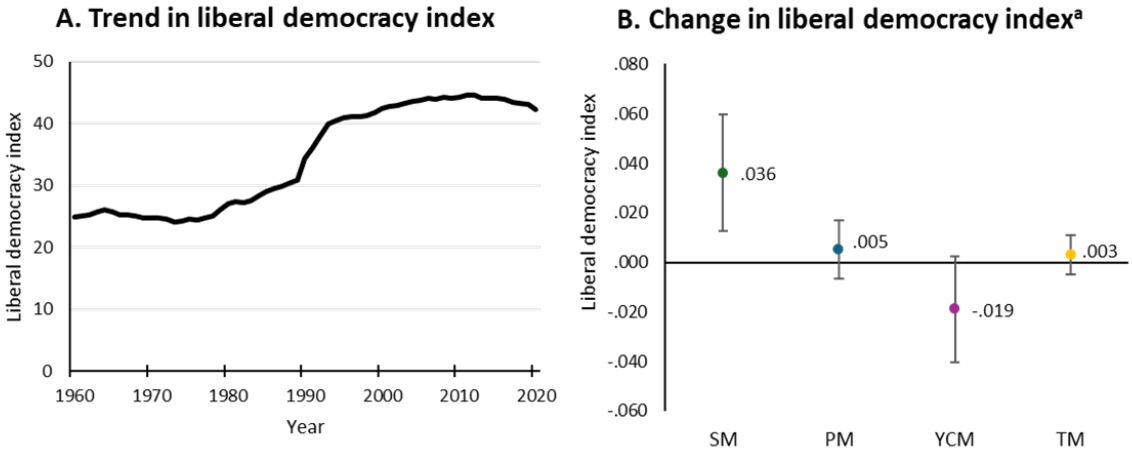


a—Unstandardized coefficient with 95% confidence intervals. Each model includes one mobility covariate (SM, PM, YCM, and TM) at a time. Controls for the following variables are included in all models: gross tertiary enrollment ratio$_{t-5}$, GDP per capita$_{t-5}$, international trade$_t$, year$_t$, year squared$_t$, and dummy variables for regions. The dot with error bars crossing the x-axis indicates a statistically non-significant correlation at the $p < .05$ level (two-tailed tests).

5.2.3. Justice and Freedom

Justice and freedom, measured using the liberal democracy index, saw notable growth in the late 1980s and early 1990s, aligning with global democratic transitions (Figure 9). However, this growth has stabilized in recent decades. Regression analysis reveals that SM has the strongest positive correlation with improvements in justice and freedom among ECA-sponsored mobility types (Figure 9). Specifically, each additional SM alum per million population is associated with a .036-point increase in the liberal democracy index. This association suggests that SM programs not only enhance individual knowledge and critical thinking but also equip alumni with the skills and perspectives necessary to stimulate civic engagement, advocate for inclusive governance, and drive systemic improvements in democratic institutions within their home countries.

Figure 9. Trend and Change in Justice/Freedom (134 Countries)



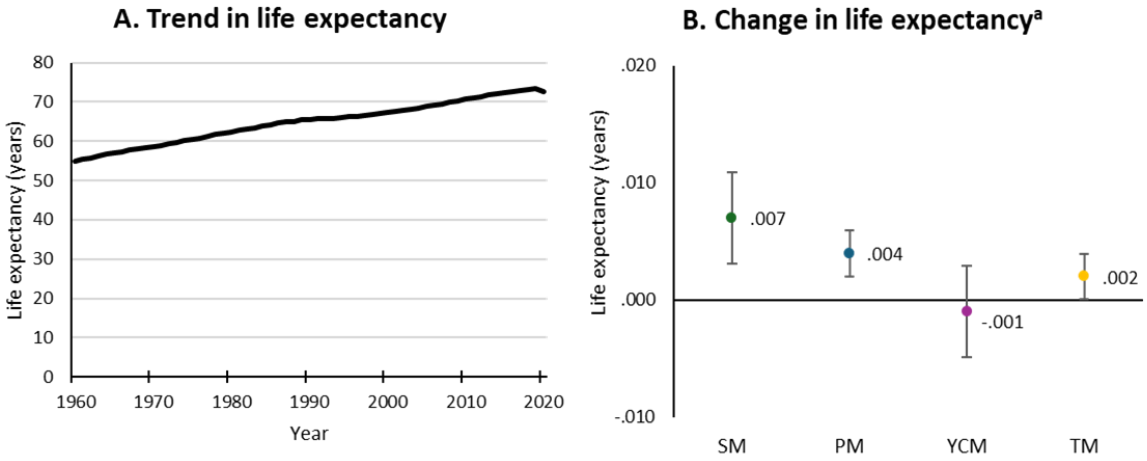
a—Unstandardized coefficient with 95% confidence intervals. Each model includes one mobility covariate (SM, PM, YCM, and TM) at a time. Controls for the following variables are included in all models: gross tertiary enrollment ratio$_{t-5}$, GDP per capita$_{t-5}$, international trade$_t$, year$_t$, year squared$_t$, and dummy variables for regions. The dot with error bars crossing the x-axis indicates a statistically non-significant correlation at the $p < .05$ level (two-tailed tests).

In addition, we explored the broader impact of general SM on democratization in authoritarian countries. Using dynamic panel analysis (a statistical method that examines how changes within countries occur over time, using repeated observations across multiple countries over several years), the study demonstrates that international student mobility, particularly to democratic host countries, promotes democratization in authoritarian regimes. This finding aligns with the ECA-sponsored SM analysis, extending its implication to general student mobility. Appendix 9 provides further details on this study.

5.2.4. Health

Global population health, as measured by life expectancy, has improved dramatically, rising from an average of 55 years in 1960 to 71 years in 2020 (Figure 10). SM, PM, and TM all show positive correlations with health outcomes, with SM exhibiting the strongest association (Figure 10). Each additional SM alum per million people is linked to a 0.007-year (or approximately 2.6 days) increase in life expectancy. These findings imply that ECA-sponsored mobility programs, except YCM, contribute to population health improvements through alumni efforts in healthcare, policymaking, and addressing underlying social and environmental factors that influence health outcomes.

Figure 10. Trend and Change in Health (134 Countries)

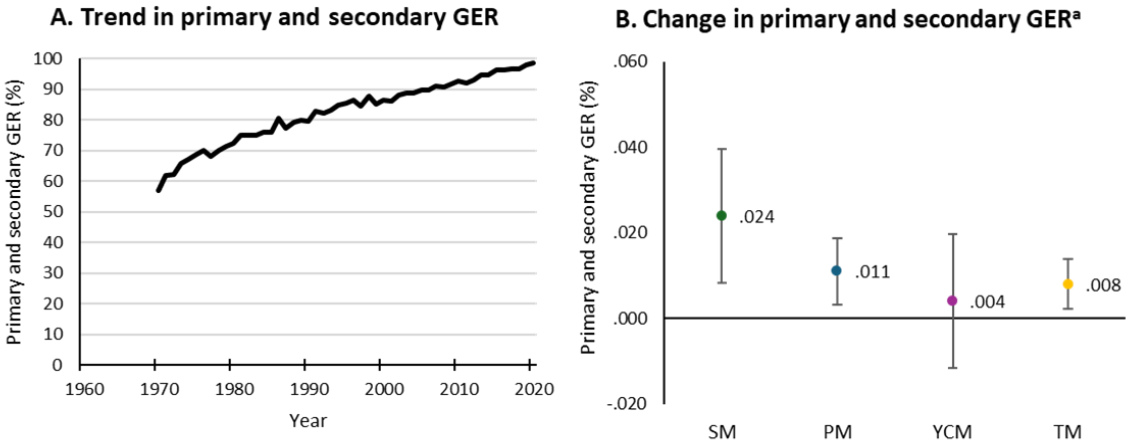


a—Unstandardized coefficient with 95% confidence intervals. Each model includes one mobility covariate (SM, PM, YCM, and TM) at a time. Controls for the following variables are included in all models: gross tertiary enrollment ratio$_{t-5}$, GDP per capita$_{t-5}$, international trade$_t$, year$_t$, year squared$_t$, and dummy variables for regions. The dot with error bars crossing the x-axis indicates a statistically non-significant correlation at the $p < .05$ level (two-tailed tests).

5.2.5. Education

Access to basic education, represented by the primary and secondary gross enrollment ratio, has seen global expansion since the 1970s, reaching nearly universal levels in 2020 (Figure 11.A). SM, PM, and TM show positive associations with access to basic education (Figure 11.B). Each additional ECA alum per million people is linked to a .008 percentage point increase in primary and secondary enrollment. This highlights the role of ECA-sponsored alumni in advocating for and implementing policies that expand educational access. However, YCM does not exhibit a similarly strong relationship, suggesting that its contributions may not directly influence educational access.

Figure 11. Trend and Change in Education (134 Countries)



a—Unstandardized coefficient with 95% confidence intervals. Each model includes one mobility covariate (SM, PM, YCM, and TM) at a time. Controls for the following variables are included in all models: gross tertiary enrollment ratio$_{t-5}$, GDP per capita$_{t-5}$, international trade$_t$, year$_t$, year squared$_t$, and dummy variables for regions. The dot with error bars crossing the x-axis indicates a statistically non-significant correlation at the $p < .05$ level (two-tailed tests).

5.3. The Link Between Student Mobility and Home Country Development: The Influence of Destination Country Contexts in the US, China and Russia

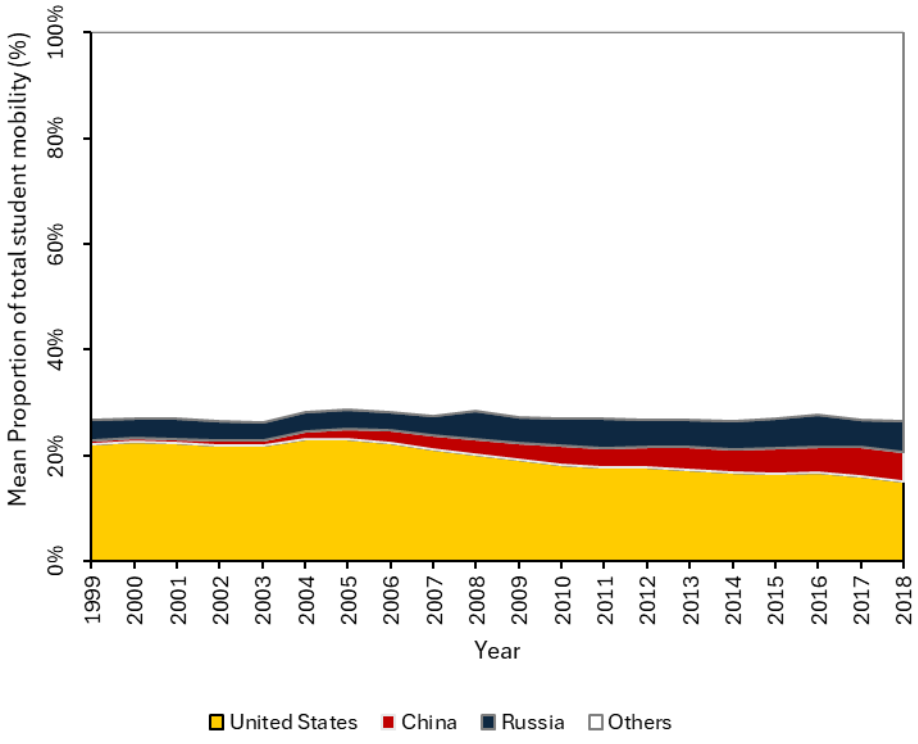
While Section 5.2 explored the connections between ECA-sponsored mobility and development outcomes within alumni home countries, Section 5.3 extends this analysis by examining how destination country contexts—such as the US, China, and Russia—influence the link between general SM and these outcomes. This comparative perspective highlights the role of host country environments in shaping alumni contributions.

Understanding the influence of international exchanges on home country development requires examining the varied social, cultural, and institutional contexts of destination countries. These settings influence the skills and networks individuals acquire and, subsequently, the contributions they make upon their return. This section presents findings on general SM—including self-funded and ECA- or non-ECA-sponsored exchanges—and compares the influences of mobility to the US, China, and Russia.

The primary source of data for general SM is the UNESCO Institute for Statistics. However, China does not report statistics for foreign students enrolled in its higher education institutions. To address this gap, we supplemented the data with the Concise Statistics on International Students in China, produced by China's Ministry of Education's Department of International Cooperation and Exchanges, covering the period from1999 to 2018, which represents the most recent data available for China. Consequently, this analysis is restricted to the period between 1999 and 2018 and includes data from 115 countries.

Between 1999 and 2018, around 30% of internationally mobile students chose these three countries (Figure 12). During this period, the percentage of students going to the U.S. declined from 22.2% to 15.1%, while the shares for Russia and China rose from 4.1% to 5.8% and from 0.7% to 5.7%, respectively. These trends suggest a shift in global student destinations away from the US.

Figure 12. Student Mobility to the U.S., China, and Russia as Shares of Total Student Mobility (115 Countries)



Regression analysis, using the same modeling strategy as used for the analysis of ECA-sponsored exchanges, shows that a higher proportion of students studying in the U.S. correlates with improvements in women's opportunities, justice and freedoms, population health, and educational access in their home countries. Conversely, student mobility to China and Russia is associated with either negative or no measurable outcomes in these areas of development. These differences might stem from variations in learning materials, educational environments, and socio-political cultures across host countries. Additionally, the applicability of acquired knowledge and the strength of social networks supporting its application may vary within home countries, depending on the host country. This suggests that the influence of mobility experiences may differ, as knowledge and networks gained in certain host countries could have a greater influence when applied in specific contexts. This finding suggests that the social and educational contexts of destination countries may play a critical role in shaping returnees' contributions to their home countries.

5.4. Summary

This chapter provided an overview of the global connections between ECA-sponsored mobility and development outcomes in alumni home countries, revealing that countries with higher concentrations of ECA alumni tend to experience stronger outcomes across key development indicators. Quantitative findings highlight significant correlations across key development areas, underscoring the transformative potential of ECA-sponsored mobility. However, the following nuances offer additional context to these results:

- PM emerged as the largest type of ECA-sponsored exchange, reflecting its strategic focus on professional capacity building across diverse sectors. SM and YCM follow in scale, with each mobility type contributing differently to development outcomes.
- High-income countries have consistently been the largest per capita beneficiaries of ECA-sponsored mobility, although their share has declined over time. By 2020, low-income countries had surpassed lower-middle- and upper-middle-income countries to become the second-largest per capita beneficiaries, highlighting increasing inclusivity within ECA mobility programs.
- ECA-sponsored SM correlates strongly with economic development, justice and freedoms, population health, and educational opportunities.
- ECA-sponsored PM demonstrates links to all development areas except justice and freedom.
- YCM is primarily associated with economic development.
- The share of students studying in the U.S.—both self-funded and scholarship-sponsored (ECA- and non-ECA-sponsored) degree exchanges—correlates with improvements in women's opportunities, justice and freedoms, population health, and educational access in alumni home countries. Conversely, student mobility to China and Russia shows weaker or negative associations in those areas.

The mechanisms driving these outcomes—including alumni agency, social relations, and intercultural competence—will be explored in greater detail through qualitative analysis in Chapter 8.

Despite these encouraging findings, it is crucial to acknowledge that correlations, while significant, do not prove causation; other contextual factors such as economic cycles, governance reforms, or foreign investment might also influence progress. Furthermore, while mobility often leads to individual transformation, translating these gains into broader societal change depends on a variety of contextual factors which are explored in Chapter 7.

6. In What Ways do ECA Alumni Contribute to System-Level Development in their Home Countries?

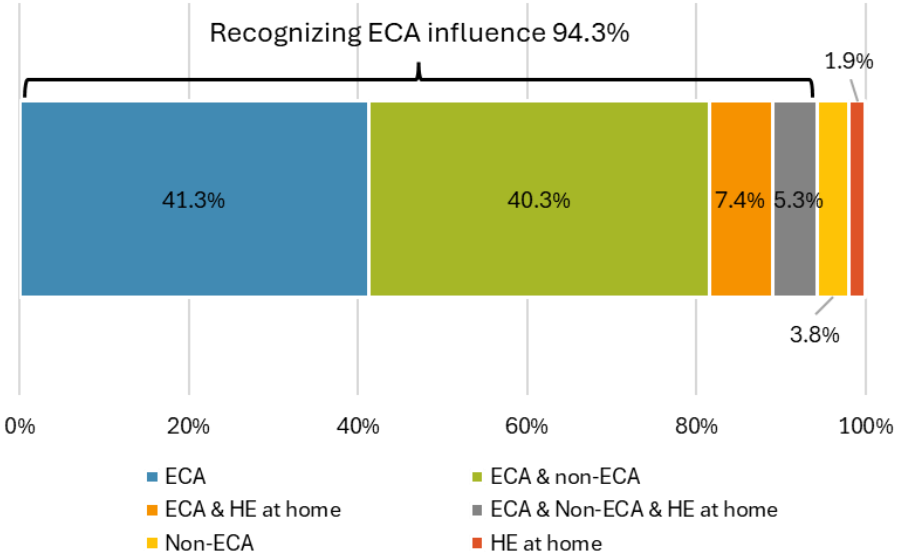
This chapter provides an overview of the contributions made by ECA alumni to system-level development in their home countries, based on 704 interviews with changemakers from AF, EAP, EUR, NEA, SCA, and WHA. By quantitatively analyzing and summarizing the qualitative data, the chapter offers an account of the ways in which alumni in this sample have contributed to various levels, sectors, areas, and domains of societal development. These findings not only describe the range of contributions but also detail what "contributions" mean within the context of this sample. The analysis also compares key differences between ECA alumni and non-ECA groups, highlighting patterns within the sample that reflect the unique characteristics and contexts of the participants of this study.

Importantly, while the findings here illustrate the contributions within this sample, they are not intended to generalize to broader populations of ECA alumni or other mobility groups. This chapter also sets the foundation for the qualitative insights presented in Chapter 8, which explores how mobility experiences led to these contributions.

6.1. The Role of ECA Mobility and Other Influences on ECA Alumni Contributions

In total, 94.3 percent of ECA alumni interviewed for this study recognized the significant role of the ECA exchange program in contributing to their home country (Figure 13). Among these, 41.3 percent of ECA alumni in the sample attributed their societal contributions solely to their participation in ECA programs. Additionally, a substantial proportion highlighted the combined influence of multiple experiences: 40.3 percent credited both ECA and non-ECA mobility, 7.4 percent mentioned ECA mobility and domestic higher education, and 5.3 percent identified all three factors—ECA mobility, non-ECA mobility, and domestic higher education—as instrumental in their contributions. By contrast, 5.6 percent of ECA alumni felt that factors other than ECA mobility were more critical to their contributions. Of these, 3.8 percent pointed to non-ECA mobility experiences, and 1.9 percent emphasized the role of domestic higher education over ECA mobility.

Figure 13. Sources of Influence on ECA Alumni Contributions (N=419)



While ECA programs serve as a key driver of societal contributions in the sample, their broader systemic effect is often complemented by experiences such as other mobility opportunities or domestic education, which can enhance the influence of ECA mobility. Additionally, the socio-political landscape in alumni home countries plays a crucial role (see Chapter 7), either facilitating or constraining the effectiveness of these contributions.

6.2. Contributions of ECA Alumni

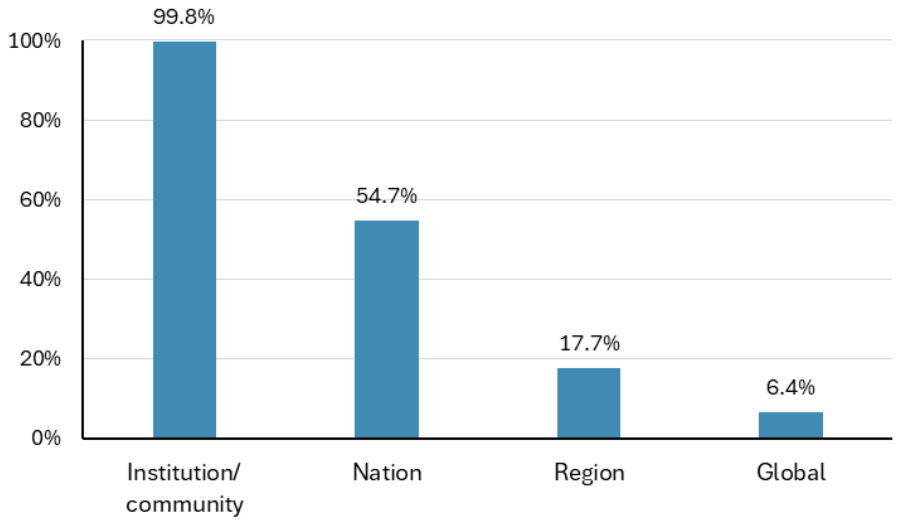
This section presents how ECA alumni interviewed for this study have contributed to their home countries, focusing on the levels, sectors, areas, and domains of their contributions.

6.2.1. Contribution Levels

The contributions of ECA alumni are categorized across four levels to capture the breadth of their influence: institutional, national, regional, and global. *Institutional/community-level* contributions include tangible improvements within organizations and local communities, *for example,* launching youth education programs, strengthening public health services, expanding access to digital tools, or supporting community-led advocacy efforts. At the *national level*, contributions are reflected in policy, legislation, and nationwide initiatives. *Regional-level* contributions extend beyond single nations to include policies and collaborative efforts that shape regional cooperation or reform across multiple countries within a geographical area, such as Sub-Saharan Africa, South and Central Asia, and Europe. Finally, *global-level* contributions address worldwide challenges through involvement in international organizations or initiatives that transcend regional boundaries, focusing on issues like climate change, human rights, and global public health.

As shown in Figure 14, nearly all ECA alumni (99.8 percent) reported making institutional-level contributions, with 54.7 percent contributing at the national level. Contributions at the regional and global levels were less common (17.7 percent and 6.4 percent respectively).

Figure 14. ECA Alumni Contributions, by Level (N=419)



The non-ECA group in this study also shows a high percentage of institutional/community contributions (98 percent), but their broader societal influence —at the national (74 percent), regional (32 percent), and global (19 percent) levels— is more pronounced than that of ECA alumni interviewed for this study.

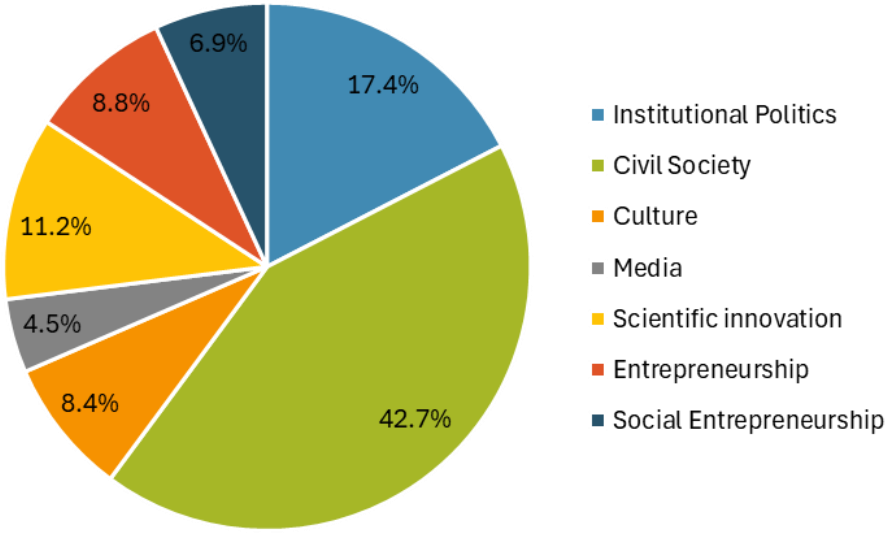
This profile suggests that in the sample a smaller proportion of ECA alumni, compared to the non-ECA group, reported making broader societal contributions at the national, regional, and global levels.

6.2.2. Contribution Sectors

The sectors of contribution reflect the professional and societal fields where ECA alumni have led initiatives, introduced reforms, or supported development efforts. *Institutional politics* includes governance-related organizations, such as government bodies and public institutions. *Civil society* refers to independent organizations, networks, and associations, such as non-governmental organizations (NGOs) and community groups, that work to advance social interests, human rights, and community development. The *culture* sector involves activities that create, preserve, and disseminate cultural practices, such as visual arts, music, and literature. *Media* focuses on the production and distribution of information and entertainment across diverse print, digital, and broadcast channels. *Scientific innovation* pertains to advancements arising from research and academia, including the development of new technologies and knowledge. Finally, *entrepreneurship* centers on profit-driven businesses, while *social entrepreneurship* encompasses enterprises, non-profits, and other initiatives aimed at achieving social or environmental outcomes.

Figure 15 illustrates that civil society is the dominant sector for ECA alumni contributions (42.7 percent), highlighting the strong emphasis on community and grassroots initiatives. Contributions to institutional politics (17.4 percent) and scientific innovation (11.2 percent) follow, underscoring the diverse applications of ECA-acquired skills.

Figure 15. ECA Alumni Contributions, by Sector (N=419)



Comparatively, non-ECA participants exhibit similar patterns but show a higher proportion of contributions to scientific innovation (19.4 percent). This variation could stem from the non-ECA group's larger proportion of participants engaged in student mobility, as identified in Chapter 4 (Methodology).

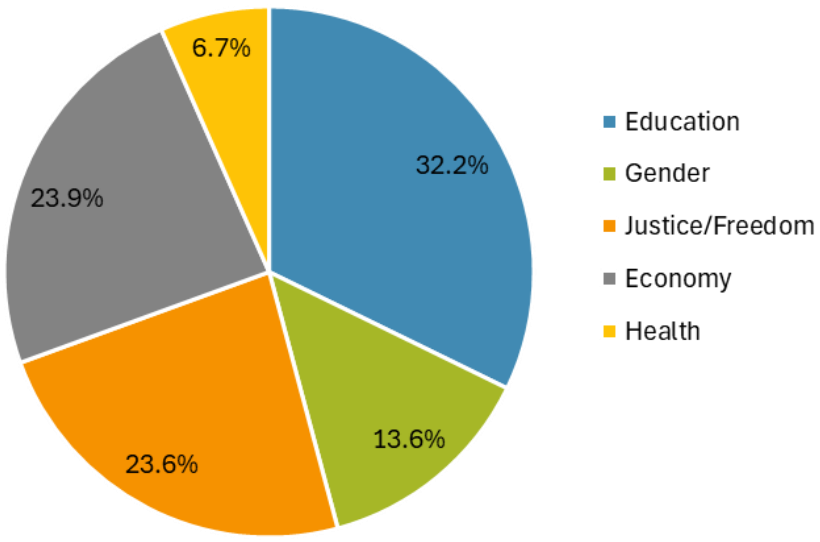
Participants with no international mobility experience overwhelmingly focus on civil society (59.4 percent), followed by institutional politics (25 percent). Notably, this group in the sample contributes minimally to scientific innovation (3.1 percent), possibly reflecting limited exposure to international research opportunities.

6.2.3. Contribution Areas

The study focused on five key areas of societal contributions, capturing the diverse ways in which ECA alumni interviewed for this study drive change and address critical societal issues. *Education* includes initiatives aimed at enhancing skills and knowledge, such as curriculum reform, teacher training, and efforts to improve access to quality education within formal education systems and lifelong learning programs. *Gender* focuses on advancing women and LGBTQ+ communities rights, equality and empowerment in all spheres of society, from leadership roles to community-level interventions. *Justice and freedom* encompass efforts to promote democratic values and human rights, including initiatives for peacebuilding, conflict resolution, and advocating for marginalized groups. *Economy* includes poverty alleviation initiatives and contributions to economic growth through innovation, entrepreneurship, and sustainable development. Lastly, *health* involves improving access to healthcare and well-being services, including the developing treatments, medicines, vaccines, and implementing national programs to address challenges in the health sector.

As shown on Figure 16, education emerges as the most prominent area of contribution for ECA alumni (32.3 percent), followed closely by economy (23.9 percent) and justice and freedom (23.6 percent). Contributions to gender equality and empowerment (13.6 percent) are significant, although smaller in proportion, while health (6.7 percent) represents the smallest area in the sample (Figure 16).

Figure 16. ECA Alumni Contributions, by Area (N=419)



For non-ECA participants, the distribution of contributions differs. Education remains the largest area (23.7 percent), followed by economy (21.3 percent). However, gender (19.8 percent) and justice and freedom (18.6 percent) account for a greater share compared to ECA alumni. Although health remains the smallest area for this group (16.6 percent), it is notably higher than the proportion observed among ECA alumni. In contrast, participants with no international mobility experience show a different pattern. Their contributions are concentrated in justice and freedom (31.1 percent), with gender (25.0 percent) ranking second.

6.2.4. Contribution Domains

The domains of contribution represent nine distinct avenues through which ECA alumni identified as change-makers and interviewed for this study have led change in their home countries, capturing the

diverse ways alumni address societal needs and drive change. *Initiating or leading new initiatives or organizations* involves creating and managing projects or entities to address specific social needs. *Leading existing initiatives or organizations* focuses on sustaining and improving operations and strategies within established structures. *Community engagement and empowerment* highlights efforts to involve and uplift community members through active participation and support. *Policy changes* refer to the development or alteration of rules and regulations to address societal challenges. *Advocacy and awareness campaigns* aim to raise public awareness on critical issues, while *capacity building and training* emphasize developing the skills and abilities to enhance individual and group effectiveness. *Advocacy and activism for change* mobilize communities and influence decision-makers to address social, political, or environmental challenges. *Legislative change* pertains to enacting, amending, or repealing laws through formal legislative procedures. Finally, *thought leadership and public intellectual contributions* involve shaping public discourse through ideas, analysis, and commentary on key issues.

As shown in Table 3, over half of the ECA alumni (56.6 percent) interviewed for this study reported contributing by initiating or leading new projects or organizations, with an additional 11.0 percent describing roles in leading existing initiatives. Together, this accounts for 67.6 percent of ECA alumni indicating involvement in organizational leadership. These figures point to a strong orientation toward leadership and initiative-taking, though the project did not assess the long-term continuity of these efforts. Other notable domains include community engagement (6.4 percent), policy change (6.2 percent), advocacy campaigns (5.3 percent), and capacity building (5.0 percent). While these contributions were mentioned less frequently, participants nonetheless associated them with efforts to drive change.

Table 3. ECA Alumni Contributions, by Domain (N=419)

Domains	%
Initiating/leading a new initiative or organization	56.6%
Leading an existing initiative or organization	11.0%
Leading/contributing to community engagement and empowerment	6.4%
Leading/contributing to policy changes	6.2%
Leading/contributing to advocacy/awareness campaigns	5.3%
Leading on capacity building/training	5.0%
Leading/contributing to advocacy/activism for change	4.1%
Leading/contributing to legislative change	3.3%
Thought-leadership / being a public intellectual	1.9%

The domains of contribution are similar across non-ECA and no-mobility groups. Most participants in these groups have also contributed through new or existing initiatives (72.7 percent for non-ECA participants and 78.1 percent for those with no mobility experience). These figures underscore the centrality of organizational leadership in societal contributions across all groups.

6.3. Examples of Contributions

The following examples have been selected to illustrate the diversity of ECA alumni contributions across geographical regions, areas, sectors, levels of emgagement, and the variety of ECA programs, showcasing the breadth and depth of their societal influence.

- In AF, a Kenyan education and technology professional (AFR582) contributed to civil society in the field of educational justice by leading multiple new initiatives addressing disparities in education. She credits her ECA mobility experience as a catalyst for her contributions by providing her with the skills, perspective, and network to support marginalized groups with essential digital competencies and professional knowledge to bridge the gap between education and employment. Her projects include a digital literacy program for deaf primary school students and a career development project for high school students, effectively bridging the gap between education and employment. Additionally, she also led awareness campaigns to promote education for all and delivered several podcasts on professional growth and resilience. Through these efforts, she has shaped narratives around educational equity in Kenya and demonstrated the transformative potential of ECA mobility in driving educational change.
- In NEA, an accomplished academic in Architecture and Urban Planning from Morocco participated in the Fulbright Foreign Student Program to pursue an M.Sc. and a Ph.D. in Architecture at the University of Pennsylvania (NEA565). Upon returning to Morocco, he established a new School of Architecture and Planning at Mohammed VI University, offering extensive scholarships to Sub-Saharan African students and focusing on sustainable development across Africa. His ECA mobility offered him a “paradigm shift” that shaped his approach to education and policy reform. His exposure to diverse cultural and academic contexts helped him develop an open-minded and pragmatic perspective on promoting education in Morocco and in the African region.
- In EAP, a Filipino female agricultural leader in the sector of institutional politics (EAP343), who participated in the Young Southeast Asian Leaders Initiative (YSEALI) program, gained exposure to advanced agricultural technologies, such as robotic farming, and learned the importance of Good Agricultural Practices (GAP) and food safety during her exchange in the U.S. Inspired by these experiences, she initiated and led new GAP initiatives at the national level upon her return to improve local food safety standards, promote sustainable agricultural practices, and develop stronger connections between farmers and institutional buyers. Her efforts enhanced farmers’ productivity and incomes while driving broader systemic improvements in the agricultural sector.
- In SCA, a female entrepreneur from Bangladesh leveraged her experience with the International Visitor Leadership Program (IVLP) to expand her organization, *Women in Digital* (SCA449). During her IVLP exchange, she observed mentorship-driven innovation, hands-on skill development, and inclusive training programs. Inspired by these practices, she adapted them to the Bangladeshi context, initiating and leading new national level initiatives such as technical training programs in coding and graphic design, mentorship networks for women entrepreneurs, and outreach projects to bring digital education to underserved communities. Her efforts have empowered over 20,000 women with the skills and opportunities necessary to succeed in the digital economy.
- In EUR, a former Minister of Health from Georgia participated in the Edmund S. Muskie Graduate Fellowship Program, earning a master’s degree in public administration at the Robert Wagner School in New York (EUR335). As part of his mobility program, he participated in a

professional internship at Grady Hospital, where he had a unique opportunity to observe a significant reform within the public hospital. The whole mobility experience dramatically influenced his interest and approaches to the challenges within healthcare management and financing. After returning to Georgia, he joined the country's healthcare reform efforts and led the comprehensive restructuring of the healthcare system. These reforms modernized healthcare financing and service delivery, replacing the outdated Soviet-era approach with a more effective system.

- In WHA, an ECA alumna from Mexico, who participated in the IVLP, aimed to enhance the inclusion of Afro-Mexican communities in national politics (WHA387). Already an advocate, activist, and legislator before her trip, the IVLP experience deepened her understanding of advocacy across various sectors. Armed with new insights, information, and an expanded network upon her return, she intensified her efforts to ensure Afro-Mexican needs were reflected in laws and policies. She reached out to political actors and international platforms, facing resistance from conservative sectors and systemic racism. Despite these challenges, she obtained support from the Afro-Mexican movement and key allies, including the new government. In September 2024, Mexico passed a constitutional reform recognizing Afro-Mexican communities' legal rights, marking a key milestone in the fight for justice and equality.

6.4. Summary

This chapter provided an overview of the contributions made by ECA alumni to system-level development in their home countries, based on the qualitative data from 704 interviews. By examining the levels, sectors, areas, and domains of their contributions, this chapter offered a nuanced account of the diverse ways in which ECA alumni drive societal change. The analysis also highlighted key differences between ECA alumni and non-ECA groups, offering critical context for interpreting the qualitative insights presented in Chapter 8. The key findings from this chapter are as follows:

- Approximately 95 percent of ECA alumni acknowledged the significant role of their ECA mobility experience in shaping their contributions. However, broader systemic outcomes often depended on complementary experiences, such as domestic higher education and non-ECA mobility.
- Nearly all ECA alumni in the sample reported institutional-level outcomes (99.8 percent), with 54.7 percent contributing at the national level. Contributions at the regional and global levels were less common (17.7 percent and 6.4 percent, respectively).
- Civil society was the dominant sector of engagement for ECA alumni (42.7 percent), followed by institutional politics (17.4 percent) and scientific innovation (11.2 percent).
- Education emerged as the most prominent area of contribution for ECA alumni (32.2 percent), whereas health represented the smallest area (6.7 percent).
- The majority of ECA alumni contributed through organizational leadership, with 67.6 percent either initiating or leading new projects or organizations.

This chapter highlights the diversity and complexity of societal contributions made by ECA alumni. Importantly, while these findings reflect patterns within the sample, they are not intended to generalize to all ECA alumni or other mobility groups. Together, these findings provide a descriptive foundation for the deeper exploration of mechanisms and processes in Chapter 8, which examines how mobility experiences translate into tangible societal outcomes.

7. How do Structural Obstacles and Enablers Influence ECA Alumni Contributions?

This chapter examines the structural obstacles and enablers encountered by ECA alumni implementing transformative projects aimed at systemic change. Structural obstacles are defined as contextual factors that hinder the achievement of project objectives, while structural enablers are those that support them. As outlined in the theoretical chapter, obstacles and enablers manifest within the context of specific transformative projects and are shaped by intentional actions and expected outcomes. Their significance depends on how individuals interpret and engage with them, reflecting the dynamic interplay between agency and structure. This chapter contributes to understanding these interactions, laying the groundwork for a deeper exploration of agency-structure relationships in the following chapter.

The analysis is organized into four sections. The first and third sections identify global systemic obstacles and global systemic enablers, presenting trends that were prominent across social, political, and economic contexts. The second and fourth sections examine regional dynamics, focusing on how specific contexts shaped additional systemic obstacles and enablers. These sections explore how regional dynamics shaped specific systemic obstacles and enablers, providing additional insights that build on the broader global trends.

7.1. Cross-Regional Trends in Global Obstacles

ECA alumni across different social, cultural, political, and economic contexts encountered systemic obstacles that significantly hindered their transformative efforts and projects. The three most prominent challenges reported were gender discrimination, cultural conservatism and resistance to change, and bureaucratic inefficiencies. While the nature and intensity of these obstacles varied, they collectively shaped the alumni's ability to drive meaningful change and implement systemic reforms. Notably, non-ECA participants and those without mobility also identified gender discrimination, cultural conservatism and resistance to change as their main obstacles. This consistency is noteworthy not because these barriers are unique to any one group, but because participants across mobility types subjectively recognized and framed them as significant challenges to transformative action— consistent with the critical realist view that structural obstacles exist objectively but are navigated through reflexive engagement, which mediates how they are experienced and acted upon.

7.1.1. Gender Discrimination

Gender discrimination, rooted in power imbalances, patriarchal norms, and historical subordination, emerges as a significant obstacle for ECA alumni striving for systemic change. This challenge often intersected with other dimensions of marginalization, such as class, race, and geography, creating complex barriers that hindered progress.

Alumnae frequently described challenges in male-dominated fields such as finance, politics, and technology. Many encountered dismissive attitudes that undermined their authority and efforts. A Kazakh alumna, for example, was asked to serve tea during a high-level meeting despite her leadership position, exemplifying the trivialization of women in professional settings (SCA254). Such behaviors demanded disproportionate effort from women to assert their credibility and secure institutional support, requiring them to invest additional time and energy to prove their commitment and skills.

The challenges extended beyond workplaces to broader societal norms and institutional barriers. In Côte d'Ivoire, an alumna leading a national initiative on women's leadership in conflict resolution reported resistance to her visible leadership role, as societal norms often relegated women to behind-the-scenes positions (AFR494). Meanwhile, in Palestine, an alumna faced systemic hiring discrimination tied to assumptions about her marital status and motherhood, alongside familial restrictions that limited her mobility. Living in a conflict zone compounded these barriers, with threats and harassment intensifying the personal risks of addressing systemic inequalities (NEA047).

For younger women, the intersection of age and gender further complicated their efforts. In Moldova, a policymaker described being dismissed as a "little girl," undermining her ability to lead effectively in critical negotiations (EUR449). Alumnae in media and entrepreneurial sectors across Latin America shared similar struggles. A Dominican journalist explained that perceptions of her youth and gender often required her to continually prove her expertise, a pattern echoed by an Ecuadorian entrepreneur navigating male-dominated spaces (WHA466, WHA350).

In some cases, the consequences of gender discrimination were severe. An alumna advocating for gender and LGBTQ+ rights reported threats, harassment, and online abuse, reflecting the heightened risks associated with tackling deeply entrenched inequities (WHA347). Thus, gender discrimination was a significant obstacle, spanning professional dismissiveness in some contexts to life-threatening opposition in others.

7.1.2. Cultural Conservatism and Resistance to Change

Resistance to systemic transformation often stemmed from deeply ingrained cultural conservatism, entrenched societal norms, and skepticism toward change. Across diverse contexts, alumni reported that introducing reforms often clashed with traditional beliefs and long-standing practices. For example, in Nepal, alumni implementing a skills development project encountered community reluctance rooted in a history of unfulfilled promises. This skepticism underscored the challenge of building trust in communities wary of change due to repeated failures of past initiatives (SCA909). In Kenya, efforts to introduce modern medical practices faced backlash from communities adhering to traditional beliefs. The interviewee noted instances where medical conditions were attributed to curses, reflecting how such norms conflicted with scientifically backed healthcare solutions. Additionally, mistrust of external intentions further complicated these efforts, with implementers sometimes accused of seeking personal recognition rather than genuine community benefit. Consistent engagement and education were crucial in addressing this resistance (AFR557).

Another recurring theme was the rejection of foreign ideas, often framed as threats to cultural or national identity. In Kazakhstan, for instance, an alumna was labelled "Soros's child" and "pro-West," illustrating how propaganda cast Western connections as destabilizing forces undermining national values (SCA254). In Lebanon, this skepticism was institutionalized, as efforts to introduce extracurricular activities in public universities faced criticism from administrators and faculty who dismissed them as unnecessary. This resistance was compounded by fears that accepting foreign funding would misalign priorities and invite undue external influence (NEA440). These concerns reflected mistrust toward externally introduced change and discomfort with perceived foreign interference. Such examples reveal how entrenched conservatism can intersect with fears of external dominance to constrain the adoption of new practices, particularly when those practices are associated with foreign models or international funding.

Finally, societal inequalities and hierarchical systems often reinforced resistance to systemic change. In Thailand, cultural conservatism was tied to an authoritarian political structure and an education system

that prioritized conformity over critical thinking. Alumni advocating for more socially inclusive climate change policies faced resistance from officials who viewed these efforts as unwarranted diversions from traditional, technical approaches. These attitudes not only suppressed alternative frameworks but also stifled broader societal progress (EAP428). In Mexico, cultural conservatism intertwined with systemic racism to obstruct constitutional recognition for Afro-Mexican communities. Conservative political actors opposed these initiatives, while the absence of reliable data further limited efforts to advance equity (WHA387).

These examples highlight how cultural conservatism, intersecting with mistrust of external influences and systemic inequalities, perpetuates societal inertia and creates significant barriers to innovation.

7.1.3. Bureaucratic Inefficiencies

Bureaucratic inefficiencies, including excessive paperwork, overregulation, rigid procedures, and decision-making delays, emerged as significant barriers to systemic transformation efforts. These inefficiencies were particularly pronounced in state bureaucracies, where alumni frequently encountered obstacles that hindered the timely implementation of their initiatives.

Many alumni highlighted how excessive bureaucracy created unnecessary barriers and delayed progress. In Nigeria, an alumna working on disability-inclusive policies described how endless paperwork and the need to coordinate across multiple ministries stalled the implementation of national protocols despite the government's formal commitment to these goals (AFR468). Similarly, in India, a civil engineer advocating for sustainable water supply in rural towns faced extensive delays caused by local government overregulation, which impeded access to clean water for underserved communities (SCA452). In Panama, an alumna and former minister noted how the protracted legislative processes required for teacher reclassification slowed educational reforms and discouraged collaboration among key stakeholders (WHA311).

Bureaucratic inefficiencies also disrupted sector-specific initiatives, demonstrating the far-reaching impact of rigid systems. In Cambodia, an alumnus working to develop educational video games for Khmer and mathematics education encountered repeated delays due to indecisive leadership within the Ministry of Education (EAP811). Similarly, in Iraq, an alumnus leading a robotics and coding program for children described the state registration process for his organization as unnecessarily tedious, requiring significant time and effort to navigate (NEA273).

The underlying causes of these inefficiencies varied across regions, reflecting different political and cultural contexts. Alumni in SCA often attributed these challenges to a culture of distrust within state systems, which led to rigid oversight and procedural bottlenecks. In contrast, participants in the WHA linked inefficiencies to political corruption and systemic inertia, which obstructed timely decision-making and undermined public trust.

By delaying approvals, complicating procedures, and limiting institutional responsiveness, bureaucratic inefficiencies obstructed alumni efforts to address pressing social and educational challenges. These barriers significantly impeded the realization of projects that intended transformative change, demonstrating the pervasive impact of entrenched administrative obstacles.

7.2. Regional Dynamics and Additional Systemic Obstacles

The three global obstacles—gender discrimination, cultural conservatism and resistance to change, and bureaucratic inefficiencies—manifest in varying forms across regions, shaping alumni efforts to

achieve systemic change. In addition to these global patterns, ECA alumni identified further region-specific challenges, such as limited access to financial resources and lack of individuals with relevant expertise. While financial support enabled some participants to launch and scale their work, others—particularly in AF, EAP, and NEA—faced acute funding shortages that constrained what they could achieve. These additional obstacles highlight the distinct regional dynamics that further influenced the scale of alumni-led initiatives.

Financial constraints were particularly acute in AF, EAP, and NEA. Alumni in these regions described how limited access to funding jeopardized the continuity of their initiatives. In Kenya, a participant struggled to secure basic resources like lunch for workshop attendees (AFR557), while in Liberia, a women's leadership program ran out of funding, requiring participants to cover material costs themselves (AFR550). Similar financial challenges in EAP constrained staffing and research for projects in Indonesia and Vietnam (EAP398, EAP404). In Lebanon, an alumnus implementing a peacebuilding project highlighted the lack of funding for volunteer associations, which limited organizational development and hampered project sustainability (NEA084). In some cases, even when funding was available, reliance on external sources introduced vulnerabilities, as donor-driven agendas occasionally diverged from grassroots priorities, further limiting local autonomy in project implementation. These funding gaps and constraints frequently forced alumni to scale back their ambitions, reducing the scope of their work.

The lack of other individuals in the home country with relevant expertise emerged as a significant obstacle in NEA and SCA. In Iraq, an alumnus struggled to find reliable and like-minded collaborators to support a children's robotics and coding initiative, citing both logistical constraints and the sensitivity of working with children (NEA274). In Morocco, a social entrepreneur highlighted a general shortage of expertise in sustainable finance and environmental, social, and governance (ESG) issues, noting that many in the private sector did not yet view it as integral to business strategy, which limited uptake and slowed momentum (NEA420). In SCA, context-specific challenges undermined alumni efforts to sustain skilled labour for reforms: in Uzbekistan, outdated clinical practices persisted despite updated guidelines (SCA277), while in Nepal, high outmigration rates and weak educational infrastructure made it difficult to retain qualified human resources (SCA978).

7.3. Cross-Regional Trends in Global Enablers

Interviews conducted across six regions, encompassing diverse social, cultural, economic, and political contexts, revealed common enablers of systemic change identified by ECA alumni: support from the community, access to financial resources (where available), and political support and readiness. Access to funding, however, varied significantly across contexts. While some alumni benefited from targeted grants and support mechanisms, others—especially in lower-resource settings—identified financial limitations as a persistent barrier. The sustainability of these enablers often depended on maintaining long-term funding, strong alliances, and consistent stakeholder engagement. Non-ECA participants and those without mobility similarly emphasized community and political support as critical enablers but pointed to the presence of a critical mass of skilled professionals and experts rather than access to financial resources. Also, for these non-ECA participants, innovative leadership and collaboration were consistently recognized as essential for advancing systemic change through collective expertise.

7.3.1. Support from the Community

Support from the community emerged as an enabler of systemic change, encompassing relationships with grassroots organizations, local networks, and institutions. ECA alumni consistently emphasized how trust, reciprocity, and shared goals with their communities were vital for the success of their initiatives. For example, addressing pressing local concerns was instrumental in gaining acceptance for projects. An alumnus in Niger noted that aligning initiatives with the "real concerns" of the people developed trust and facilitated collaboration with both institutional and community stakeholders (AFR508).

Partnerships with grassroots organizations were critical in creating spaces for mutual support and overcoming institutional barriers. Alumni highlighted how local organizations provided solidarity, logistical help, and advocacy platforms. In Afghanistan, collaboration with grassroots organizations enabled a school infrastructure program to succeed in challenging rural contexts (SCA532). Similarly, in WHA, networks of women leaders and activists navigated institutional mistrust and violence to advance legislative reforms and systemic change (WHA426, WHA293, WHA284).

Solidarity and collective action within communities served as a strong foundation for empowerment and agency. Alumni working across different contexts emphasized the emotional and practical support provided by their networks (including but not limited to their exchange experiences), enabling them to sustain their work despite resource limitations or systemic resistance. For example, local engagement in Jordan helped a refugee training program build trust and reciprocity, demonstrating how collaboration can empower marginalized groups to achieve shared goals (NEA357).

Institutional support also played a significant role by offering technical assistance, infrastructure, and communication channels. Alumni working on educational technologies or refugee programs benefited from collaboration with universities, NGOs, and research centers. These partnerships not only provided resources but also built organizational capacity. For example, logistical and technical support from universities and international agencies significantly advanced the implementation of projects (EAP388, EAP398, EAP375).

By integrating grassroots and institutional support, ECA alumni were able to navigate complex environments, build trust, and align their efforts with the values and priorities of the communities they served. This interplay of community solidarity and institutional collaboration was a key enabler of systemic change.

7.3.2. Access to Financial Resources

Access to financial resources was a critical enabler of systemic change, influencing the capacity of ECA alumni to initiate and sustain their initiatives. Initial funding often played a transformative role in helping alumni overcome entry obstacles and launch their projects. However, this access was not universal. As outlined in Section 7.2, alumni in several regions—including AF, EAP, and NEA—described significant constraints in securing the resources needed to sustain their efforts. Many of those who identified access to financial resources as an enabler, relied on funding from international sources, such as the U.S. Embassy, which provided essential capital to kickstart initiatives. These early resources allowed alumni to establish credibility and attract additional support, particularly in under-resourced contexts (AFR543, NEA357). Alumni described this stage as critical for transitioning from conceptual planning to implementation.

Beyond providing immediate capital, financial resources often facilitated the development of strategic partnerships that enhanced managerial and technical skills. In many cases, funding from philanthropic and government programs was tied to mentorship opportunities, networking, and access to

collaborative platforms. For example, alumni working on educational technologies benefited from resources that combined financial assistance with capacity-building activities, such as UNICEF's program for tech-based educational tools (EAP824). Similarly, grant programs aimed at social entrepreneurship provided alumni with the skills and guidance necessary to sustain their projects over time (WHA168, EUR421).

However, the reliance on external funding presented notable challenges. International grants and aid organizations dominated the funding landscape, particularly in regions where local financial ecosystems were underdeveloped. This dependency often left alumni navigating complex bureaucracies to secure ongoing support, while the lack of local funding options raised concerns about long-term sustainability. Alumni noted that reliance on external funding occasionally influenced project priorities, aligning them with donor expectations rather than local needs (SCA902, NEA084).

Access to financial resources thus emerged not only as a practical enabler but also as a catalyst for building networks and credibility. At the same time, the systemic reliance on international funding underscores the importance of developing local investment ecosystems to reduce vulnerabilities and ensure the sustainability of transformative initiatives.

7.3.3. Political Support and Readiness

Political support and readiness significantly enabled ECA alumni to implement systemic change, providing credibility, resources, and acceptance for their initiatives. Alumni emphasized the value of securing endorsement from influential stakeholders such as politicians, government officials, and local leaders. Building trust through shared values and addressing practical community concerns often laid the groundwork for these partnerships. For example, participants noted how aligning conservation and development initiatives with governmental priorities enhanced collaboration and influence (AFR508, WHA464).

High-ranking officials played a crucial role in advancing reforms and institutional changes. Alumni shared how engaging ministers and deputies facilitated the adoption of innovative teaching methods and systemic policy shifts. This alignment of interests between alumni and government officials was critical for overcoming bureaucratic resistance and ensuring progress (EAP806). Political readiness, defined as stakeholders' willingness to embrace change, further strengthened these efforts.

Shifts in governance and societal openness to reform created opportunities for systemic change. In EUR, alumni highlighted collaborative policymaking as a key enabler. In Georgia, reform efforts spanning health, economic, and legal systems created momentum for structural transformation (EUR280). In Moldova, alumni leveraged the government's openness to public-private partnerships to advance digital education initiatives, securing integration and support by aligning with state strategies (EUR443).

Despite these successes, alumni acknowledged the challenges of sustaining political support amid complex power dynamics and skepticism. Demonstrating tangible benefits and engaging in open dialogue with stakeholders were essential strategies for bridging gaps and maintaining momentum. By aligning their goals with institutional priorities and cultivating trust, alumni created environments conducive to systemic change, navigating challenges with strategic collaboration and advocacy.

7.4. Regional Dynamics and Additional Systemic Enablers

The global enablers—support from the community, access to financial resources, and political support and readiness—play a critical role in alumni's systemic contributions. However, alumni also highlight additional region-specific enablers, such as the existence of a critical mass of people and cultural openness and adaptability. These systemic factors, shaped by regional contexts, created spaces for alumni to mobilize resources, gain societal support, and achieve sustainable outcomes.

The existence of a critical mass of people emerged as a systemic enabler by providing the expertise, drive, and resources needed to sustain and expand transformative efforts. These groups—professionals, advocates, and stakeholders—worked collectively to influence institutional practices and societal norms. More than relational networks, critical mass functioned as a systemic enabler, contributing to lasting institutional change. Across regions, these groups generated momentum to challenge entrenched obstacles and catalyze systemic reform. In EUR, professional networks and advocacy coalitions often formed this critical mass; in Estonia, children's rights experts collaborated to draft the Child Protection Act, introducing progressive frameworks on children's citizenship and altering public attitudes (EUR371). In SCA, committed professionals and youth networks drove initiatives, as seen in Sri Lanka, where one alumna created a skill-based IT training model that equipped thousands of young people with practical experience, enabling many to build careers as software engineers and technology professionals (SCA477). In the WHA, coordinated teams with technical expertise made inroads in resistance-heavy fields, such as technological education in Argentina (WHA035). Critical mass also enabled sustained dialogue, policy advocacy, and resource mobilization, developing resilience and amplifying the reach of alumni-led initiatives.

Alumni described how societal acceptance of new ideas and adaptability to change – referred to as cultural openness and adaptability - supported their efforts to introduce progressive reforms and implement innovative initiatives. This emerged as a systemic enabler in EUR, and, to a lesser extent, in some contexts in NEA. In EUR, alumni highlighted how openness to social inclusion, democratic principles, and human rights underpinned systemic transformations across multiple sectors. In Estonia, Moldova, and Georgia, these societal characteristics facilitated reforms in child protection, education, and health, creating a foundation for sustainable and scalable change. Alumni noted that this adaptability was crucial for developing trust and gaining support for initiatives that challenged traditional practices. In NEA, alumni perceptions of cultural openness were tied to specific contexts. For example, in Morocco, alumni linked ongoing educational reforms to a willingness to incorporate citizen education and collaborate with non-governmental organizations and parent associations, which aligned with their initiatives (NEA280). In Iraq, alumni perceived a growing openness to democratic governance and international collaboration, which they believed provided new opportunities for systemic innovation in diverse sectors (NEA510). These examples illustrate how cultural openness and adaptability, while unevenly distributed across and within regions, acted as systemic enablers by creating spaces where alumni could align their initiatives with societal priorities, navigate resistance, and achieve sustainable outcomes.

7.5. Summary

This chapter examined the systemic obstacles and enablers that influenced whether and how the ECA alumni interviewed for this study were able to contribute to systemic change. It identified three global obstacles—gender discrimination, cultural conservatism and resistance to change, and bureaucratic inefficiencies—that emerged across diverse contexts, highlighting their widespread impact on alumni-led initiatives. In addition to these, region-specific obstacles such as financial constraints, lack of relevant expertise, and resistance to change demonstrated how distinct regional dynamics further shaped alumni efforts.

On the enablers side, the analysis highlighted three global enablers: community support, access to financial resources, and political support and readiness, which consistently facilitated systemic change. Complementing these were region-specific enablers, such as the existence of a critical mass of people and cultural openness and adaptability, which showed how regional characteristics created opportunities for innovation and reform. Together, these findings underscore the complex interaction between global and regional factors in shaping systemic change, setting the stage for a deeper exploration of how alumni navigate these structural dynamics through their agency in the following chapter.

8. How do Individual Transformations Experienced through ECA-Supported Mobility Translate into Broader Societal Contributions?

This chapter explores how ECA-supported international mobility contributes to societal transformation by enabling participants to exercise agency, apply skills, knowledge, expertise, and civic understanding, develop intercultural competence, and cultivate social relations. These four mechanisms, introduced in the conceptual framework, help explain how alumni translate mobility-acquired experiences into systemic contributions. The analysis highlights how mobility supports the discernment, deliberation, and dedication needed to sustain transformative projects; strengthens participants' ability to apply practical expertise in local contexts; fosters intercultural competence for navigating difference; and builds relations and networks that mobilise resources and sustain long-term collaboration. Rather than focusing on personal development alone, this chapter examines how these mechanisms collectively support alumni in navigating structural obstacles and contributing to systemic change.

8.1. Transnational Mobility and Agency

Transnational mobility involves sustained cross-border interactions and experiences that can expose participants to diverse cultural, educational, and professional environments. Participants may develop agency in various settings, including structured environments like universities and professional placements, as well as unstructured contexts such as peer interactions and community engagements. Through reflexive engagement with these environments, participants critically assess their roles and priorities, shaping their capacity to act, make decisions, and challenge structural obstacles. Evidence from participant experiences points to ECA programs influencing three interconnected elements of agency through transnational mobility: discernment, deliberation, and dedication.

Transnational mobility appears to sharpen discernment by helping participants critically evaluate their priorities for meaningful transformative projects. It may also support deliberation by encouraging reflective and innovative approaches to designing and refining strategies for such projects. Additionally, transnational experiences often enhance dedication by building confidence, resilience, and access to resources, which may help participants navigate obstacles and implement their projects effectively.

In this context, ECA-sponsored mobility often supports participants in initiating and leading new initiatives—what we refer to as transformative projects—designed to address systemic challenges. The most common outcomes among ECA alumni involved organizational leadership, with nearly 68 percent reporting that they founded or led new or existing initiatives. Other domains, such as community engagement, policy reform, and advocacy, were less frequently reported but nonetheless played meaningful roles in some alumni trajectories.

This section explores these dimensions in turn. It begins by considering discernment, focusing on how transnational experiences help participants clarify priorities and deepen their understanding of how they can make a difference. It then examines deliberation, suggesting how diverse transnational contexts might enhance participants' ability to design innovative and practical solutions. It addresses dedication by discussing how ECA programs may equip participants to sustain and adapt their efforts in the face of structural obstacles. Finally, regional variations are also considered, offering insight into how different contexts could shape participants' experiences and outcomes.

Participants' accounts often describe ECA mobility as an important opportunity to gain tools and perspectives to address systemic challenges. However, while these experiences are generally viewed as valuable, the extent and nature of their influence on participants' ability to contribute meaningfully to their home contexts seem to vary.

8.1.1 Discernment

Discernment refers to participants' ability to prioritize and critically analyze the developmental needs of their home countries. In ECA-supported mobility, discernment emerges through two interlinked processes: socialization, where participants internalize new cultural norms and practices, and subjectification, involving the development of autonomous thinking by reassessing prior assumptions. These processes align with emancipatory learning, encouraging critical reflection on societal constraints and equipping participants to challenge entrenched structures.

Socialization occurs across transnational settings, including universities, professional environments, peer interactions, and community engagements. These experiences broaden participants' perspectives and encourage critical examination of their home contexts. Reflexivity is central to this process, enabling participants to evaluate norms and practices critically. For example, a Fulbright SM participant from Colombia (WHA129) described how her immersion in U.S. cultural dynamics, including inclusive family values and diversity, inspired her advocacy for equity-focused policymaking in Colombia. By reflecting on these experiences, she envisioned systemic changes for her home country. Across the sample, SM participants often gained deeper insights into systemic challenges through structured academic environments, enabling them to align their goals with broader societal needs.

For PM participants, who typically began with an established understanding of their countries' challenges, socialization added nuance to their perspectives. A YSEALI alumnus from Indonesia (EAP374), a climate activist, noted how engagement with U.S. organizations deepened his understanding of understanding of the interconnected nature of environmental, economic, and political challenges. This experience allowed him to identify systemic issues underlying waste management and coastal degradation. Building on these insights, he developed ecotourism initiatives alongside waste management efforts, creating solutions that promoted environmental sustainability while generating economic opportunities for coastal communities.

Subjectification occurs as participants critically assess societal norms they had internalized by engaging with alternative perspectives. This reflexive process helps them evaluate their contexts and roles within them. For example, a visually impaired Global UGRAD alumnus from South Korea (EAP626) explained how exposure to accessible technologies and inclusive support systems in the U.S. reshaped his understanding of disability. This experience motivated him to advocate for similar innovations in South Korea. Similarly, participants from marginalized groups across the sample, including women, sexual minorities, and ethnic minorities, reported developing a deeper awareness of systemic inequalities and the importance of advocating for inclusivity.

These processes of subjectification often culminate in a reassessment of priorities and strategies for addressing systemic challenges. A Dutch Fulbright alumna (EUR501) described how her initial work in the Netherlands focused on traditional psychological frameworks that overlooked the environmental factors influencing well-being. Her exposure to environmental psychology during her Fulbright program in the U.S. fundamentally shifted her perspective, highlighting the importance of integrating human-centered design into healthcare and urban planning. Upon returning, she redefined her approach by pioneering the concept of healing environments, which prioritize user well-being through innovative hospital designs and urban spaces.

Critical and autonomous thinking stood out as distinct outcomes of transnational mobility. Both ECA and non-ECA Participants frequently noted how exposure to transnational settings heightened their capacity for critical analysis, enabling them to challenge entrenched structures and propose innovative

solutions tailored to their contexts. In contrast, non-mobility participants often emphasized practical skills but less frequently cited critical thinking as a significant outcome.

Some ECA alumni extended their reflections on justice and freedom through experiences in restrictive environments like Russia and China, though these particular mobilities were not part of ECA-sponsored programs. These mobilities provided unique opportunities to grapple with contrasting political and social systems, deepening participants' understanding of systemic challenges and the complexities of advocacy in such contexts. A Fulbright alumna from the Netherlands (EUR523) described how monitoring and restrictions in Russia deepened her understanding of the fragility of political freedoms, reinforcing her commitment to democratic values. An IVLP alumnus from Kazakhstan (SCA257) criticized state propaganda in Russia, highlighting the need for education in international law to counter distorted narratives. Similarly, a Singaporean Fulbright alumnus (EAP515) who researched sexual health in China noted the challenges of advocating for justice within restrictive systems, which strengthened his resolve to support marginalized communities in Singapore.

Transnational mobility enhances critical analysis and autonomous thinking, enabling participants to identify priorities and devise innovative solutions tailored to their home countries' needs. This process highlights the role of mobility in advancing agency through discernment.

8.1.2 Deliberation

Deliberation builds on discernment to translate critical reflection into actionable strategies for societal change. During ECA-supported mobility, deliberation emerges through three interconnected practices: exploring new methods, experimenting with roles and relationships, and planning targeted solutions.

Exploration of new methods was a key feature of ECA participants' emancipatory learning in the U.S. SM participants benefited from structured academic environments, where mentorship and curricula promoted problem-solving and critical thinking. These settings provided participants with opportunities to synthesize theoretical insights with practical applications, enabling them to address context-specific challenges effectively. Reflexive engagement with these settings enabled participants to identify solutions tailored to their contexts. For example, an alumna of the Fulbright Foreign Student Program from Libya (NEA465) credited her U.S. academic experience with sharpening her evidence-based reasoning skills, which she applied to promoting international scholarship opportunities in Libya and advocating for systemic educational reforms to support aspiring students from underrepresented regions. PM participants, particularly those in IVLP, emphasized the transformative effect of observing diverse organizational models while in the United States. A Japanese IVLP alumnus (EAP548) applied insights from his exchange to introduce a U.S.-inspired system into Japan's disaster management practices. Inspired by the efficiency of U.S. frameworks, he initiated training programs to standardize local response operations, moving away from reliance on ad-hoc decision-making. In contrast, YCM participants often gained insights through informal learning, such as cultural immersion and community engagement, which shaped their aspirations (discernment) more than immediate action plans.

Experimenting with program design and implementation allowed participants to refine their approaches in real-world settings. SM participants frequently tested ideas through academic research and field-based projects. For example, research and thesis development offered structured opportunities for participants to address specific issues through analytical frameworks. PM participants described similar outcomes from placements in diverse professional contexts. For example, a Nigerian alumnus (AFR588) developed youth employment programs inspired by his international training, refining his approach through iterative field implementation and direct community engagement. His work directly addressed the root causes of violent extremism by training over 3,000 young people. By contrast, YCM

participants, with limited access to structured experimentation, focused more on informal learning and broader global perspectives. These engagements created space for participants to reflect on how their roles within institutional frameworks could influence change.

Comparative perspectives also shaped deliberation outcomes. Participants who combined experiences in Western and non-Western contexts integrated strategies from both. For example, a Fulbright alumnus from Bangladesh (SCA163) merged lessons from the U.S. on evidence-based policymaking with insights from China on infrastructure development to propose hybrid strategies that addressed distributional inequalities and supported sustainable development goals in Bangladesh. Non-mobile participants, lacking these comparative frameworks, often relied on trial-and-error approaches. This comparative learning enabled participants to identify the relative strengths and weaknesses of different systems, enabling an adaptive approach to local contexts.

For some participants, planning actionable solutions varied by mobility type and duration. PM participants in short-term programs, such as YSEALI, emphasized workshops that guided the design of targeted projects. These programs often led to immediate, focused interventions in participants' home countries, leveraging concise timelines to inspire action. SM participants, with longer-term engagements, had more time in the transnational spaces in the U.S. to reflexively question the viability of their approaches. Internships and extended research opportunities allowed participants to design systemic strategies that required sustained effort, balancing deeper inquiry with practical application. Some YCM participants benefited from community engagement during long-term mobility, gaining insights into grassroots strategies for local challenges. A YES alumnus from Thailand (EAP422) described how his experiences in a U.S.-based high school exchange program deepened his awareness of educational disparities, particularly for students with disabilities. Inspired by early exposure to volunteerism and inclusion, he later co-founded a national initiative to support deaf education in Thailand.

Short-term PM participants valued the immediate applicability of their experiences, such as site visits and targeted workshops, which facilitated efficient learning and rapid implementation. In contrast, long-term SM and PM participants benefited from sustained inquiry and deeper engagement in academic and professional settings, allowing for extended reflexivity and the development of systemic strategies. Both approaches offer unique advantages, depending on participants' objectives and contexts.

In summary, deliberation during ECA mobility involves applying reflective learning to develop strategies for societal change. Participants refined their approaches through method exploration, role experimentation, and solution planning, with outcomes varying by program type and duration.

8.1.3 Dedication

Dedication ensures that strategies developed through discernment and deliberation are sustained and translated into tangible outcomes, even in the face of structural and cultural challenges. Participants emphasized that ECA mobility equipped them with practical expertise, resilience to overcome obstacles, and the ability to collaborate effectively, amplifying the reach and effectiveness of their initiatives. These benefits were contrasted with the experiences of non-ECA and domestic mobility participants, who often lacked access to alternative approaches and transnational networks.

ECA programs provided participants with critical technical knowledge in project management, strategic planning, and leadership, which they applied to address systemic challenges. For example, a IVLP alumna from the Dominican Republic (WHA472) utilized resource mobilization strategies learned through IVLP to expand a community foundation focused on delivering basic services in underserved areas. By forming partnerships and leveraging innovative strategic tools, she overcame funding and

logistical challenges to deliver clean energy, water, and housing. The program's emphasis on practical learning allowed her to incorporate advanced technologies such as solar power and data systems, exemplifying how technical expertise can support systemic transformation.

Resilience and confidence emerged as key outcomes of mobility, empowering participants to tackle adversity and drive systemic change. For example, a Libyan alumna (NEA534) leveraged skills and mentorship gained through the TechWomen program to address gender inequality via a national initiative supporting women's leadership and professional growth. Mentorship played a central role in her development: she worked closely with mentors at 23andMe, including the CEO, which provided her with leadership training, professional insights, and a valuable network. Inspired by this experience, she replicated the mentorship model in Libya, founding a volunteer-led organisation focused on women's empowerment and career development. These experiences enhanced her ability to challenge patriarchal norms and establish inclusive leadership networks in resistant communities. In contrast, non-ECA participants, who lacked access to comparable mentorship frameworks, faced greater challenges in achieving similar outcomes.

Participants frequently highlighted the value of collective agency supported through transnational alumni networks. These platforms enabled participants to critically evaluate their strategies and collaborate with culturally and professionally diverse peers. For example, an IVLP alumnus from Iraq (NEA416) co-founded the IVLP Iraqi Network to address issues such as climate change and cybersecurity, facilitating dialogue with government officials and local organizations. Similarly, an alumna from Nicaragua (WHA460) applied insights from her IVLP experience to strengthen partnerships between local government entities and NGOs, collectively improving national responses to human trafficking. She emphasized how lessons learned from U.S. examples of government-NGO coordination allowed her to enhance protections for survivors and strengthen prevention efforts through long-term advocacy. More on the role of alumni networks can be found in Section 8.4 on social relations.

Community engagement during mobility further strengthened participants' dedication. A YES alumna from Bangladesh (SCA031) co-founded a youth-led nonprofit that mobilises young people in over 40 countries, inspired by her community service experiences in the United States. She credited her ECA experiences with instilling a sense of purpose and providing the tools to scale her initiatives. Her organisation has since grown into a platform that supports grassroots leadership through mentorship, localised training, and youth-led action projects. A similar effect of community engagement on participants' dedication was also found in non-U.S. mobility experiences. A Southeast Asian academic (EAP441), who participated in a Fulbright program, described how a separate period of PM in China enriched her ability to connect with local communities. She noted that the experience required her to adapt her communication style and engage with cultural difference, which later influenced her approach to inclusive education and outreach in Southeast Asia. These experiences illustrate how community-driven learning enhances long-term commitment to systemic change.

These accounts illustrate how international mobility, particularly when paired with strong program structures and social relations, deepened participants' dedication to long-term change. ECA participants emphasised that program design, mentoring, and alumni collaboration supported their sustained efforts to navigate structural obstacles and maintain momentum in complex environments. Participants who experienced mobility across both resourced and under-resourced settings, including China, also highlighted the value of contrasting perspectives in strengthening their commitment to inclusive and adaptable solutions. Across cases, international experiences reinforced participants' motivation to persist, adapt, and lead over time, even in contexts where change was slow or contested.

8.1.4 Regional Variations

This subsection considers how participants' discernment, deliberation, and dedication—shaped through ECA and non-ECA mobilities—may translate into societal change differently across regions. While patterns are identified, it is important to note that these reflections are based on a limited set of participant experiences and should not be seen as definitive representations of entire regions.

Participants frequently reported that ECA mobility enhanced their discernment by helping them critically examine societal challenges and reflect on their roles in addressing them. Across regions, participants described gaining new insights into their countries' developmental needs and their own identities through structured and unstructured transnational interactions. The reflexive process of reconciling global perspectives with local realities was particularly evident in regions such as EAP, SCA, and NEA. A YSEALI alumnus from Indonesia (EAP395) mentioned how exposure to alternative environmental management strategies in Hawaii prompted him to reconsider approaches to mangrove restoration in his home context. In AF and WHA, discernment often centered on addressing historical inequities, such as a Brazilian alumnus (WHA412) who drew on his YLAI experience to reconnect with indigenous roots and promote social justice. In EUR, discernment seemed more commonly oriented towards systemic reform, with one alumna from Moldova (EUR276) using her mobility experience to initiate investigative journalism efforts to combat corruption.

Deliberation, or the process of exploring strategies for societal change, was also a common theme, although its emphasis varied. Across all the regions, participants highlighted how transnational experiences offered practical tools and approaches that inspired new strategies. In SCA, NEA and EAP, participants placed significant emphasis on emancipatory learning and highlighted how ECA experiences inspired innovative approaches. For example, an alumna from Kyrgyzstan (SCA303) reported using advocacy tools learned in the Edmund S. Muskie Graduate Fellowship Program to address bride kidnapping in her home region. She emphasized how her exposure to inclusive and collaborative approaches enabled her to adapt global ideas to culturally sensitive local contexts. These experiences equipped her with practical tools for advocacy, including framing messages in ways that resonate with diverse audiences. Participants from WHA and AF focused more on addressing immediate community needs and adapting pre-existing local strategies, perhaps reflecting differences in regional priorities and contexts. In these two regions, many participants also talked about how their emancipatory learning processes influenced their identities and then the strategies for societal changes.

Dedication to implementing systemic change also appeared to be shaped by regional contexts. Participants from resource-constrained contexts in AF, EAP, and NEA, often noted that ECA mobility provided them with skills and perspectives to mobilize support for their initiatives. For example, some emphasized communication and strategic planning as crucial tools gained during mobility programs. In regions such as EUR, NEA, and parts of EAP, where institutional support and governance structures were reported to be relatively stable, participants often described leveraging their mobility experiences to enhance existing resources and frameworks. In WHA, several participants suggested that ECA mobility strengthened their confidence to address cultural conservatism and gender discrimination, while NEA participants often emphasised the importance of networking and the perceived credibility that came from being associated with U.S. government programs, as well as embracing new ideas and adaptability in navigating bureaucratic challenges.

The role of post-program U.S. Government support also varied. Participants in regions such as EAP, SCA, EUR, and WHA commonly highlighted the value of funding, mentorship, and networking opportunities. These resources were frequently seen as helping sustain and scale their initiatives, particularly among EAP participants, some of whom described experiencing financial constraints as a

barrier to implementation. For example, a YSEALI alumna from the Philippines (EAP342), emphasized how the program provided crucial mentorship and connections to international markets, enabling her to enhance her sustainable fashion enterprise for marginalized communities. This support not only helped her access funding but also introduced her to diverse international resources and markets, which were instrumental in addressing challenges such as limited local market support and empowering communities. Such examples illustrate how ongoing support can play a role in sustaining the impact of participants' transformative projects, though perceptions of access and adequacy varied across regions and may not reflect broader structural funding patterns.

8.2. Skills, Knowledge, Expertise, and Civic Understanding

International mobility equips participants with a wide range of skills and insights that enable them to address societal challenges. These include transferable skills, such as decision-making and leadership, alongside knowledge and expertise in areas like policy analysis, advocacy, and technical innovation. Civic understanding, another key outcome, empowers participants to engage with and reshape societal structures, often addressing systemic issues through grassroots initiatives, capacity-building, and policy reforms.

This section examines these elements. It begins by exploring the development of transferable skills, focusing on how mobility sharpens decision-making, problem-solving, interpersonal, and leadership skills that are crucial for navigating complex challenges and supporting collaboration. The next subsection considers knowledge acquisition, highlighting how technical, policy, and entrepreneurial knowledge are applied to adapt global practices to local contexts. Expertise is then discussed as an advanced, interdisciplinary capacity enabling participants to anticipate challenges, innovate solutions, and drive systemic change. The section then examines civic understanding, detailing how mobility experiences inspire participants to contribute to community resilience, educational initiatives, and governance reform. Finally, regional variations are explored, revealing how local contexts shape these outcomes.

8.2.1. Skills

Skills are foundational abilities that empower individuals to address challenges and lead transformative efforts. Through mobility, participants develop cognitive abilities such as decision-making and problem-solving, as well as interpersonal and leadership abilities that support collaboration, influence, and strategic action. These abilities enable individuals to navigate uncertainty, engage stakeholders, and implement solutions tailored to cultural and institutional contexts.

Decision-making

Decision-making refers to participants' enhanced ability to make informed and timely choices by evaluating alternatives and weighing outcomes. ECA participants engage in activities like workshops, organizational visits, and collaborative projects, gaining exposure to oversight standards and structured protocols, sharpening their cognitive abilities and challenging conventional approaches. These experiences equip them to introduce data-driven and systematic decision-making processes upon their return, contributing to improved institutional transparency and efficiency.

For example, a Jordanian molecular biologist (NEA059), observed during her Fulbright Foreign Student Program experience, how competitive research environments drive excellence through collaboration and resource-sharing across disciplines. Inspired by this, she restructured team dynamics in her home institution, introducing cross-departmental collaborations to overcome the traditional isolation of

academic research. By applying decision-making frameworks learned abroad, she secured grants, increased cooperation among colleagues and students, and produced more impactful research outcomes. She also advocated for increased accessibility to large-scale research initiatives, significantly transforming institutional practices and influencing broader education reforms in Jordan.

Problem-solving

Problem-solving encompasses participants' ability to address persistent and complex challenges methodically and creatively. Mobility programs provided in-depth exposure to structured and flexible problem-solving approaches through interactions in diverse environments such as universities, governmental agencies, and community organizations. Participants adopted analytical and question-driven techniques, moving away from rote practices to holistic strategies that integrate creativity, collaboration, and contingency planning. This shift empowered participants to adapt solutions to the socio-cultural and environmental contexts of their home countries.

For example, a Dutch diplomat turned climate security specialist (EUR523) participated in the Fulbright program, where she gained insights into addressing global challenges through interdisciplinary collaboration. During her course, she learned to break down complex issues, prioritize solutions, and communicate intricate ideas effectively to diverse stakeholders. Upon returning to the Netherlands, she applied these lessons to develop strategies addressing climate-induced conflicts by integrating security and environmental considerations. Collaborating with researchers, policymakers, and community groups, she implemented resilience plans in vulnerable regions, influencing Dutch and EU policies. Her ability to align local challenges with global frameworks exemplifies how mobility-driven problem-solving translates into societal contributions.

Interpersonal

Interpersonal skills enable individuals to build meaningful relationships, navigate socio-cultural complexities, and collaborate effectively across diverse contexts. These skills are cultivated through immersive experiences such as homestays, cultural events, and community engagement, which expose participants to varied cultural, social, and professional perspectives. Through these experiences, participants develop active listening, empathy, and conflict resolution skills, enhancing their ability to engage harmoniously and form strategic alliances.

Participants often mobilize networks to form cross-sector partnerships involving government agencies, NGOs, and academia, leveraging collective expertise to tackle global and local challenges. By supporting collaboration, they gain access to new ideas, resources, and funding, which support transformative initiatives. Upon their return, participants utilize their enhanced interpersonal skills to engage stakeholders, build coalitions, and lead community-based initiatives. They mentor local leaders, create capacity-building opportunities, and champion inclusivity by amplifying marginalized voices in project design and implementation.

For example, a doctor from Niger (AFR673) gained a deeper understanding of the social contexts shaping global health and humanitarian work during her mobility experience. She developed her ability to listen and communicate effectively and compassionately, which helped her build trust and secure collaborations with diverse stakeholders for health-related community projects in Niger. Her ability to create opportunities for dialogue and mutual respect inspired collective action, provided access to key resources, and facilitated the dissemination of innovative clinical practices. These efforts significantly strengthened local capacity and advanced medical improvements.

Leadership

Leadership skills encompass the ability to inspire, guide, and mobilize individuals toward shared objectives, integrating strategic vision, team management, and decision-making competencies. These

skills are cultivated through workshops, internships, and networking events. Participants frequently took on leadership roles during programs, organizing activities or leading group projects, which provided practical opportunities to refine their capabilities. Public speaking engagements and storytelling sessions further enhanced their confidence, resilience, and ability to lead with purpose.

Through these experiences, alumni acquired a renewed sense of empowerment and responsibility, as program participation often validates their potential or achievements. Leadership skills enabled participants to align initiatives with community priorities, navigate challenges, and motivate diverse groups to act collectively. Unlike interpersonal skills, which focus on building relationships and facilitating collaboration, leadership emphasizes strategic decision-making, goal-setting, and the ability to coordinate resources and people effectively to achieve systemic change.

Participants applied their leadership skills across education, youth empowerment, women's rights, and community development. They led initiatives to improve literacy, inclusivity, environmental sustainability, and access to clean water. Alumni inspired action through enthusiasm and commitment, leveraging individual strengths within teams to drive transformative projects. They reported that they managed complex dynamics, allocated resources strategically, and maintained morale during crises, demonstrating adaptability and resilience in the face of unforeseen challenges.

For example, a Nicaraguan lawyer and leader of a community-based organization (WHA284) transformed her leadership approach through the IVLP. Her participation in the program provided unique opportunities to engage with global leaders and U.S. institutions. She was particularly inspired by specialized units in the U.S. addressing violence against women. Motivated by these insights, she lobbied for survivor-centered policies and services upon her return, leading to significant institutional changes. Her ability to build alliances and empower others underscores the transformative potential of leadership skills, driving systemic changes in human rights and social justice.

The diverse range of skills discussed in this section—decision-making, problem-solving, interpersonal, and leadership abilities—was shaped, in part, by the duration and format of mobility programs. ECA programs, often described as having a focus on applied outcomes, tended to incorporate community engagement, workshops, and real-world problem-solving opportunities. These elements supported participants in developing a wide spectrum of skills, particularly in shorter-term formats like IVLP and YSEALI, which seemed to prioritize competencies for immediate, actionable outcomes.

Non-ECA participants, who more often engaged in longer-term mobility experiences (Figure 3), reported developing analytical problem-solving skills, reflecting the exploratory nature of immersive, independent inquiry in academic exchanges. Leadership skills, however, were less prominently discussed, potentially reflecting the research-focused and holistic nature of many of these exchanges. Interviewees with no international mobility reported a comparable skill set to their mobile peers but mostly with context-specific applications. Fewer opportunities for mentorship or leadership development led them to depend on informal or experiential learning to develop decision-making and problem-solving abilities.

Regional contexts also influenced skill development. Participants in mobility programs to China and Russia, though a small sample, reported acquiring transferable skills across all four categories. Participants with mobility experiences to China reported interpersonal skills gained through navigating linguistic and cultural differences, adapting to new settings, and collaborating with diverse groups, which appeared to enhance their cultural awareness and professional networking. Similarly, participants in Russia noted interpersonal skills developed by engaging with local history, societal norms, and daily interactions, which improved adaptability and social awareness. Mobility in both regions also supported decision-making and problem-solving skills. In China, participants described refining their ability to balance competing factors under pressure, while in Russia, interdisciplinary approaches enabled them

to address complex challenges by integrating insights across fields. Upon returning home, participants applied these skills to societal contributions, highlighting the potential of mobility programs to advance transferable skills that drive change.

8.2.2. Knowledge

This subsection explores the main knowledge areas that participants gained through their mobility experiences to effect change. Specifically, it focuses on technical, policy analysis and research, business entrepreneurship and management, and advocacy and activism. These domains emerged as central to promoting systemic change.

Technical

Technical knowledge refers to the specialized methodologies, tools, and systems participants acquire through international mobility, which equip them to address pressing societal challenges. Mobility programs enable participants to transition from theoretical understanding to actionable skills, allowing them to adapt global best practices to local contexts. This knowledge is especially transformative in fields like engineering, medicine, environmental science, and technology, where practical applications directly address societal needs.

Participants consistently highlighted how mobility programs equipped them to operate advanced equipment, adopt innovative methodologies, and integrate global best practices into their professional environments. For example, an Iraqi academic and scientist (NEA325) leveraged his Fulbright experience to master techniques such as DNA extraction and microarray analysis. Upon returning home, he applied these methods to modernize curricula, train students and faculty, and enhance research infrastructure. This not only improved institutional capacities but also elevated national research standards, enabling local scientists to address critical environmental issues. Beyond academia, his work contributed to shaping policies on environmental sustainability, bridging global expertise with local challenges in Iraq.

Technical knowledge gained during mobility also supports technological innovation, with alumni introducing advanced tools and systems to modernize industries and public services. For example, alumni in computer science and engineering often apply their expertise to digitize public services, improve operational efficiency, and create scalable technological solutions tailored to local needs.

Policy Analysis

International mobility enhances participants' knowledge of policy analysis, equipping them with tools like data collection, scenario planning, and needs assessments to inform decision-making and develop evidence-based solutions. Through interactions with academics, policymakers, and the private and non-profit sectors, participants gain insights into effective policymaking strategies that prioritize transparency, accountability, and inclusivity. Mobility programs also provide exposure to case studies of successful policies, developing an understanding of how government, private enterprises, and NGOs can work together.

ECA alumni frequently apply these insights to address local challenges, adapting global frameworks to improve systems and services. For example, they employed comparative policy analysis to enhance education by introducing teacher training programs and digital learning platforms inspired by international models. In healthcare, participants designed community-oriented systems to address challenges like vaccine distribution and maternal health. Drawing from sustainable development lessons, they developed renewable energy policies and waste management systems tailored to local needs. Policy knowledge also enabled alumni to tackle equity issues, advocating for anti-discrimination laws and gender-inclusive policies. Specific examples included implementing workplace equity measures and supporting women's entrepreneurship through targeted training and funding.

Program duration appears to shape the scope and nature of these outcomes. Short-term programs often provide participants with focused tools, such as data analysis techniques or scenario planning frameworks, enabling immediate applications in discrete projects. Longer-term programs allow for broader exploration and synthesis of comparative policymaking approaches, supporting systemic innovations over time. These skills are consistently applied to societal contributions upon participants' return home, such as addressing equity gaps, improving educational systems, and designing sustainable development initiatives.

The broader influences of this knowledge are exemplified by a Turkish educational policy specialist (EUR648), who utilized insights gained during a Fulbright program to design initiatives that improved early childhood outcomes. By conducting community needs assessments and crafting data-driven recommendations, she developed a parenting resource app for underserved families and collaborated with key stakeholders, including Turkey's Ministry of Education and UNICEF. Her work elevated national education standards and reshaped narratives around early childhood education, underscoring the transformative potential of policy analysis knowledge acquired through international mobility.

Entrepreneurship

Entrepreneurship knowledge gained through international mobility empowers participants to identify opportunities and create innovative solutions that generate economic and social value. By engaging in workshops, mentorship, and industry visits, participants gain insights into resource allocation, strategic planning, and global market dynamics. This knowledge equips them to develop ventures addressing community needs, balancing profitability with sustainability and inclusivity.

Social entrepreneurship, often inspired by mobility programs, enables alumni to address pressing societal challenges through business models that integrate community benefit and economic growth. For example, participants establish ventures that promote environmental sustainability, such as renewable energy solutions, or improve access to education and technology for underserved communities. These initiatives not only create jobs and stimulate local economies but also inspire systemic change by introducing efficient practices and innovative technologies.

The experiences of a Mexican CEO (WHA396) and a Nigerian entrepreneur (AFR368) illustrate these outcomes. The Mexican CEO leveraged knowledge gained through the Young Leaders of the Americas Initiative (YLAI) to scale his company, integrate technology into preserving indigenous traditions, and align team efforts toward shared goals. Similarly, the Nigerian entrepreneur used skills from non-ECA global executive programs to launch a technology hub, an angel investment network, and a venture capital firm, channeling over $25 million into African startups. These ventures drove industry-wide innovation, created jobs, and established a foundation for sustainable economic growth.

Advocacy and Activism

Advocacy and activism encompass participants' enhanced knowledge of identifying and addressing critical societal issues through systematic action. Participants gained awareness of pressing challenges, such as gender inequality and environmental degradation, developed strategies to influence attitudes and policies (advocacy), and engaged in direct actions to confront systemic barriers (activism). This knowledge was cultivated through exposure to grassroots initiatives, mentorship from civil society leaders, and training programs that provide tools for campaign design, stakeholder engagement, and community mobilization.

Respondents described how mobility programs expanded their understanding of global frameworks for human rights, sustainability, and equality, enabling them to contextualize and apply these principles in their local contexts. Programs also cultivated their capacity to utilize social media platforms and public forums to amplify causes effectively. Participants returned home equipped with new methods to

organize public awareness campaigns, form coalitions, and advocate for reforms that challenge societal norms and promote systemic improvements.

The societal significance of this knowledge is evident in the initiatives alumni developed to address local and global issues. Advocacy efforts often led to transformative policies in education, healthcare, and environmental conservation, while activism strengthened institutions such as NGOs and social enterprises. By mobilizing communities and mentoring future changemakers, ECA alumni contributed to cultural and policy shifts. For example, alumni frequently engaged in transformative projects to combat gender-based violence, empowered marginalized groups, and promoted inclusive practices within their communities.

The experience of a Dominican advocate highlights these trends (WHA466). During her participation in YLAI, she learned to communicate ideas concisely and pitch impactful projects. Inspired by her mentor's work with marginalized groups, she initiated a multidisciplinary gender violence response team upon returning home. This team streamlined processes for survivors, reducing re-victimization by ensuring their stories needed to be shared only once. Additionally, she developed community training programs and partnered with fellow alumni to create resources such as guides and videos promoting women's empowerment and economic independence. Her mobility experience not only advanced advocacy efforts but also strengthened resilience and collaboration within her local community, demonstrating the transformative potential of knowledge gained through international mobility.

The analysis of knowledge areas among ECA alumni—technical, policy analysis and research, entrepreneurship, and advocacy—shows that all three program types commonly supported learning in these areas, with relatively consistent reporting across professional, student, and youth mobility participants. However, notable exceptions emerged: student mobility respondents reported comparatively less knowledge of entrepreneurship, while youth mobility participants reflected limited knowledge in policy analysis and research. Participants across all mobility categories also described various barriers to knowledge development within their home country contexts—from limited institutional support to lack of follow-up resources or practical application opportunities, particularly in under-resourced settings. These barriers also apply to non-ECA and no mobility participants. The individuals who did not partake in exchange programs primarily highlighted context-specific knowledge acquisition, often shaped by local resources and practices. While some described challenges such as limited access to equipment, materials, or pedagogies, others noted that practical experience in professional settings helped bridge these gaps. Although fewer opportunities for exposure to global best practices or case studies were reported, many participants emphasized how local expertise and on-the-job learning contributed meaningfully to their professional development.

When we compare mobilities to the U.S. with those to China and Russia, notable differences emerge, though findings from the latter are based on a smaller sample. In China, participants primarily developed technical and business knowledge, focusing on areas such as education management, financial planning, and infrastructure investments, with some also deepening their research expertise in advanced methodologies. This knowledge led participants to contribute to societal development by improving access to education, optimizing management practices that generated financial efficiency, and developing critical infrastructure projects that supported economic growth. By applying advanced research methodologies, some participants also enhanced local research practices and academic outputs. In contrast, mobility to Russia facilitated knowledge in gender equality, biochemistry, and Russian history, integrating technical and socio-political dimensions to address complex challenges. For example, insights into gender equality informed initiatives to promote social cohesion and equity in their home contexts. Similarly, expertise in biochemistry was used to advance health and environmental projects, while understanding Russian history offered a framework for promoting cross-cultural dialogue and cooperation. Professional mobility dominated experiences in China, drawing participants from

diverse regions, while student mobility was more prevalent in Russia, particularly among individuals from former Soviet republics. Despite the limited sample, these examples underscore the context-specific knowledge cultivated through mobility programs in China and Russia, complementing broader patterns observed in U.S.-based experiences.

8.2.3. Expertise

Expertise, distinct from technical knowledge, involves the ability to strategically apply deep, interdisciplinary understanding to solve problems, innovate, and drive systemic transformation. Unlike technical knowledge, which centers on task-specific methodologies, expertise represents advanced cognitive frameworks that enable individuals to recognize patterns, anticipate outcomes, and devise innovative solutions. International mobility programs cultivate expertise by exposing participants to advanced research, global networks, and diverse cultural contexts, equipping them with strategic insights and adaptive problem-solving skills to address societal challenges and influence institutional innovation.

A Ukrainian legal scholar (EUR466), after specializing in law through an ECA program, transformed his deep understanding of comparative legal systems into actionable frameworks for reform. He contributed to judicial institutions in Ukraine, advocating for transparent, meritocratic processes and combating political interference. His expertise not only enabled institutional reform but also positioned him as a trusted advisor on religious freedom, shaping national policy debates and building resilience in Ukraine's legal infrastructure. The scholar credits his mobility experience with expanding his capacity to navigate resistance, engage stakeholders, and apply diplomacy skills critical for systemic change.

In Ethiopia, a medical professional (AFR690) used advanced expertise in disability prevention acquired during an ECA program to transform healthcare systems. He applied his knowledge of congenital disabilities to create multidisciplinary care systems, establish treatment protocols, and train healthcare providers. By integrating community-based care, launching awareness campaigns, and developing collaboration with organizations like Reach Another Foundation, he improved healthcare delivery and policy, particularly for individuals with birth defects and disabilities. His expertise enabled him to design patient-centered interventions and mentor healthcare providers, ensuring sustainable advancements in Ethiopia's medical sector.

Similarly, a Palestinian environmental engineer (NEA439) applied expertise gained through international education from non-ECA student and professional mobility programs to address environmental challenges in Gaza. Leveraging global best practices, he improved water management systems, founded sustainability-focused platforms like the Global Ambassadors of Sustainability, and promoted interdisciplinary collaboration across 130 countries. His expertise in low-carbon solutions and community-based research enabled him to design environmental projects and advocate for climate resilience. Collaborating with the Global Green Chamber, he emphasized networking and disseminating technical knowledge, driving sustainable development locally and globally.

These examples suggest that expertise developed through mobility can extend beyond personal achievement to support systemic change. Whether reforming judicial processes, advancing environmental sustainability, or transforming healthcare delivery, participants harness their expertise to improve institutions, address inequities, and create pathways for sustainable development. The findings highlight the transformative role of expertise in bridging advanced knowledge with strategic application, emphasizing how mobility programs cultivate leaders capable of generating societal change.

Expertise in medical, legal, educational, political, and environmental fields emerged as central for participants across both ECA and non-ECA groups, with no notable differences between the two.

However, the type of mobility did influence outcomes. Expertise was rarely associated with youth mobility, which was absent from findings in this area—likely reflecting participants' younger age and earlier career stage, as well as the definition of expertise used in this analysis. For student mobility, the contribution of the experience varied: in some cases, it served as an initial steppingstone for undergraduate and master's students, while in others, it helped consolidate expertise through targeted opportunities. These patterns reflect the nuanced role of mobility in shaping expertise based on participants' prior experiences and professional trajectories. Respondents without international mobility experience generally displayed less diverse expert knowledge, drawing more heavily on deep, context-specific expertise shaped by local practice and resources. Limited access to interdisciplinary environments and professional networks may have constrained opportunities for broader learning, often requiring substantial individual effort to compensate. This contrasts with mobile participants, whose experiences often supplemented local expertise with international frameworks and cross-sectoral knowledge.

8.2.4. Civic Understanding

ECA programs cultivate transformative civic understanding by exposing participants to diverse societal structures, cultural dynamics, and community practices. Through structured opportunities such as workshops, community immersions, interactive training, and project development exercises, participants gain practical insights into governance, leadership, and advocacy. These experiences combine socialization—learning to navigate and contribute to existing cultural, social, and political frameworks—with subjectification—critically engaging with and transforming societal norms. Alumni were inspired and equipped to drive change through grassroots initiatives, educational programs, and systemic reforms. This section examines three key domains of civic understanding—Community Resilience and Empowerment, Education and Capacity Building, and Policy Innovation and Governance—and their interconnected influences on communities, institutions, and society at large.

Community Resilience and Empowerment

ECA participants often use their experiences to empower communities through grassroots initiatives that build trust, cohesion, and resilience. Exposure to inclusive governance systems and participatory practices equips alumni with tools to mobilize collective action and address local challenges. In terms of socialization, participants gain practical tools and frameworks for engaging with community structures, while subjectification empowers them to inspire change by stimulating critical reflection on existing governance models and practices.

For example, an ECA alumna from Côte d'Ivoire (AFR494) observed community-led disaster responses in the U.S. and applied these lessons in her region. By training women in leadership and conflict management, she established regional security watch committees that cultivated trust between civilians and security forces. She also implemented strategies such as community dialogues and awareness workshops, which she described as contributing to broader efforts to shift attitudes toward civic responsibility. According to her account, these initiatives contributed to reducing violent protests, strengthening partnerships with local authorities, and promoting longer-term social cohesion. She also believed that these efforts encouraged communities to take greater ownership of their safety and security.

Similarly, a social entrepreneur from Nicaragua (WHA462) stated that the Youth Ambassadors Program transformed his life, instilling a proactive service mindset and inspiring him to advocate for others' dreams. He led volunteering projects addressing education and humanitarian needs, that supported children, the elderly and underprivileged families with school support and medical aid. He also engaged in social community action on environmental issues, organizing youth-led conservation campaigns.

Education and Capacity Building

Civic understanding often manifests in participants' ability to design educational initiatives and build capacity for informed participation in governance and development. ECA alumni leverage insights from their mobility experiences to craft civic education programs and professional development initiatives.

A Moroccan IVLP alumnus (NEA280) exemplifies this impact through his founding of an NGO focused on civic education in Morocco. Inspired by U.S. civic education practices, he integrated democratic values and human rights into Moroccan curricula. By collaborating with experts in pedagogy and civic education, he developed inclusive teaching materials and trained educators to deliver effective curricula tailored to local contexts. Through collaborations with educators and grassroots NGOs, he developed inclusive programs that equipped students with the skills and confidence to engage in their communities actively. This work empowered young people to participate more actively in their communities and supported civic education efforts through collaboration with grassroots NGOs and engagement with government ministries. According to his account, these initiatives contributed to broader awareness of civic values and informed local approaches to citizenship education in parts of NEA.

In Cambodia, a TechGirls alumna (EAP824) launched a youth-led initiative to promote gender equity in STEM education. Drawing on her international experiences and early exposure to technology training, she designed workshops to support rural students—particularly girls—in exploring opportunities in science and engineering. She described developing a peer-led teaching model, sharing information on scholarships, and creating mentorship opportunities. According to her account, these efforts aimed to expand students' awareness of technology careers and strengthen their confidence to pursue STEM-related fields.

Policy Innovation and Governance

ECA programs also prepare participants to influence governance systems and advocate for systemic reforms. Alumni use their understanding of participatory governance to address societal challenges and support equity at all levels.

An ECA alumna from Ethiopia (AFR627) employed participatory models from the IVLP to form youth and women's associations, empowering grassroots leaders to address local resource limitations and engage in peacebuilding. Her strategies included hosting training sessions to enhance the capacity of local leaders, facilitating collaboration among stakeholders, and promoting sustainable conflict resolution mechanisms. According to her account, these efforts aimed to enhance local leadership, improve coordination across sectors, and support peacebuilding efforts in resource-constrained settings. Similarly, an alumna from Côte d'Ivoire (AFR494) applied insights from her U.S. mobility experience to lead regional initiatives aligned with UN Resolution 1325, aiming to strengthen women's leadership in peace and security. She described working with local authorities and civil society to promote training, establish women's security committees, and support community dialogue—efforts she saw as contributing to shifts in perception and practice regarding women's roles in conflict prevention.

Civic understanding emerged as a key component of ECA programs, shaping participants' sense of responsibility and active engagement in social change. By experiencing socialization and subjectification during mobility experiences, participants developed practical tools and critical perspectives that informed their societal contributions. ECA alumni across SM, PM, and YCM programs gained practical insights into collaborative problem-solving and public participation, translating theory into actionable strategies. In contrast, while non-ECA participants demonstrated significant civic contributions, they reported a less pronounced development of civic understanding during mobility, largely attributed to the limited presence of structured civic engagement components in their programs. Participants who did not engage in mobility demonstrated strong civic understanding, although this was

primarily influenced by family and personal values. Their contributions frequently centered on addressing immediate community needs and small-scale projects in civil society.

8.2.5. Regional Variations

Participants across the six regions consistently reported positive outcomes from mobility programs, including the development of skills, knowledge, expertise, and civic understanding. However, regional variations in the emphasis and application of these outcomes reflect differing local contexts and priorities. Some of these variations may stem from the program profiles of participants, contextual factors such as local challenges and regional priorities, as well as sample characteristics. While patterns are identified, it is important to note that this analysis is based on the experiences of participants in the sample and should not be viewed as definitive representations of entire regions.

In terms of skills development, decision-making and problem-solving emerged as universally emphasized across all regions, underscoring their global relevance. However, African participants particularly valued interpersonal skills, such as relationship-building and community engagement, alongside leadership as essential for driving collective action and socio-economic transformation. In SCA, participants highlighted leadership skills often linked with civic understanding, which enabled them to address human rights challenges and sustainable development goals. In WHA, leadership was primarily associated with grassroots advocacy and gender-focused initiatives, reflecting a strong emphasis on empowering communities and advancing equity. Meanwhile, participants from NEA demonstrated a distinct focus on decision-making and problem-solving to advance scientific innovation and tackle complex societal challenges. In EUR, problem-solving was highlighted as a crucial skill for navigating governance complexities and supporting effective international collaboration.

Regional trends were observed in knowledge acquisition despite the findings that participants across regions gained broadly comparable knowledge in technical, policy, entrepreneurship, and advocacy domains. AF and EAP participants reported significant gains in business, management, and entrepreneurial knowledge. In AF, this knowledge was often applied to for-profit entrepreneurship to address economic development goals, while in EAP, social entrepreneurship emerged as a key focus. Many participants from WHA similarly linked business knowledge to broader societal outcomes, underlining regional priorities in community advancement and equity. Participants from SCA reported strong knowledge gains in educational systems and development, while those in EUR emphasized knowledge in policy analysis and research, supporting effective governance and decision-making. NEA respondents often stressed environmental and technical knowledge, reflecting their focus on development initiatives and capacity building in these areas.

Expertise development showed no major regional patterns, but some trends could still be discerned. Expertise in scientific, technical, and medical fields was particularly prominent in the NEA and EAP, where participants focused on advancing innovations in areas such as engineering, environmental science, and healthcare. In AF and SCA, expertise related to educational and agricultural sectors was more prevalent, aligning with regional development priorities. EUR and WHA participants typically reported expertise in legal and political fields, reflecting an emphasis on structural reforms and governance.

Civic understanding displayed notable regional differences, with distinct outcomes for SCA, NEA, and EAP. In EAP, civic engagement was closely linked to social entrepreneurship and capacity-building initiatives. NEA participants focused on transferring knowledge and supporting community collaboration, while respondents from SCA highlighted grassroots advocacy as a key approach to driving social change. Some AF, EUR, and WHA participants also reported meaningful advancements

in civic understanding, though these outcomes were less emphasized compared to achievements in other areas.

8.3. Intercultural Competence

International mobility supports the development of intercultural competence by immersing participants in diverse academic, professional, and social settings. Through these experiences, participants develop critical skills such as adaptability, flexibility, empathy, and an ethnorelative perspective, enabling them to navigate cultural complexities and apply innovative solutions to societal challenges. Intercultural integration, encompassing academic, professional, and social dimensions, emerges as a vital component in shaping participants' ability to engage with and transform their home contexts.

This section begins by examining the processes of intercultural integration—academic, professional, and social—that enhance participants' capacity to collaborate across cultural boundaries and leverage their mobility experiences. It then explores how key elements of intercultural competence, including adaptability, flexibility, empathy, and an ethnorelative perspective, can contribute to systemic change led by returnees. Finally, regional variations in participants' experiences and outcomes are considered, highlighting the influence of local cultural and institutional contexts on their development of intercultural competence.

8.3.1. Intercultural Integration

This section identifies three critical components of mobility experiences—academic integration, social integration, and professional integration—that were central in enhancing ECA participants' intercultural competence.

Academic Integration

Participants with U.S. higher education experience consistently highlighted the transformative role of U.S. academic environments, which promoted active dialogue, critical thinking, active engagement, and participatory learning. Rigorous coursework and interactive learning frameworks encouraged intellectual growth, heightened self-awareness, and provided exposure to varied methodologies. ECA participants described the open, supportive relationships between learners and professors, emphasizing how diverse perspectives were attentively listened to. This openness enabled a culture of mutual respect and curiosity while developing foundational attitudes for intercultural competence. These environments allowed participants to express themselves freely, engage critically, and develop the ability to collaborate effectively across cultural boundaries.

The experience of a Fulbright alumna (EAP757) illustrates this. She reflected on classroom discussions with lecturers and peers from diverse cultural and professional backgrounds, which reshaped her understanding of societal inequalities and motivated her to start initiatives promoting gender equity in rural areas in Japan. Upon returning home, she applied her newly acquired gender frameworks and perspectives on global challenges to address gender disparities in Japan by initiating a collaborative project. The initiative provided educational opportunities, empowering female high school students in Japan.

The expectation to navigate academic challenges independently exposed participants to diverse perspectives and methodologies, enhancing their ability to adapt and collaborate across cultural boundaries. Collaborative environments, such as interdisciplinary projects and classroom discussions, encouraged participants to engage critically with different viewpoints, developing empathy and openness to cultural diversity. These experiences enabled participants to challenge hierarchical

structures in their home contexts and apply innovative, culturally sensitive solutions, demonstrating how intercultural competence can drive leadership and systemic change.

Engaging with diverse intellectual traditions further enhanced participants' capacity for intercultural collaboration. For instance, a German participant from the Fulbright Student program reflected on how exposure to interdisciplinary teamwork expanded his ability to bridge global and local knowledge systems. This critical reflection informed his leadership in sustainability initiatives upon his return home (EUR609).

Thus, academic integration within international mobility programs is not merely about acquiring subject-specific knowledge. It creates immersive environments that cultivate adaptability, flexibility, empathy, and ethnorelative perspective which are critical for addressing global and local complexities. By deeply engaging with academic settings, participants gained a foundation for meaningful societal contributions informed by diverse cultural and intellectual experiences.

Professional Integration

Professional integration in transnational settings, such as internships and work placements, provided participants with transformative opportunities to enhance their intercultural competence. These experiences allowed them to apply their skills in varied contexts, engage with cultural differences, and shape their professional trajectories while contributing to societal change. Professional integration experiences sharpened participants' adaptability and ethnorelative perspective by enabling them to navigate cross-cultural settings and compare global and local practices. Long-term mobility programs—both ECA and non-ECA—stood out in providing extended opportunities for deeper intercultural immersion and professional engagement.

An SM participant from Georgia (EUR335), supported by the Edmund Muskie Graduate Fellowship, exemplified how professional integration develops intercultural competence. During a 10-week healthcare internship at Grady Hospital in Atlanta, which was integrated into his master's program at New York University, he collaborated with diverse teams and observed professional practices shaped by different cultural norms. This experience sharpened his ability to navigate cross-cultural communication and adapt to new work environments. By comparing U.S. healthcare management with practices in Georgia, he gained a nuanced understanding of institutional reform. Upon returning home, he applied these insights to advance healthcare reforms in Georgia, demonstrating how intercultural exposure translates into meaningful societal contributions.

A PM Nicaraguan participant in the Hubert H. Humphrey Fellowship Program (WHA470) described how professional integration enabled her to address sensitive issues with greater empathy and patience. Working in diverse professional environments refined her leadership approach and amplified her climate change advocacy efforts in Nicaragua.

Short-term mobilities also offered opportunities for professional integration. Participants engaged in focused visits to U.S. organizations and participated in discussions with peers from varied cultural backgrounds that allowed them to translate and adapt new ideas and strategies in their own country context. For example, a Nigerian alumna (AFR552) shared how interactions with women leaders during the program reshaped the participant's perspective on societal change. Inspired by these experiences, the participant returned home to launch educational projects, including a mentoring program for girls and a free school for out-of-school children. These initiatives addressed gaps in education using strategies informed by participants' intercultural learning.

Through professional integration, participants developed the ability to navigate cultural differences and adapt innovative practices to local contexts. These experiences strengthened their capacity to balance

global perspectives with the specific needs of their home countries, enabling them to drive systemic change.

Social Integration

Social integration extended participants' learning beyond academic environments, developing intercultural competence through informal interactions and personal connections. Within ECA programs, long-term mobility participants found numerous opportunities to engage socially, which deepened their understanding of diverse cultural practices and strengthened their ability to navigate cultural complexities.

Alumni highlighted how informal engagements, such as sharing living spaces, facilitated intercultural learning. They described how living with peers from different countries encouraged reflection on diverse behaviors, routines, and cultural norms. Through everyday interactions—including meal preparation, adapting to unfamiliar habits, and managing interpersonal misunderstandings—participants reported developing a deeper understanding of how cultural background shapes behavior and expectations. One SM participant from Kenya (AFR556) explained that sharing an apartment with peers from 12 countries helped her better understand and respect different ways of living, which deepened her awareness of cultural difference and strengthened her ability to collaborate across cultures. Through diverse social interactions, participants honed empathy and flexibility, gaining deeper insights into cultural practices and communication styles. For instance, an SM Panamanian participant (WHA311) credited living with female roommates from diverse backgrounds with broadening her understanding of the challenges and opportunities faced by women in STEM. This experience shaped her commitment to advancing women's participation in STEM fields, ultimately influencing her leadership in higher education and policy development upon returning home.

Living with host families further reinforced intercultural learning for YCM and SM participants. Host families provided both logistical support, such as accommodation and meals, and cultural immersion through participation in family and community events. A Moldovan participant (EUR443) reflected on how her FLEX program experience living with a host family played a formative role in developing her ability to engage in constructive dialogue and collaborative decision-making. Observing how her host parents navigated shared responsibilities and reached consensus on family matters provided a vivid example of effective communication and mutual respect. These lessons influenced her leadership in building a public-private partnership in Moldova's IT sector. By leveraging U.S. and Moldovan resources, she spearheaded initiatives such as digital education programs in underserved schools, supporting technological innovation and economic growth. While the societal outcomes emerged years after the mobility experience, the intercultural competence acquired through the program laid a strong foundation for her later achievements.

Volunteer activities during long-term and short-term mobilities offered participants valuable opportunities to engage with diverse cultural settings, enhancing their intercultural competence. By working alongside individuals from different cultural backgrounds, participants gained insights into inclusive practices and applied these lessons to societal challenges back home. A Moroccan participant (NEA367) during his short-term Professional Fellows Program observed how the U.S. volunteering culture prioritized collective responsibility, motivating him to adapt these practices to his local context. He organized youth initiatives focused on environmental sustainability, encouraging collaboration across cultural and social divides. Similarly, an ECA FLEX participant (SCA284) used the skills gained through volunteering in multicultural teams to design leadership summer camps and support initiatives for disadvantaged families. These experiences shaped her ability to build inclusive programs that bridged cultural differences and addressed community needs in Kyrgyzstan.

Through diverse forms of social integration, participants developed intercultural competence by navigating cultural differences, adapting to varied lifestyles, and engaging with distinct communication styles. These experiences equipped them to bridge cultural divides and apply culturally informed approaches to societal challenges. The following section examines how four key constituents of intercultural competence - adaptability, flexibility, empathy, and an ethnorelative perspective—translated into societal contributions.

8.3.2. Intercultural Competence in Action

Participants in ECA-supported mobility programs demonstrated how intercultural competence—the ability to engage effectively and appropriately in diverse cultural settings—served as a foundation for driving societal contributions. Through the development of adaptability, flexibility, empathy, and an ethnorelative perspective, participants demonstrated their ability to navigate cultural complexities and address societal challenges. These components of intercultural competence enabled them to engage with diverse perspectives, transform approaches to complex issues, and implement innovative solutions in their home contexts. This section explores how these components of intercultural competence translated into societal contributions across different settings.

Adaptability

Adaptability refers to participants' capacity to adjust their communication styles, behaviors, and actions to align with the norms and expectations of new cultural settings. Developed during mobility programs, adaptability serves as a bridge between individual growth and broader societal contributions upon participants' return. Participants' willingness to embrace uncertainty and integrate diverse practices into their professional and personal contexts enhanced adaptability. Across all mobility programs, the ability to integrate new practices, navigate cultural complexities, and recalibrate behaviors emerged as a key factor in translating individual intercultural competence into broader societal outcomes.

ECA participants' experiences demonstrate how adaptive communication strategies cultivated through exposure to diverse intercultural settings, enabled them to address challenges and drive systemic changes in their home contexts. For instance, an SM participant from Afghanistan (SCA503) used adaptive communication strategies acquired during his Fulbright Foreign Student Mobility experience to facilitate inclusive decision-making in governance. These skills shifted workplace dynamics from blame-focused interactions to constructive dialogues that advanced democratic reforms and supported human rights initiatives. Similarly, a Moldovan alumna of the Edmund S. Muskie Graduate Fellowship Program (EUR311) used their adaptability as a "cultural translator," successfully negotiating critical financial assistance during an economic crisis, which she viewed as contributing to improved coordination and resilience during a period of national uncertainty.

Likewise, short-term mobilities, despite their limited opportunities for exposure to various intercultural environments, also developed adaptability. A Peruvian social entrepreneur (WHA469) described how brief but intensive intercultural engagements during YLAI reshaped her collaborative strategies. By prioritizing cooperative approaches over competition, she expanded her disability-focused technology initiative into international markets, broadening its societal reach.

Adaptability's role in professional innovation was evident across various areas, including education. A Tanzanian educational leader (AFR607) leveraged intercultural communication skills developed during their program to design culturally inclusive learning environments, improving access and equity for students from diverse backgrounds. These initiatives reflect how adaptability, initially an individual competency, evolves into a tool for systemic transformation.

Adaptability extended beyond professional domains, influencing community-driven transformative projects. For instance, the founder of a green building initiative in Iraq (NEA330) developed critical adaptive skills through academic and social interactions during his Fulbright master's program. He described how this experience influenced his approach to building sustainable networks and promoting energy-efficient development strategies in his home country. These findings highlight adaptability as not only a skill but also a mechanism for driving innovation and resilience in diverse social and professional contexts.

Flexibility

Flexibility refers to the ability to interpret multiple perspectives and determine the most appropriate response in a given cultural context. Within the framework of intercultural competence, flexibility involves critically reflecting on one's own assumptions and those of others, enabling individuals to adapt and contextualize newly developed intercultural perspectives to their home environments. Findings from ECA participants illustrate how flexibility, cultivated during both short- and long-term mobility programs, evolves from an individual skill into a mechanism for systemic influence, bridging global insights with local realities.

A cross-cutting theme in the findings was participants' ability to critically engage with and integrate diverse perspectives into their professional and societal practices. By recalibrating their own cultural assumptions and adapting newly acquired knowledge, participants developed innovative approaches tailored to local needs. Whether through policy reform, education, or grassroots initiatives, flexibility proved essential in translating mobility experiences into meaningful contributions that advanced equity, inclusion, and innovation.

This capacity to contextualize and reimagine approaches to societal challenges was a recurring theme, featuring flexibility as essential for innovation and societal contributions. For example, a Ukrainian education activist (EUR462), reflecting on her Fulbright program experience, identified shared struggles between Ukraine and Colombia, such as postcolonialism and corruption. By critically examining these parallels, she co-founded a national initiative encouraging young teachers to work in rural, disadvantaged communities. This initiative not only addressed educational inequality but also supported social cohesion by challenging stereotypes and bridging cultural divides within underserved regions.

Participants also highlighted flexibility as critical for reimagining existing systems and policies. A Danish former governor and education minister (EUR003) engaged in the IVLP program, where discussions with participants from diverse cultural contexts prompted her to re-evaluate aspects of Denmark's education system. While she maintained a preference for the Danish welfare model, her engagement with new perspectives led to systemic improvements, including enhanced access for disadvantaged children and greater collaboration with civil society organizations. This demonstrates how flexibility facilitates an openness to critique, enabling systemic innovation even in well-established frameworks.

Flexibility was equally vital in contexts where structural and cultural differences between host and home countries presented challenges. For example, a participant from Kazakhstan (SCA238) integrated human rights principles encountered during her IVLP program into local policymaking. Although Western approaches to accessibility for disabled voters did not align seamlessly with Kazakhstan's sociopolitical realities, her ability to contextualize these ideas allowed her to navigate local constraints effectively, resulting in tangible policy changes. This example underscores how flexibility operates as a tool for localizing global principles within specific socio-political frameworks.

In contrast, participants with no mobility experience often faced greater difficulty in challenging entrenched assumptions, lacking the external comparative frameworks that encourage flexibility. The

comparative disadvantage highlights the unique role of mobility in enabling individuals to recalibrate their cultural assumptions effectively, which participants described as a foundation for systemic change.

The role of flexibility within intercultural competence is thus twofold: it enables individuals to question and reshape their own perspectives while equipping them to navigate complex cultural and institutional systems. By serving as a bridge between global experiences and local application, flexibility amplifies the societal outcomes of mobility programs, facilitating systemic change grounded in intercultural understanding.

Empathy

Empathy refers to participants' ability to perceive and understand the perspectives of others, integrate diverse viewpoints, and gain deep cultural awareness during their mobility programs. Within the framework of intercultural competence, empathy emerges as a bridge between interpersonal understanding and societal transformation, equipping participants to engage meaningfully with cultural complexities and systemic inequities.

Empathy served as a catalyst, driving participants in both long- and short-term mobilities to tackle complex societal challenges with inclusive and context-sensitive solutions. For instance, a participant (NEA326) engaged with refugee communities during the Fulbright Foreign Student Program. This experience deepened their commitment to creating spaces that support equity and diversity, ultimately leading to initiatives aimed at improving refugee integration within the education sector across NEA. Such transformative intercultural engagements underscore the potential of empathy to connect individual experiences with systemic contributions. A Cambodian IVLP human rights activist (EAP009) integrated insights gained from advocacy work with minority communities into gender equality initiatives. By addressing intersecting challenges—including gender-based violence and systemic discrimination—this participant demonstrated how empathetic engagement can drive sustainable and inclusive change.

ECA programs further demonstrated how empathy motivates action by inspiring participants, especially in PM programs, to address complex challenges within their communities. These examples highlight how empathy, shaped by exposure to diverse intercultural contexts, translates into actionable contributions that address pressing social challenges. An Ethiopian YALI alumna (AFR633) drew on stories of resilience shared by fellow participants to inform her new approaches to improving education quality in community-driven initiatives.

Empathy was also found instrumental in facilitating cross-cultural collaboration during short-term mobilities, enabling participants to develop tailored strategies that address shared global challenges. For example, collaboration formed during the IVLP mobility program led a participant from Nicaragua (WHA284) to strengthen approaches for combating violence against women, blending global insights with locally informed strategies.

Participants with experiences of across multiple ECA mobilities similarly highlighted how empathy was developed through mobility experiences and how it helped them work towards systemic change. Their ability to empathize with diverse perspectives and contexts enabled them to design community-driven projects that bridged cultural and generational divides. For instance, an IVLP participant from Fiji (EAP054), inspired by the experiences of Tamils in Sri Lanka, mobilized women in her home country to engage with democratic processes, thereby enabling broader societal participation and change. Similarly, empathy allowed interview participants to engage meaningfully with others' realities, turning global lessons into locally relevant actions. For example, a YSEALI Professional Fellows Program alumnus from Vietnam (EAP504) leveraged connections and lessons from various mobility programs to empower youth through education-focused capacity-building initiatives. Thus, empathy is not merely an interpersonal skill but central for amplifying the societal outcomes of mobility programs.

Ethnorelative Perspective

An ethnorelative respective refers to the capacity to appreciate and adapt to cultural differences by recognizing that one's cultural perspective is just one among many. This perspective, a crucial component of intercultural competence, was noted by both ECA and non-ECA participants as they reflected on how their experiences helped them move away from an ethnocentric stance to a more nuanced understanding of cultural diversity.

By applying an ethnorelative lens, participants from both short- and long-term mobilities bridged global insights with local realities, creating culturally appropriate and sustainable solutions. For example, a participant from Mexico (WHA396), involved in YLAI, described the realization that his prior worldview had been overly self-centered, stating, "[It] helped us a lot to not think that we are the center of the universe" and to appreciate the remarkable work being done in other regions. This reflection enabled him to value diverse professional practices and incorporate collaborative approaches, ultimately expanding his indigenous social project's reach and forging cross-cultural partnerships.

Similarly, SM participants noted how ethnorelative perspective encouraged them to critically engage with cultural stereotypes and biases. An Ecuadorian participant (WHA350), for example, explained how her Fulbright mobility experience exposed her to diverse cultural narratives, prompting her to challenge her long-held cultural assumptions. This transformation influenced her leadership of a project integrating art and science in interactive museums, designed to reflect and celebrate cultural diversity in Ecuador.

Participants that had both ECA and non-ECA mobility experiences also demonstrated how ethnorelative perspective developed during their non-ECA experience enabled them to adapt global practices to local contexts. A Fijian agricultural specialist (EAP064), who participated in IVLP, described how learning about Western agricultural practices was only the starting point. By applying an ethnorelative lens, he adapted these approaches to support sustainable farming practices among Indigenous communities in rural Fiji, ensuring cultural and ecological appropriateness.

Across these examples, participants reflected on how their mobility experiences nurtured a deeper understanding of cultural perspectives, enabling them to develop more inclusive and contextually responsive practices. While participants' journeys toward ethnorelativism varied, these shifts were particularly evident among those engaged in SM and PM programs, where sustained immersion allowed for the development of more profound intercultural insights.

8.3.3. Regional Variations

This section examines how participants' development of intercultural competence varied across regions, shaped by distinct cultural contexts and professional landscapes. Key themes include the interplay between civic values and religion, the transformative influence of U.S. multiculturalism, and the adaptation of communication styles and work practices.

In the AF and NEA regions, exposure to U.S. cultural contexts often intersected with religious values, enabling deeper understandings of equality and human rights. For example, a program leader from Nigeria (AFR552) credited her experience in the U.S. with inspiring efforts to challenge restrictive cultural norms, particularly those limiting opportunities for girls and women. Similarly, a Yemeni participant (NEA322) reflected on how observing acceptance of Ramadan practices in the U.S. influenced his advocacy for equity and respect within higher education in Yemen.

Some Eastern European participants, often from culturally homogenous societies, described their exposure to U.S. multiculturalism as transformative, particularly in understanding how diverse groups

can coexist within shared frameworks. For example, a Ukrainian participant (EUR461) highlighted how U.S. approaches to supporting indigenous communities inspired her efforts to improve minority representation in Ukraine's educational system, focusing on Roma and Bulgarian populations. This exposure underscored the value of systemic support for underrepresented groups. Meanwhile, some participants from SCA, who described their societies as more inherently multicultural, found the U.S. emphasis on dialogue and collaboration across diverse groups particularly insightful. Building on this perspective, a lawyer (SCA539) noted how observing the decentralization of resources and decision-making in the U.S. reaffirmed the importance of promoting pluralism in their country. They emphasized that addressing the needs of multi-ethnic and multi-linguistic population in their country required devolving power and resources to local communities, a lesson reinforced by their U.S. experience.

Participants from EAP, NEA, and SCA regions reflected on significant differences in communication and work styles between their home contexts and those observed in the U.S. Participants from these regions who adopted elements of U.S. communication norms reported enhanced transparency and collaboration within their organizations. For instance, a Filipino YSEALI alumna and agricultural leader (EAP343) highlighted how the U.S. preference for direct and concise communication contrasted with the more reserved norms in her home country. By integrating aspects of this direct communication style, she facilitated more efficient decision-making processes and improved relationships with stakeholders in her agricultural projects. These adaptations illustrate how participants navigated and blended diverse communication practices, highlighting how intercultural learning shaped effective professional and cultural practices.

8.4. Social Relations

Earlier sections in this chapter highlighted how ECA alumni engaged transnationally with individuals and institutions, expanding their capacities for reflexivity, contextual awareness, and relational understanding. These transnational social relations positioned the study participants to navigate structural constraints, challenge entrenched norms, and develop innovative approaches tailored to their local contexts. This section examines the specific processes by which these relations facilitated transformative contributions, illustrating how participants leveraged mobility experiences to enact change. The three pathways within transnational social relations represent complementary yet distinct ways for influencing systemic change:

1. Developing Knowledge and Skills: Participants draw on transnational social relations for mentorship, collaborations, and access to diverse knowledge to build adaptive capacities and apply innovative methods in their home contexts.
2. Mobilizing Resources: Transnational social relations provide participants with access to critical financial, technical, and human resources, enabling them to implement systemic reforms and address pressing societal challenges.
3. Building Partnerships: Through transnational social relations, participants establish collaborative relationships that serve as platforms for long-term initiatives, scaling systemic change, supporting cross-sector collaboration, and enhancing their agency for societal transformation.

While these pathways often overlap, participants frequently rely on a combination of transnational relations to enact change. The sustainability of these relationships is critical, with many participants continuing to engage with mentors, collaborators, and institutions long after their mobility experiences. This sustained engagement underscores the transformative potential of transnational social relations,

enabling participants to harness both individual agency and structural opportunities. The following sections explore each pathway in detail, supported by qualitative evidence from participant accounts.

8.4.1. Developing Knowledge and Skills

Transnational social relations, formed during or because of international mobility, serve as a mechanism for translating individual experiences into societal contributions. Within this mechanism, knowledge and skills development emerges as a distinct pathway, enabling participants to engage in critical reflexivity, acquire specialized knowledge, and implement innovative approaches to address systemic challenges in their home contexts. These social relations, operating through sustained mentorship, virtual communities, and collaborative networks, act as generative mechanisms by equipping participants with the capacity to critically evaluate entrenched norms, adapt global practices to local needs, and implement systemic reforms.

Reflexivity is a central process within this pathway. Participants engage in self-assessment, guided by relationships developed during mobility, to critically evaluate practices, identify areas for improvement, and envision alternative solutions. Transnational social relations built during mobility create conditions for this reflection, encouraging participants to question entrenched norms and adapt global practices to local contexts. This often results in actionable contributions, such as new pedagogical methods or institutional frameworks.

The influence of sustained mentorship is evident in the case of an Indian IVLP alumnus (SCA471), who collaborated with professors in the United States during mobility to adapt student-centered teaching methodologies. He described how these relationships helped him identify institutional limitations in his home context and explore innovative pedagogical approaches. Upon returning to India, he applied these insights to enhance student engagement and promote collaborative learning in higher education settings. Similarly, virtual communities enable participants to exchange knowledge and strategies through structured digital platforms established during mobility programs. Collaborative networks further enhance this pathway by facilitating the exchange of ideas and solutions across borders. An Indian IVLP participant (SCA441) used relationships formed during mobility with international journalists and academics to refine research methodologies, enabling more effective advocacy initiatives in their home country.

The types of knowledge and skills transferred through this pathway fall into four categories: technical and methodological expertise, strategic and management skills, intercultural competence, and research proficiency. For instance, a Georgian participant (EUR280) relied on social relations established through mobility to collaborate with international experts, advancing economic policy reforms that addressed local challenges. A Thai Fulbright Foreign Student Program alumna (EAP428) highlighted her capacity for facilitating inclusive dialogue and empowering marginalized groups as key abilities honed through her mobility experiences, which she applied to drive climate change initiatives.

The experiences of SM, PM, and YCM participants highlight differences in how this pathway operates. SM participants often emphasized academic collaborations initiated during mobility, which evolved into long-term professional relationships that sustained knowledge exchange. PM participants, by contrast, reported diverse ways for knowledge sharing, focusing on immediate socio-economic challenges addressed through PM networks. YCM participants leveraged their creative engagements to develop cross-cultural dialogue through relationships built during mobility, generating innovative solutions to societal issues. These distinctions highlight the dynamic ways transnational social relations operate, shaped by participants' contexts and objectives.

Short-term exchange programs often facilitated the rapid development of professional networks that participants could draw upon for specific, time-sensitive challenges. However, longer-term programs allowed for the cultivation of deeper, sustained relationships that supported continued mentorship and collaborative efforts over time.

ECA alumni networks play critical roles in sustaining the influence of this pathway. These networks enable participants to maintain relations with international experts and peers first established during mobility, ensuring continued access to resources and knowledge. For example, a Moroccan IVLP alumnus (NEA285) used relations built through SM to collaborate with a U.S. university network on new research initiatives, improving educational practices at his institution. The long-term engagement supported by alumni networks underscores their importance as enablers of both individual development and collective societal transformation.

Non-ECA participants also developed transnational social relations during their mobility experiences, which were central to their societal contributions. They drew on similar relations with international experts and peers, leveraging these relationships to address challenges in their home contexts. However, participants without international mobility experiences had limited transnational relations to tap into. Instead, they relied on strong domestic social relations, some of which were formed through their university experiences. For example, a participant at a Mozambican social enterprise (AFR666) highlighted how mentorship within their local higher education network shaped their professional trajectory and enabled them to address pressing local challenges. They credited a university professor's guidance with refining their skills in public policy and mentorship, which later proved essential for developing social initiatives that support women and girls. Additionally, their interactions with colleagues and peers cultivated deliberative processes where they could reflect on diverse approaches to social issues, engage in meaningful discussions, and refine goals collaboratively. These experiences underline the capacity of domestic social relations to nurture professional expertise and drive transformative societal contributions in the absence of international exposure.

By engaging with transnational social relations formed during mobility, ECA and non-ECA mobility participants act as agents of change. They use these relationships to navigate structural obstacles and implement systemic reforms. This pathway demonstrates the critical interplay between individual agency and opportunities provided by international mobility—or domestic social relation—showing how knowledge and skills development can lead to meaningful societal contributions.

8.4.2. Mobilizing Resources

This pathway explores how transnational social relations, established during or as a result of international mobility, support resource mobilization. Through these relations, ECA and non-ECA participants reported gaining access to diverse resources—financial, human, and operational—that enabled them to address pressing needs in their home countries. The generative nature of these relations was described as creating channels not only for tangible resources, such as funding, and intangible assets, like expertise and trust. These social relations operate through formal channels, such as structured alumni networks and institutional partnerships, as well as informal relations, including personal connections and grassroots collaborations. Participants described leveraging these relationships to secure the resources necessary for implementing initiatives and translating their mobility experiences into tangible societal contributions.

Financial resource mobilization is a prominent avenue through which transnational social relations support societal contributions. Alumni grant programs and institutional partnerships play a significant role. A Brazilian IVLP participant (WHA429) successfully secured funding through an Impact Award to

implement a diversity and inclusion project, building on relations established during mobility. Informal relationships are equally influential. For example, a Palestinian alumna of IVLP (NEA047) utilized mentorship relations developed during her mobility experience to unlock funding and expert guidance for an online business platform connecting top talent in the Palestinian Territories with global markets. These accounts suggested that relational networks often evolved into sustained collaborations aligned with local priorities.

Some participants attributed a key role to U.S. embassies in supporting resource mobilization. According to their accounts, embassies facilitated access to funding opportunities, mentorship, and alumni platforms that extended the influence of transnational relationships. In these cases, embassy engagement was viewed not only as a resource enabler, but also as a source of credibility and logistical support.

Human resources were also mobilized through transnational social relations. Participants described recruiting mentors, trainers, and collaborators—often from alumni networks or mobility programs—to support their initiatives. A Nepali Fulbright alumna (SCA902), for example, explained how connections formed during her program helped her assemble a team for a women's leadership initiative. Similarly, grassroots initiatives often benefit from the collective efforts of local and transnational. Similarly, a Fijian IVLP alumna and civil society leader (EAP056) reflected on how peer networks formed during and after mobility enabled rapid volunteer mobilization for grassroots campaigns on women's and LGBTQ+ rights. Such relationships were described as contributing specialist skills, experience, and perspective that enhanced participants' efforts to address local challenges.

Operational resources, encompassing technical and logistical support, play a crucial role in resource mobilization. A Moroccan IVLP alumnus (NEA282) described how partnerships formed through his ECA program enabled him to expand entrepreneurship training initiatives targeting underserved groups. These efforts, supported by U.S. and Moroccan institutions, provided participants with business training and practical tools to pursue economic opportunities in their local communities. He emphasised that aligning international support with locally defined needs helped extend outreach to marginalised communities.

The integration of transnational and local relations was frequently described as essential for effective resource mobilization. Local collectives—such as community organizations, government agencies, and professional associations—were often positioned to translate international support into contextually grounded initiatives. A Fijian civil society leader (EAP056) noted that her domestic networks provided legitimacy and cultural knowledge that complemented international support. Similarly, a Costa Rican YLAI alumnus (WHA425) discussed how relationships formed during his mobility experience, combined with support from U.S. embassies, private banks, and government entities, contributed to the expansion of a literacy initiative that reached over 45,000 rural children. These examples illustrate participants' emphasis on combining transnational and local ties to sustain contributions over time.

For participants with non-ECA mobility experiences, social relations established during their mobility also facilitated effective resource mobilization, providing access to institutional and material resources critical for implementing initiatives oriented towards systemic change. Similar to ECA alumni, these participants described drawing on transnational professional and institutional ties to help sustain their work. For participants without international mobility, resource mobilization relied more heavily on domestic networks. Local professional and institutional connections often substituted for international ties, enabling access to support and coordination within national systems. These cases illustrate the value of both domestic and transnational relations in resource mobilization, with local relations proving especially critical for those without international mobility experience.

Variations in resource mobilization strategies by mobility type reflect the different purposes and contexts of participants' experiences. SM participants often access academic resources, prioritizing knowledge production to address systemic challenges. PM participants exhibit the broadest range of resource mobilization strategies, leveraging professional relations and institutional partnerships to address socio-economic issues. YCM participants more frequently relied on informal connections—such as peer and grassroots relationships—to mobilize resources for local initiatives.

8.4.3. Building Partnerships

Transnational social relations, formed during or as a result of mobility experiences, enable ECA participants to establish and sustain partnerships that drive societal change. These partnerships combine formal institutional collaborations and informal relationships, creating platforms for initiatives across NGOs, educational institutions, government bodies, and private sector entities. By drawing on these diverse connections, participants transform mobility experiences into societal contributions in their home countries. By linking structural (institutional) opportunities with participants' agency, these partnerships address systemic challenges and generate solutions tailored to local contexts. Analysis of participant experiences reveals three central processes in partnership building: scaling systemic change, enabling cross-sector collaboration, and strengthening agency for societal transformation.

Partnerships created by ECA participants and others with mobility experience expand their ability to channel international expertise and resources into local systemic reforms. These partnerships provide financial, technical, and operational support, amplifying participants' capacity for institutional and community development. For example, in post-2001 Afghanistan, a Fulbright Foreign Student Program alumnus, leveraged relations developed during his mobility experiences, including relations formed through Fulbright and other international programs such as the United Nations Institute for Training and Research (UNITAR). His partnerships with international organizations, such as the World Bank and the European Commission, facilitated public health reforms (SCA501). These collaborations provided critical funding and specialized expertise essential for rebuilding Afghanistan's healthcare system during a fragile recovery period. Similarly, Moldova's ICT innovation centers(EUR398), illustrate how transnational partnerships strengthen key sectors. A Moldovan participant, who engaged in non-ECA mobility, highlighted the influence of these partnerships in expanding ICT education in the country. These examples demonstrate how mobility-enabled partnerships support societal development. These collaborations exemplify how transnational partnerships activate structural opportunities, enabling participants to implement reforms that align with local development goals.

In addition to scaling systemic change, transnational partnerships often serve as platforms for addressing complex societal challenges through collaboration across sectors. By bringing together stakeholders from academia, government, civil society, and the private sector, these partnerships enable innovative solutions and mobilize diverse resources. For example, a Fulbright alumna from Pakistan partnered with U.S. universities to establish a law school in Pakistan (SCA523). This collaboration combined technical expertise and financial resources, addressing institutional gaps in the country's legal education system and contributing to sustainable institutional development. This case demonstrates how participants use transnational social relations to navigate structural obstacles and implement meaningful change.

Moreover, transnational partnerships address complex societal challenges by enabling cross-sector collaboration. They unite stakeholders from academia, government, civil society, and the private sector, creating opportunities for innovative solutions and resource mobilization. For example, in the aforementioned example (SCA523), the alumna partnered with U.S. universities to establish a law school. This collaboration, enabled by social relations formed through her mobility experience, filled

critical gaps in legal education by combining technical expertise and financial resources, contributing to sustainable institutional development. Similarly, a Moroccan IVLP participant (NEA282) leveraged relations built during the program with various U.S.-based organization, to develop entrepreneurship training programs. These programs not only empowered women but also improved socio-economic conditions in underserved regions by blending American and local expertise. These cases demonstrate how transnational relations formed through ECA mobility programs enable participants to implement meaningful, context-specific changes.

While partnerships often share common processes, their nature and focus appear to vary across mobility types and regional contexts. PM participants tend to establish professional partnerships targeting socio-economic challenges, leveraging their practical experiences and social relations to create diverse opportunities for collaboration. SM participants often emphasize academic partnerships, which frequently evolve into enduring relations that support knowledge transfer and collaborative research. YCM participants, in contrast, tend to rely on informal relations formed during mobility to develop grassroots partnerships addressing specific community needs. Regional contexts further shape these strategies. For example, EUR participants often highlighted collaborations supporting democratic transitions, while WHA participants focused on feminist and rights-based coalitions, and SCA participants emphasized partnerships with NGOs. These trends suggest that partnerships are shaped not only by the nature of mobility experience but also by the specific institutional and cultural contexts of the regions. Nonetheless, successful partnerships across contexts and mobility types seem to depend on a blend of formal institutional support and informal relations, with mentorship and collaboration playing a vital role in sustaining and deepening these relationships.

Participants with mobility experiences highlighted the critical role of transnational relations in facilitating local contributions. Meanwhile, local relations remain essential, even for those with mobility experiences, providing unique forms of legitimacy and support. Domestic professional relations offer institutional legitimacy and operational backing, while family ties and community relations contribute emotional resilience and grassroots engagement. For example, a UAE-based entrepreneur and philanthropist (NEA212) attributed her dedication to supporting women and girls in the MENA region to mentorship and philanthropic values instilled by her family. These values, paired with strategic relations established through the Aspen Institute Fellowship, provided guidance and practical support for launching a foundation focused on healthcare and education for women and girls. This case demonstrates how relational agency, rooted in local mentorship and transnational collaborations, drives societal transformation.

The examples demonstrate how participants use transnational partnerships to scale systemic change, enable collaboration across sectors, and enhance their agency for long-term societal contributions. By addressing structural obstacles and finding innovative solutions, these partnerships contribute to meaningful societal transformation, ensuring lasting outcomes across diverse contexts.

8.4.4. Regional Variations

Regional variations illustrate how participants in diverse contexts navigate and leverage transnational social relations to address societal challenges. While these observations are drawn from a limited sample, they provide a snapshot of how institutional, cultural, and socio-political contexts influence the processes described in this chapter.

In EUR, participants frequently emphasized the importance of structured institutional frameworks and regional mechanisms, such as EU partnerships, as key enablers of cooperation and knowledge transfer. For example, one participant noted the challenges of coordinating multiple inter-ministerial

stakeholders to implement reforms in child protection (EUR371), highlighting the role of institutional arrangements in facilitating access to resources and addressing systemic challenges in governance and public policy.

Participants in NEA and EAP similarly highlighted mentorship and collaborative efforts as central to their approaches. Mentors often played a central role in integrating transnational insights with local strategies, as in volunteer-driven initiatives (NEA084). In EAP, partnerships often centered on collaborative learning and uniting diverse stakeholders, particularly in volunteer efforts addressing shared regional challenges (EAP806). These examples reflect how participants in both regions combined grassroots engagement with high-level institutional support to support meaningful local contributions.

In WHA, participants leveraged technical expertise and advocacy networks to address socio-political challenges. Professional and informal relations facilitated the adaptation of transnational approaches to local needs, particularly in community-driven advocacy projects. For example, resource mobilization strategies often linked transnational support with grassroots initiatives, demonstrating the interplay between transnational resources and local actors in driving change.

In AF, participants frequently engaged in multi-sector collaborations aligned with local priorities. For example, partnerships aimed at strengthening media institutions demonstrated how transnational resources were adapted to meet locally relevant goals. These social relations offered legitimacy and practical support, enabling participants to address specific challenges effectively.

SCA participants described forming transnational partnerships to support institutional development and advocacy efforts, often through collaborations with NGOs and universities abroad.

While distinct patterns of engagement are evident across regions, they reflect the adaptability of transnational social relations to diverse contexts. The processes of knowledge transfer, resource mobilization, and partnership building are shaped by local institutional landscapes and societal needs, demonstrating how participants tailor their contributions to address region-specific challenges. At the same time, these examples underscore a common thread: the dynamic interplay between transnational connections and local realities, which enables participants to navigate constraints and implement meaningful societal change.

8.5. Summary

Chapter 8 examines how international mobility translates into societal contributions through four interconnected mechanisms: agency; skills, knowledge, expertise, and civic understanding; intercultural competence; and social relations. These mechanisms operate dynamically, enabling participants to navigate, engage with, and reshape structural and relational contexts in their home countries. Grounded in the theoretical framework detailed in Chapter 3, these mechanisms collectively generate emergent properties—outcomes that transcend individual efforts and arise from the interplay between agency and societal structures.

Agency is highlighted as a central mechanism in driving returnees contributions to their societies, with reflexivity enabling participants to make intentional and strategic decisions about their contributions. This aligns with Critical Realism's focus on the interaction between individual agency and structural conditions. The chapter also underscores that mobility cultivates skills, knowledge, and civic understanding that extend beyond personal enrichment to lead systemic change, provided these are effectively integrated into local contexts.

Intercultural competence developed through mobility supports participants in navigating and bridging cultural divides. Exposure to diverse norms and practices enhances their capacity to address societal challenges in increasingly interconnected global contexts. Social relations further amplify these contributions by developing trust, partnerships, and resource mobilization. Alumni networks exemplify how sustained relational interdependencies facilitate collaboration and support systemic change over time.

Findings suggest that the duration of mobility experiences influences how these mechanisms operate, though the relationship is nuanced. Shorter programs often lead to immediate, focused applications of skills and knowledge, while longer programs provide opportunities for deeper engagement and reflection. For example, participants in short-term mobility frequently reported gains in decision-making and interpersonal skills, enabling rapid and actionable contributions upon return. By contrast, long-term mobility facilitated sustained intercultural immersion and professional integration leading to societal contributions back at home. Nonetheless, the data is inconclusive about whether duration is a decisive factor in the development and translation of agency; skills, knowledge, expertise, and civic understanding; intercultural competence; and social relations into systemic change.

Importantly, these mechanisms do not operate in isolation but interact dynamically to drive societal change. Their success relies on enabling factors such as community support, access to financial resources, and political readiness, as highlighted in Chapter 7. At the same time, systemic constraints—including gender discrimination, cultural conservatism and resistance to change, bureaucratic inefficiencies—often shape the outcomes of alumni-led initiatives. While most participants of this study effectively leveraged their mobility experiences to make meaningful contributions, the extent of their societal contributions depended on both individual agency and the structural conditions that influenced their efforts.

Not every participant develops these four mechanisms to the same extent, and the report underscores that international mobility is not a guaranteed pathway to systemic change. Nonetheless, when these mechanisms converge, they yield transformative outcomes that align individual agency with broader societal structures. The chapter concludes by highlighting the interconnected nature of these mechanisms and their collective potential to drive sustainable societal transformation.

9. Summary and Discussion of Findings

9.1. Summary of Key Findings

The findings of this study demonstrate the significant and diverse ways in which ECA-sponsored mobility aligns with development outcomes. At the national level, the quantitative analysis in Chapter 5 identified improved outcomes on various development indicators—including economic performance, gender parity, health, and primary and secondary enrolment ratios—in countries with higher concentrations of ECA alumni. Additionally, justice and freedoms were positively linked specifically to student mobility, the unique role of student mobility in supporting democratic engagement and inclusive governance. These associations between higher concentrations of ECA alumni and improved development indicators persisted even after controlling for GDP per capita, tertiary enrolment, and levels of international trade, providing evidence of systemic patterns linked to mobility. However, it is important to emphasize that these findings do not establish causality; domestic reforms and global economic shifts may also contribute to these observed patterns, highlighting the complexity of societal change.

The quantitative analysis further reveals that individuals with degrees from the U.S. exhibit more pronounced links to systemic change than those who study in China or Russia, where the data suggests weaker or negligible links with similar indicators. This finding highlights the importance of host-country environments, particularly the quality of educational systems, sociopolitical conditions, and alumni networks, in shaping alumni contributions. For example, U.S.-trained alumni benefited from post-study professional networks and open political climates, which may have amplified their ability to drive change upon returning home. By contrast, structural obstacles in other host countries might have limited such opportunities, reflecting the dynamic interplay between agency and enabling environments. Collectively, these findings suggest that ECA-supported exchanges may yield system-wide benefits, particularly when participants are positioned within supportive contexts.

At the individual level, Chapters 6 and 7 provided nuanced insights into how alumni in the sample contribute to development within their home countries. Because the sample selection included individuals with documented contributions beyond the personal sphere, alumni accounts frequently referenced tangible changes within local organizations or communities. Nearly every participant pointed to institutional/community-level interventions—whether in educational settings, local government bodies, or community-led efforts—as their most prevalent sphere of influence, and around half reported engagement at the national level. A large majority of ECA alumni (94.3%) identified the ECA exchange as instrumental in enhancing their capacity to contribute, although some highlighted complementary influences from non-ECA mobility or domestic educational experiences.

Education emerged as the most prominent area of focus among ECA alumni contributions, followed by economy, justice and freedoms, gender, and health. Civil society stood out as the primary sector of involvement. Comparisons with non-ECA and no-mobility groups indicated notable differences in levels, sectors, and areas of contribution—for example, the ECA cohort demonstrated a strong emphasis on civil society work, whereas non-ECA participants reported a higher proportion of scientific innovation. However, these patterns should not be generalized to wider alumni populations.

Structural factors such as gender discrimination, cultural conservatism and resistance to change, and bureaucratic inefficiencies often constrain these contributions. The study also identified region-specific obstacles, such as limited funding and skill shortages, which complicated alumni efforts to enact systemic reforms. For example, alumnae returning to culturally conservative contexts frequently faced skepticism or resistance in leadership roles, despite possessing the necessary skills and qualifications.

Conversely, the study highlighted several enablers of systemic chnage, including community support, access to financial resources, and political readiness. Cultural openness and a critical mass of skilled professionals emerged as particularly significant at the regional level, empowering alumni to navigate and address local constraints effectively.

Chapter 8 expanded on these findings by identifying four interlinked mechanisms that empowered ECA participants to instigate change:

- The development of personal agency involved alumni cultivating discernment, deliberation, and dedication, which enabled them to align their objectives with societal needs. Discernment helped alumni to identify key challenges in different sectors, deliberation informed their strategic planning, and dedication sustained their efforts despite structural constraints.
- The development of skills, knowledge, expertise, and civic understanding was also significant. Enhanced decision-making, problem-solving, interpersonal, and leadership skills, combined with deepened expertise and a strengthened sense of civic responsibility, enabled alumni to address persistent challenges effectively. The range of knowledge domains—from technical and policy-related to advocacy and entrepreneurship—was instrumental in shaping their wider societal contributions.
- The development of intercultural competence stemmed from exposure to diverse intercultural settings that supported flexibility, adaptability, empathy, and ethnorelative perspective. Academic, professional, and social integration in transnational contexts encouraged participants to question norms, expand behavioral repertoires, and enhance their capacity to navigate complex societal terrains.
- The development of social relations was another key mechanism. Transnational relationships built during mobility—including mentorships, friendships, and collaborations—facilitated knowledge exchange, resource mobilization, and partnership development, providing critical support for addressing systemic challenges.

Together, these findings provide compelling evidence that ECA-sponsored mobility programs contribute not only to individual transformation but also to institutional and societal development.

9.2. Methodological Contribution

This study represents a significant advancement in understanding the relationship between international mobility and societal development through its rigorous methodological approach. By using quantitative and qualitative methods, it moves beyond methodological silos to deliver a comprehensive analysis of how international mobility contributes to systemic change.

A cornerstone of the study's methodology is its ability to bridge the macro and micro levels of analysis. The quantitative component, underpinned by an unprecedented longitudinal dataset provides insights into patterns of development associated with ECA-sponsored mobility. The analysis of quantitative data using advanced statistical modelling allowed for an exploration of associations between mobility and development indicators, while accounting for temporal and contextual variations. Complementing this, the qualitative component drew on 704 semi-structured interviews with changemakers across 70 countries, offering an in-depth examination of individual experiences and their translation into systemic contributions.

This study's methodological approach is distinguished by its rigorous and systematic use of comparisons, examining differences across multiple dimensions to provide a nuanced understanding of

the societal outcomes of mobility. Central to this approach is the comparative synthesis of three types of mobility—SM, PM, and YCM —which emphasizes their distinct contributions and shared mechanisms, such as skill acquisition, intercultural competence, development of agency and social relations. This synthesis demonstrates how each form of mobility tends to address developmental challenges while also revealing converging patterns of influence.

The study further explores regional variations. By embedding quantitative trends within regionally grounded qualitative analyses, it highlights how mobility programs interact with specific local realities, revealing the enabling and constraining conditions across different regions. This regional sensitivity ensures that findings are contextually relevant and applicable to a wide range of socio-political and cultural landscapes.

Additionally, the study quantitatively contrasts host-country effects, underscoring the significant role of host-country environments in shaping mobility's broader contributions to the development of general international student returnees' home countries.

The study also incorporates a comparative analysis of mobility experiences among ECA participants, non-ECA participants, and changemakers with no mobility experience. This dimension of the analysis sheds light on how distinct mobility pathways influence developmental trajectories, illustrating how ECA sponsorship, in particular, enhances participants' capacity to navigate and address systemic challenges. Together, these comparisons contextualize mobility's outcomes and advance a more integrated understanding of its role in societal change.

Finally, the study's commitment to methodological transparency and reflexivity strengthens the reliability of its findings. From harmonizing diverse datasets to mitigating potential biases in qualitative sampling, the research employs quality assurance measures, including robustness checks, inter-coder reliability checks, and comprehensive documentation of data biographies. These efforts not only enhance the study's credibility but also provide a replicable model for future investigations.

In sum, this study sets a new benchmark for evaluating the developmental contributions of international mobility. By combining statistical rigor with qualitative richness, contextual sensitivity, and comparative analysis, it redefines what is methodologically possible in this area of research, providing a vital resource for scholars, practitioners, and policymakers seeking to understand mobility as a catalyst for sustainable development.

9.3. Theoretical Contribution

This study introduces a pioneering theoretical framework that redefines the understanding of how international mobility drives societal development. By bridging established theories with novel conceptual insights, it constructs a comprehensive lens through which to analyze the transformative potential of mobility programs. This theoretical framing, uniquely tailored to capture the complexity of ECA-sponsored exchanges, represents a first-of-its-kind approach in contemporary social science.

At the center of the theoretical framework is the interplay of agency, social structures, and cultural factors, moving beyond traditional narratives of mobility as solely individual transformation. By integrating perspectives from critical realism, transnationalism, and transformative learning, this framework identifies four interlinked mechanisms that illuminate how individuals translate mobility experiences into systemic contributions: agency development, the acquisition of skills, knowledge, and expertise, intercultural competence, and the formation of social relations. These mechanisms operate within broader structural constraints and enablers, offering a nuanced understanding of how mobility interacts with local contexts.

The framework emphasizes the dynamic nature of transnational social relations formed during mobility, conceptualizing them as active, enduring connections that facilitate knowledge exchange, resource mobilization, and collaborative innovation. This perspective redefines these relationships as mechanisms of change, rather than static or incidental networks, and underscores their sustained and context-sensitive role in enabling alumni to make meaningful contributions over time.

This conceptualization challenges binary perspectives, such as brain drain versus brain gain, by positioning mobility as a fluid process situated within a continuum of global and local interactions. It reveals how structural constraints and cultural enablers shape the transformative potential of mobility, emphasizing the iterative, context-dependent nature of its outcomes.

Together, this framework redefines the theoretical landscape of international mobility research, offering fresh insights that address enduring gaps in the literature while providing policymakers, practitioners, and scholars with a deeper, more integrated understanding of how mobility catalyzes societal transformation.

9.4. Critical Issues in International Mobility

While this study provides a comprehensive understanding of the societal outcomes of ECA-sponsored international mobility, it also raises pressing questions about the broader context in which mobility operates. Beyond the individual and systemic contributions documented here, international mobility exists within a dynamic and often inequitable global landscape. The findings of this study underscore the importance of not only celebrating mobility's successes but also addressing the structural and contextual challenges that limit its reach and potential.

Three critical issues emerge as particularly relevant to understanding and advancing the role of international mobility in societal transformation. First, the diverse trajectories of alumni after their mobility experiences challenge traditional narratives, including the persistent debates on brain drain versus brain gain. Second, significant inequities in access to mobility opportunities raise questions about who benefits from these programs and whose voices remain excluded. Finally, the growing prominence of virtual mobility, particularly in the wake of the COVID-19 pandemic, demands a closer examination of its promise and pitfalls in reshaping global education and collaboration.

These issues go beyond the scope of the study's core findings but are integral to the future of international mobility. By situating the study within these broader debates, this section aims to provoke reflection and provide direction for policymakers, practitioners, and researchers committed to making mobility more inclusive, effective, and sustainable in an evolving global context.

9.4.1. Diverse Trajectories of Alumni and the Brain-Drain Debate

ECA alumni follow diverse migration trajectories after their international experiences, often starting with a mandatory return to their home countries before they are eligible to apply for another category of U.S. visa, as required by many ECA programs. The immediate return requirement aims to ensure that alumni apply their newly acquired skills and knowledge in their home contexts. However, over time, alumni may take varied paths, including remaining in their home countries, relocating back to the U.S, moving to other countries, or frequently shifting locations. This fluid and evolving mobility creates transnational connections that extend alumni contributions beyond their immediate environments, challenging overly reductive notions of brain drain. Recognizing these diverse trajectories is essential for capturing the breadth and complexity of alumni societal contributions.

The phenomenon of brain drain has long been a concern regarding international mobility. Scholars such as Docquier & Rapoport (2012) and Kerr et al. (2016) emphasize the risk of highly skilled individuals leaving their home countries for education and not returning, potentially depleting critical human capacities. However, evidence suggests a more nuanced reality. Chankseliani (2016), for instance, demonstrates that limited tertiary education capacity and restricted employment opportunities in post-Soviet countries have historically driven outbound student mobility, reflecting the complex interplay between individual aspirations and structural constraints. While these dynamics are often framed as losses for sending countries, they can also foster long-term benefits through diaspora networks, remittances, and knowledge transfer.

The existing, albeit limited, data also shows that the majority of international students comply with return requirements. For example, UK Home Office data reveals that over 98% of non-EU students adhere to visa rules and leave once their visas expire (Home Office, 2020). Similarly, many Department of State exchange programs that operate under the J-1 visa category include a two-year home-country physical presence requirement, which is designed to encourage local contributions through return before the visa holder is eligible to apply for work or residency in the United States, per Section 212(e) of the Immigration and Nationality Act. However, this requirement does not extend to all J-1 holders, particularly those in privately funded programs (U.S. Department of State – Bureau of Consular Affairs, n.d.). According to the annual DHS Entry/Exit Overstay Report, 3.67 percent of student and exchange visitors overstayed their visas in Fiscal Year 2023 (Department of Homeland Security, 2024). Research from the present project confirmed a positive correlation between international student mobility and poverty reduction in low- and middle-income countries, even after accounting for the proportion of students who do not return to their home countries, as indicated by emigration ratios (Kwak & Chankseliani, 2024).

While not all graduates return permanently or even at all, those who remain abroad often contribute indirectly through remittances, diaspora networks, and knowledge transfer, as documented in the literature (Berry & Soligo, 1969; Docquier & Rapoport, 2012; Gibson & McKenzie, 2012; Grubel & Scott, 1966; Johnson, 1979). Migration opportunities may also encourage educational investments in sending countries (Batista et al., 2012; Beine et al., 2008), ultimately expanding the skilled workforce. The concept of “brain circulation” further reframes static notions of alumni contributions, emphasizing how ongoing cross-border exchanges facilitate collaboration and innovation, even when alumni do not remain in their home countries (Krannich & Hunger, 2024).

In sum, while concerns about brain drain remain relevant, this study demonstrates that international mobility often generates substantial developmental benefits. However, the findings also call for further inquiry into how different post-exchange movements—whether alumni return home, remain abroad, or relocate to other countries—affect societal development outcomes.

9.4.2. Inequities in Mobility Opportunities

International mobility programs, particularly student mobility initiatives, have often been critiqued for perpetuating inequities by disproportionately benefiting socioeconomically advantaged groups while limiting access for underrepresented populations. Structural barriers such as language requirements, application infrastructure concentrated in capital cities, and academic prerequisites hinder access for individuals from rural areas and lower socioeconomic backgrounds. While international mobility programs do not formally require applicants to be based in urban areas, access to recruitment networks, testing centers, and support services is often concentrated in capital cities—leading to structural advantages for urban applicants (Lomer, 2017; Perna et al., 2014). These barriers, coupled with the tendency of international education to reinforce social hierarchies by favoring those with

financial resources and cultural capital, exacerbate inequities (Brooks et al., 2024; Lomer et al., 2024; Waters & Brooks, 2011). Evidence from OECD (2022) further highlights that socio-economic disparities persist even in contexts where international mobility programs are widespread.

The intersectionality of barriers is also evident in cultural and gender-related constraints. Interview participants from traditional and patriarchal societies, such as those in Bangladesh, Fiji, Niger, and Uzbekistan, reported how familial expectations and cultural norms posed challenges to accessing mobility opportunities, particularly for women. These findings underscore the compounded nature of inequities, where socioeconomic and cultural factors intersect to limit participation.

In addition to within-country disparities, country-level inequities in access to international mobility remain a concern. This study highlights differences in the distribution of ECA-sponsored mobility opportunities across countries with varying income levels. High-income countries have historically received the largest per capita share of ECA-sponsored exchanges. While this dominance has declined—from 5.42 exchanges per million people in 1990 to 1.85 in 2020—low-income countries, which started with the lowest per capita participation rates in 1990 (0.53 exchanges per million people), have seen significant increases, emerging as the second-largest per capita beneficiaries by 2020. While these trends reflect greater inclusion over time, the persistent gap between high- and low-income countries highlights the structural challenges of achieving equitable access to mobility opportunities globally.

Structural barriers at the individual level and systemic disparities across countries must be tackled simultaneously to ensure that mobility programs fulfil their potential as drivers of global development. While examining equity and inclusivity was beyond the scope of this study, the findings highlight the pressing need for more inclusive approaches to international mobility.

9.4.3. Virtual Mobility

As global mobility continues to evolve, virtual exchanges present both opportunities and challenges. Shields (2019) highlights the significant carbon footprint of traditional student mobility, prompting discussions about the environmental sustainability of large-scale international education programs. Virtual mobility, accelerated by the COVID-19 pandemic, offers a pathway to address these concerns by reducing physical travel while enabling cross-border learning and collaboration.

Online and hybrid learning models have the potential to expand access to international education by lowering barriers such as cost and geographical distance. The UNESCO IESALC (2022) report argues that virtual student mobility significantly enhances access for marginalized groups, including those constrained by financial, geographic, or physical limitations. This aligns with its broader potential to promote equity in international education. However, disparities in internet access and digital literacy remain significant obstacles. Kizilcec et al. (2017) found that while massive open online courses can enhance global access to education, they often reinforce inequalities due to uneven infrastructure and support systems, limiting their reach among marginalized groups.

Virtual mobility can provide exposure to global perspectives but may struggle to replicate the cultural immersion and trust-building that face-to-face exchanges offer. These elements, which are integral to transformative learning experiences, remain difficult to replicate in purely digital formats. West (2023) argues that the pandemic-driven shift to ed-tech has often prioritized technological solutions over the broader social and emotional goals of education, sometimes undermining its human-centered essence. The UNESCO IESALC (2022) further cautions that digital divides—stemming from unequal access to reliable internet and devices—pose challenges to the widespread adoption of virtual mobility.

Hybrid models combining virtual and in-person elements may offer a balanced approach, retaining the benefits of physical mobility while addressing environmental and equity concerns.

The study focused on physical mobility and its links to societal contributions, and therefore excluded participants in virtual exchange programs. However, the increasing relevance of virtual mobility warrants further investigation. Future research should explore both virtual and hybrid mobility to examine their respective influence on individual development and societal transformation. Understanding the influence of these forms of mobility can help design programs that optimize the benefits of international mobility while addressing sustainability and accessibility challenges.

This chapter provides a critical foundation for actionable recommendations. By illuminating the mechanisms, comparative dynamics, and contextual factors that shape the outcomes of international mobility, this study equips policymakers, program designers, and scholars with a clearer understanding of how mobility contributes to societal transformation. Building on these insights, the following chapter will propose specific policy and research directions to enhance the equity, effectiveness, and sustainability of international mobility programs, ensuring that their developmental potential is fully realized.

10. Implications for Policy and Research

10.1. Recommendations for Policy

1. Positioning ECA Programs as Catalysts for Systemic Transformation

ECA programs reflect the principles of mutual understanding, leadership development, and intercultural exchange, which have long been integral to U.S. public diplomacy. This study demonstrates the significant potential of ECA programs to strengthen individual agency, enable cross-border collaboration, and address pressing societal challenges. Alumni accounts provide compelling evidence of their contributions to institutional reforms, driving innovation, and building resilience in their home countries. To fully harness this potential, ECA programs should refine their messaging and adopt enhanced metrics to capture and articulate their systemic outcomes. It is imperative to position these programs as drivers of systemic transformation that support both U.S. foreign policy priorities and global development objectives.

The following recommendations are proposed:

- Strengthen program narratives to clearly demonstrate how ECA initiatives align with and contribute to the SDGs.
- Develop tools to systematically document systemic outcomes, such as improved governance frameworks, expanded leadership opportunities for underrepresented groups, and capacity-building initiatives led by alumni.
- Enhance evaluation frameworks by integrating metrics that measure long-term societal and institutional outcomes.

Advocacy efforts should prioritize demonstrating ECA's vital role in addressing global challenges. Collaborations with international development organizations and platforms, such as UNESCO and the World Bank, can showcase ECA's contributions to economic resilience, public health, and climate action. Such partnerships would amplify the visibility of ECA's systemic outcomes and reinforce their relevance in addressing shared global priorities. By emphasizing these transformative contributions, ECA programs can cement their position as essential tools for tackling complex global challenges and advancing U.S. diplomatic and developmental objectives.

2. Strategic Integration of Exchange Programs into Global Development Frameworks

International exchange programs, including those facilitated through ECA, play a central role in advancing global development objectives by developing individual capabilities and driving societal transformation. While distinct from Official Development Assistance (ODA) programs administered by USAID, ECA's exchange initiatives serve as a complementary mechanism, supporting alumni-driven systemic change. This alignment presents a strategic opportunity to integrate ECA programs more closely with broader U.S. development priorities.

Quantitative findings from this study indicate that countries with higher concentrations of ECA alumni experience stronger outcomes on key development indicators, including economic performance, health, justice and freedoms, gender equity, and educational enrolment rates. Alumni-driven systemic changes—rooted in enhanced agency, skills development, transnational networks, and intercultural understanding—further underscore the alignment of ECA programs with global development goals. Importantly, mandatory return policies embedded in ECA programs ensure that the knowledge and resources gained abroad are reinvested into local contexts, mitigating concerns about brain drain.

Specific recommendations for strategically strengthening the outcomes of ECA scholarships include:

- Align exchange programs with local development strategies to maximize alumni contributions to systemic capacity-building efforts across diverse sectors, tailored to the unique priorities of each context.
- Explore interagency partnerships between ECA and USAID to harmonize mobility programs with U.S. ODA objectives, ensuring that investments in ECA exchanges support long-term systemic transformation.
- Expand support for alumni-led initiatives that address critical societal challenges, providing resources to scale their outcomes in home countries.

Strategically integrating ECA's exchange programs into global development frameworks enhances their capacity to drive systemic change while reinforcing the U.S.'s leadership in international development. This approach ensures that investments in international exchanges deliver sustainable benefits by addressing both immediate needs and long-term challenges in recipient countries.

3. Agency Development for Systemic Transformation

The development of individual agency is fundamental to returnees' ability to contribute to systemic change. This study conceptualizes agency as a dynamic process encompassing discernment, deliberation, and dedication—essential capacities that enable participants to navigate and influence complex systems. Discernment involves critically evaluating circumstances and identifying priorities; deliberation entails formulating actionable strategies; and dedication reflects sustained commitment to pursuing these strategies despite obstacles. Findings demonstrate that international mobility experiences significantly cultivate these dimensions, equipping participants to assess entrenched systems critically, navigate socio-political complexities, and design locally relevant solutions.

Building on these strengths, the following recommendations are proposed:

- Expand reflexive learning opportunities. Scale structured initiatives such as coursework integrating global and local perspectives, cross-sector dialogues, and mentorship programs focusing on reflexive practice. Activities like academic and professional placements that encourage participants to explore context-specific solutions should be broadened across ECA programs. These efforts will deepen participants' understanding of systemic challenges and support innovative approaches to address them.
- Broaden direct community engagement in both the U.S. and participants' home countries. Many participants reported that engaging with U.S. communities and institutions broadened their perspectives and refined their problem-solving skills. Expanding structured internships, community-based projects, and professional placements in the U.S. will provide hands-on experiences addressing systemic issues. Complementary opportunities to apply these lessons in home contexts—such as designing and piloting locally relevant projects inspired by U.S. experiences—should be supported with mentorship and peer feedback to ensure practical applicability.
- Sustain agency development through alumni engagement. While ECA programs already nurture robust networks, scaling alumni-driven mentoring and capacity-building initiatives can further reinforce participants' agency. Alumni with expertise in specific fields could mentor participants during and after mobility, offering guidance on navigating structural barriers and advancing systemic change. Supporting thematic alumni networks focused on addressing

global challenges will provide platforms for collaboration and knowledge-sharing across borders.

By enhancing reflexive learning, strengthening community engagements, and leveraging alumni networks, ECA programs can empower participants to address entrenched challenges and drive societal transformation. These initiatives will not only strengthen individual agency but also contribute to broader systemic change, aligning with global development priorities and U.S. diplomatic objectives.

4. Addressing Structural Obstacles and Leveraging Systemic Enablers

ECA alumni interviewed for this study face significant structural obstacles, including gender discrimination, cultural conservatism and resistance to change, and bureaucratic inefficiencies. These obstacles hinder their efforts to implement transformative projects. However, systemic enablers, such as community support, access to financial resources, and political readiness, play a critical role in facilitating their contributions.

Based on these insights, the following recommendations are proposed:

- Introduce targeted initiatives to combat gender discrimination. Expand funding opportunities for projects specifically addressing gender equality, such as mentorship programs for women leaders, technical training in male-dominated fields, and advocacy campaigns challenging discriminatory norms. These initiatives should include measurable goals, such as increasing the participation of women alumni in leadership roles by a set percentage within five years. Additionally, ECA could partner with local women's organizations to provide alumni with cultural and regional expertise tailored to overcoming these obstacles.
- Provide training to alumni on navigating cultural conservatism and resistance to change. Develop region-specific workshops and online training modules that equip alumni with tools to address societal pushback. These could include conflict resolution techniques, strategies for building coalitions, and case studies of successful projects implemented in culturally conservative environments. ECA could also facilitate mentorship pairings between alumni who have faced similar challenges, creating a network of peer support and shared learning.
- Streamline bureaucratic processes by establishing "rapid response" frameworks.
  Create a dedicated support network of experienced alumni who have successfully navigated similar challenges. This team could provide alumni with expedited access to legal or administrative advice, share best practices for overcoming regulatory hurdles, and offer mentorship tailored to specific local contexts.
- Strengthen partnerships with local communities, NGOs, and grassroots organizations.
  Facilitate connections between alumni and community-based organizations to enhance project implementation. This could include establishing formal partnerships with local NGOs to provide logistical support, offering small grants to grassroots groups that align with alumni initiatives, and creating regional hubs where alumni can collaborate with local stakeholders. These partnerships should be rooted in mutual trust and focus on empowering communities to take an active role in shaping and sustaining alumni-led projects.
- Increase access to sustainable financial resources by developing regional funding ecosystems. Collaborate with regional and local financial institutions to create funding mechanisms tailored to alumni needs, such as microfinance schemes, crowd-funding platforms, or public-private investment initiatives. ECA could also negotiate long-term funding partnerships with philanthropic organizations or private sector donors to ensure alumni have access to stable,

localized financial support. Training sessions on grant writing and financial management could further empower alumni to secure and effectively utilize funding.

- To harness the enabling role of political readiness, ECA programs could facilitate alumni engagement with policymakers by offering targeted mentorship, forums, and resources for aligning initiatives with government priorities. Programs could also include training in coalition-building, strategies for developing trust, and demonstrating tangible benefits to stakeholders. These measures would position alumni to secure endorsements, navigate power dynamics, and drive systemic reforms in collaboration with political leaders and institutions.

By addressing these obstacles and leveraging enablers, ECA programs can enhance the systemic contributions of their alumni, ensuring that they are better equipped to overcome challenges and create lasting change in their communities and beyond.

5.Advancing Equity and Accessibility

To address the inequities highlighted in this study, strategies should prioritize increasing the number of exchanges funded per capita in low-income countries, where participation remains disproportionately low compared to high-income counterparts. Tailored outreach initiatives and targeted support for underrepresented groups globally, including women from patriarchal societies who face compounded cultural and gendered constraints, could further enhance inclusivity. By reallocating resources more equitably across income groups and systematically addressing structural barriers, mobility programs can enable a more diverse range of participants to contribute to societal development.

6. Commitment to Evidence-Based Evaluation

To sustain their relevance and maximize developmental outcomes, ECA programs require robust monitoring and evaluation frameworks. This study underscores the importance of tracking alumni trajectories to document systemic outcomes, such as institutional reforms, policy innovations, and community transformations.

The following recommendations are proposed:

- Leverage digital platforms to facilitate alumni reporting and streamline feedback loops between program administrators and alumni, strengthening a culture of transparency and ongoing refinement.
- Clearly define metrics such as changes in governance structures, improvements in community resilience, and the establishment of sustainable local enterprises to ensure alignment with both global and local development goals.
- Establish institutional collaborations. Partnering with universities, think tanks, and local research organizations can strengthen the analytical capacity of evaluation frameworks, enabling more nuanced interpretations of alumni contributions. Collaborative efforts could include co-designed studies to assess long-term outcomes, shared access to regional data, and joint efforts to contextualize findings within specific socio-political environments.

By integrating these strategies, ECA programs can demonstrate their systemic outcomes, strengthening their role as vehicles for systemic transformation.

10.2. Potential Areas of Further Research

1. Dual Contributions of Alumni: Contributions to Host Communities and Home Nations

This study highlights how ECA-supported alumni drive systemic development in their home countries. However, further research is needed to examine the dual contributions of alumni who relocate to third countries, focusing on their contributions to both home and host communities. Key areas for exploration include how alumni contribute to local development in host countries, engaging with industries, driving innovation, and addressing societal challenges through transnational collaborations. Simultaneously, research should assess how alumni maintain ties to their home nations, leveraging diaspora networks, remittances, and transnational knowledge for systemic reforms. Such a study would clarify how mobility programs enable alumni to create transnational societal contributions, offering insights to better support sustainable global impact while addressing concerns about sustainable reintegration into home and host contexts.

2. Hybrid and Virtual Mobility

This study highlighted the transformative potential of in-person exchanges but did not address emerging models of hybrid and virtual mobility. Future research should investigate the comparative effects of these newer modalities on individual development and societal contributions. A critical question is whether hybrid and virtual exchanges effectively replicate the immersive experiences that facilitate intercultural understanding, trust-building, and transformative learning. Additionally, studies could evaluate how these models address sustainability challenges by reducing environmental implications and logistical barriers associated with traditional mobility. Accessibility is another key area for investigation, focusing on whether virtual programs enable greater participation among underrepresented groups, such as those from rural areas or low-income backgrounds, and how these programs reshape the inclusivity of mobility opportunities.

3. Equity in Access to Mobility Programs

The existing literature highlights that ensuring equity in access to mobility programs remains a challenge. Women, individuals from rural areas, and those from low-income backgrounds are often underrepresented, which limits the diversity of perspectives and talents these programs can mobilize for systemic change. When these groups are underrepresented, the ability to address a broader range of societal challenges is reduced. Future research should examine how structural and cultural obstacles intersect to limit access for certain groups. An inclusive approach ensures participants reflect their communities' diversity, contributing varied experiences and innovative solutions to complex issues. Addressing these disparities unlocks untapped potential, empowering underrepresented groups to drive systemic change and ensuring these initiatives benefit societies more deeply. These strategies would ultimately expand the transformative potential of mobility programs and amplify their societal outcomes.

4. Host-Country Contexts and Systemic Outcomes

This study highlights the broader societal outcomes of mobility programs globally, with quantitative findings revealing notable differences in development outcomes associated with host-country contexts. Higher proportions of students studying in the U.S. correlate with greater improvements in specific development indicators, such as women's opportunities, justice and freedoms, population health, and educational access, compared to those studying in China or Russia. These findings highlight the importance of understanding how host-country environments influence alumni outcomes. As Chankseliani (2022) notes, during the Cold War, both the USSR and the U.S. recognized the strategic importance of investing in international mobility, albeit with contrasting goals and approaches. Today, host-country contexts continue to play a central role in shaping alumni contributions, with the U.S., China, and Russia representing markedly different socio-political and academic environments. Exploring how these contemporary contexts shape the acquisition of knowledge, skills, agency, social

relations, civic understanding, and intercultural competence during mobility can provide deeper insights into the quantitative differences observed. Identifying specific factors that enable U.S.-based programs to achieve stronger systemic outcomes (as indicated in the quantitative analysis of this study) would allow ECA to enhance its strategic positioning and implement evidence-based program improvements.

5. Structural Obstacles and Systemic Enablers

Building on the policy recommendation to combat gender discrimination, future research could assess the effectiveness of targeted interventions, such as mentorship programs, technical training, and advocacy campaigns. Comparative studies could examine the outcomes of these initiatives on women alumni's leadership trajectories and societal contributions across various cultural and regional contexts. For example, longitudinal studies might evaluate whether such interventions enhance women's capacity to navigate male-dominated industries and drive systemic reforms. This research would provide evidence-based recommendations for best practices in empowering women alumni to assume leadership roles and contribute to societal changes.

To support the policy recommendation for training alumni on navigating cultural conservatism, research could evaluate the tools and techniques most effective in addressing societal pushback. Case studies of alumni-led initiatives in conservative regions could identify successful approaches to coalition-building, conflict resolution, and stakeholder engagement. Experimental designs might test the impact of workshops and mentorship programs on alumni's ability to implement transformative projects in culturally resistant settings. These insights would inform the design of adaptable and scalable training models for future cohorts.

Research could pilot and evaluate the proposed "rapid response" frameworks to assess their impact on reducing bureaucratic hurdles faced by alumni. Studies could analyze the outcomes of dedicated alumni support networks in navigating legal, administrative, and regulatory challenges. For example, surveys and interviews with alumni who benefited from such frameworks could measure their effectiveness in enabling systemic change. This research would refine the design and implementation of responsive support mechanisms for alumni.

Future research could investigate the dynamics of alumni partnerships with local communities, NGOs, and grassroots organizations. Comparative studies might examine how these collaborations vary across contexts and assess their role in amplifying alumni contributions to systemic change. Research could also evaluate the sustainability of such partnerships, focusing on factors such as mutual trust, resource sharing, and long-term alignment of goals. These findings would guide the development of more effective and equitable models for community engagement.

Research could analyze the feasibility and effects of creating regional funding ecosystems tailored to alumni needs. Case studies could document the outcomes of alumni projects supported by innovative funding mechanisms, such as microfinance schemes, crowdfunding platforms, or public-private partnerships. Experimental designs might test the effectiveness of grant writing and financial management training in empowering alumni to secure and utilize funding. These studies would provide actionable insights into the enablers of financial sustainability, informing the design of funding mechanisms that maximize alumni contributions to systemic change.

To strengthen the role of political readiness in driving alumni-led systemic change, future research could assess the effectiveness of initiatives that facilitate engagement between alumni and policymakers. Comparative studies might evaluate how mentorship, forums, and strategic training in trust-building and demonstrating tangible benefits empower alumni to secure endorsements and navigate power dynamics. Research could also investigate how alumni collaborations with political

leaders influence the adoption of reforms, providing insights to refine support to alumni in aligning initiatives with governmental strategies.

Thus, Chapter 10 has outlined actionable policy and research recommendations to enhance the systemic outcomes of ECA programs. The policy recommendations emphasize positioning ECA initiatives as drivers of systemic transformation, strategically integrating exchange programs into global development frameworks, strengthening individual agency, and addressing structural barriers while building on systemic enablers. Simultaneously, the identified research priorities, including exploring how alumni contribute to both their home and third-country contexts, the potential of hybrid and virtual mobility, and the influence of host-country environments, provide a roadmap for advancing evidence-based program improvements. Together, these insights reaffirm the essential role of ECA programs in supporting sustainable global development, offering pathways to enhance their effectiveness, inclusivity, and responsiveness to evolving societal needs.

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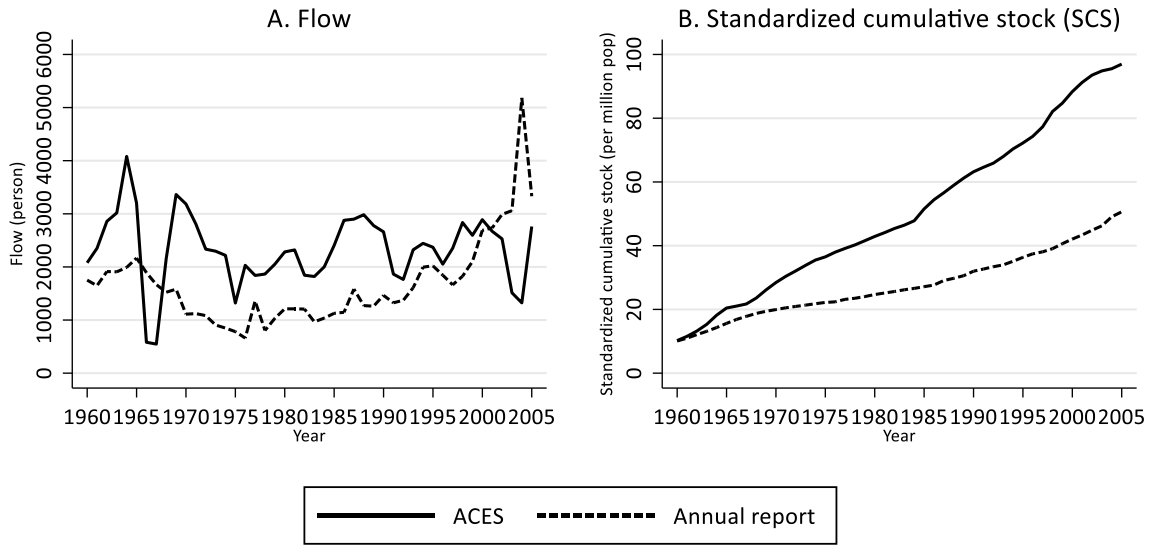
Appendices

Appendix 1. Robustness Checks

Fulbright Foreign Student Exchange in the ACES and Annual Report

The SM data for the Fulbright exchange were also sourced from the annual reports of the U.S. Department of State and the Board of Foreign Scholarships (J. William Fulbright Foreign Scholarship Board). The annual reports overlap with the ACES over the period of 1960-2005. Panel A of Figure 17 presents the trends of the two flows of the SM of the Fulbright foreign student exchange in the annual reports and in the ACES dataset between 1960 and 2005. These two sources use slightly different time units - the calendar year for ACES and the fiscal or academic year for the annual report. The number of participants in the Fulbright exchange during this period is quite different in these two sources. The flow derived from the ACES is generally higher than the flow from the annual reports.

Figure 17. Flow and SCS of SM from the ACES and the Annual Report



The data from the Fulbright annual report were chosen for the analyses for this period as the published data from the funding agency were considered to be relatively more trustworthy. Therefore, the SM data from the Fulbright annual reports were used to substitute the Fulbright foreign student exchange in the ACES from 1960 to 2005.

Panel B of Figure 17 shows that the global means of the two versions of the standardized cumulative stock (SCS) measures of SM have similar trends with a strong correlation (r=.994). The same regression models were run with the original version of the ACES SM measure, and the results were similar to those presented in the report.

Confounders

Several confounding factors of a country may have an impact on both international exchanges and the development of home country, including the U.S. international aid, international trade with the U.S., and foreign direct investment (FDI) from the U.S. Of these possible confounders, U.S. aid is the most promising factor in the analysis. The aid from the U.S. depends on diplomatic relations between the U.S. and other countries, and can thus affect the ECA-sponsored exchanges. Additionally, international aid is targeted to promote the development of the recipient countries, which could lead to development.

To test if the flow of U.S. international aid, measured with the GreenBook, plays a role as a confounding factor, we conducted bivariate correlations between U.S. international aid and each of the five development indicators, as well as between U.S. international aid and four ECA-sponsored mobility variables. The analysis showed that the correlations between U.S. international aid and the development indicators ranged from -.069 to -.002 and those between U.S. international aid and ECA-sponsored mobility variables ranged from -.025 to .018. Furthermore, the results of the regression analysis that took the U.S. international aid variable into account were similar to those in Figure 7 - Figure 11 of the report. This exercise demonstrates that U.S. international aid is not a confounding factor in this analysis.

Unfortunately, the limited temporal and cross-national coverage of the other potential confounders prevents us from testing them. Given the challenge of unobserved confounding factors, the findings of the present study provide evidence consistent with the relationship between international exchanges and development, but do not definitively demonstrate a causal relationship.

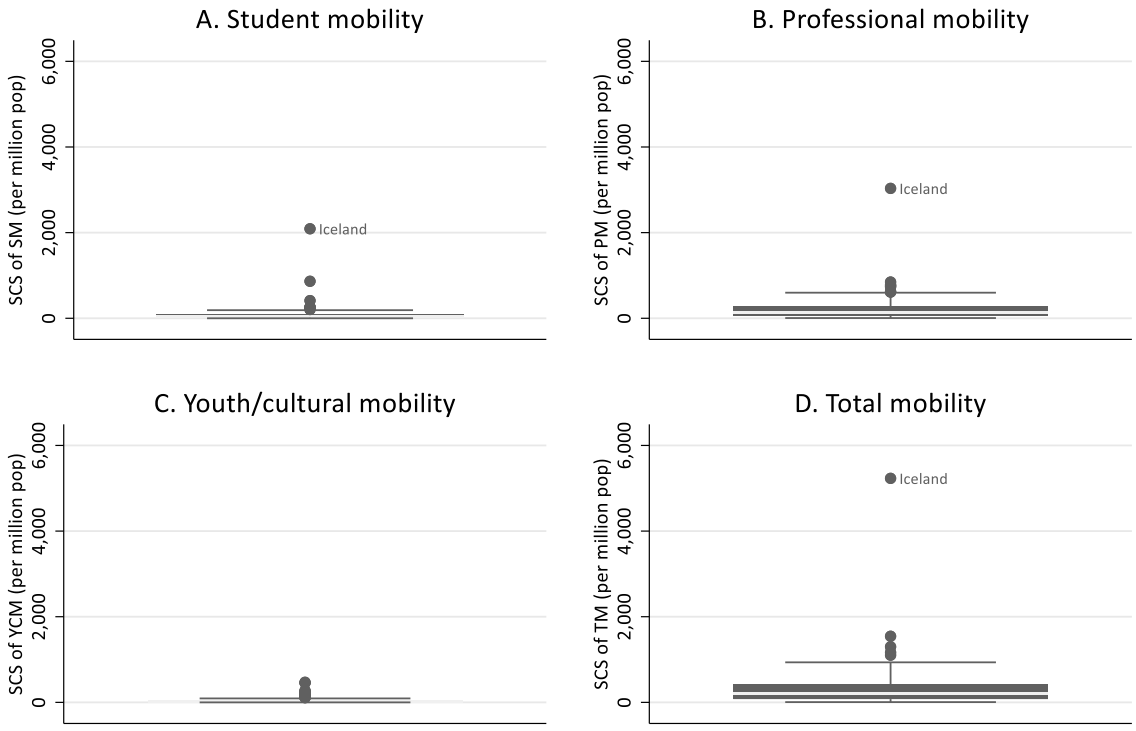
Appendix 2. Data Biographies (Quantitative)

Title	Dataset/ Report	Publisher/ Distributor	Owner	Publication Date	Last Updated Date	Date Accessed	Country & Territory Coverage	Year Coverage	Who	When	How	URL Link
Alumni Contact Engagement System	Report	Monitoring, Evaluation, Learning and Innovation Unit (MELI)	Monitoring, Evaluation, Learning and Innovation Unit (MELI)	N/A	N/A	N/A	223	1940-2024	Monitoring, Evaluation, Learning and Innovation Unit (MELI)	N/A	The dataset is generated from ECA's Alumni Contact Engagement System	N/A
Annual Report (The titles of the reports vary by year)	Report	The Bureau of Educational and Cultural Affairs of the U.S. Department of State	The Bureau of Educational and Cultural Affairs of the U.S. Department of State	1968-1974	N/A	N/A	Vary by year	1967-1972	The Bureau of Educational and Cultural Affairs of the U.S. Department of State	1968-1974	The data are obtained each year from the statistics of the grantees in the Department's exchange programs.	N/A
Annual Report (The titles of the reports vary by year)	Report	Board of Foreign Scholarships (J. William Fulbright Foreign Scholarship Board)	Board of Foreign Scholarships (J. William Fulbright Foreign Scholarship Board)	1966, 1974-2006	N/A	N/A	Vary by year	1966, 1973-2005	Board of Foreign Scholarships (J. William Fulbright Foreign Scholarship Board)	1966, 1974-2006	The data are obtained each year from the statistics of the grantees in the Fulbright educational exchange programs.	N/A

Brief Statistics on International Students Studying in China	Report	International Cooperation and Exchange Department of Ministry of Education of the People's Republic of China	International Cooperation and Exchange Department of Ministry of Education of the People's Republic of China	N/A	N/A	N/A	220	1999-2018	Institutions of higher education confirmed by the education department of each province, autonomous region, and municipality directly under the Central Government	N/A	The data are compiled on the basis of statistical data submitted by the institutions of higher education.	N/A
Educational and Cultural Diplomacy	Report	The U.S. Department of State	The U.S. Department of State	1961-1966	N/A	N/A	Vary by year	1949-1965	The U.S. Department of State	1961-1966	The data are obtained each year from the statistics of the grantees in the Department's exchange programs.	N/A
UN World Population Prospects - 2022 revision	Dataset	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat	Jul-11-2022	Jul-11-2022	Dec-02-2022	237	1950-2100	Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat	N/A	The data are obtained from the results of 1,758 national population censuses conducted between 1950 and 2022, as well as information from vital registration systems and from 2,890 nationally representative sample surveys.	https://population.un.org/wpp

UNESCO Institute for Statistics (UIS)	Dataset	UNESCO	UNESCO	Sep-2022	Sep-2022	Dec-06-2022	Vary by variable	Vary by variable	UNESCO Institute for Statistics (UIS)	N/A	The data are collected from a variety of sources of data to produce internationally comparable education indicators, including administrative data, household surveys, learning assessments, financial and expenditure data, and population data. The data for the variables in the analysis are obtained from education statistics in aggregate form from official administrative sources at the national level, using the annual UIS Survey of Formal Education (UIS/ED/C) for UNESCO countries.	http://data.uis.unesco.org
Variety of Democracy (V-Dem) - version 12	Dataset	V-Dem Institute at the University of Gothenburg	V-Dem Institute at the University of Gothenburg	Mar-2022	Mar-2022	Dec-13-2022	202	1789-2021	V-Dem Institute at the University of Gothenburg	N/A	The data are collected from five experts per country-year observation, using a pool of over 3,700 country experts who provide judgment on different concepts and cases.	https://v-dem.net/data/the-v-dem-dataset
World Bank Open Data	Dataset	The World Bank	The World Bank	N/A	N/A	Jan-06-2023	Vary by variable	1960-2021	The World Bank	N/A	The data are collected from World Bank national accounts data and OECD National Accounts data.	https://data.worldbank.org

Appendix 3. Outliers of ECA Mobility Measures in 2015



Appendix 4. Standardized Cumulative Stock of ECA-Sponsored Mobility in 134 Countries

Country	Standardized Cumulative Stock of ECA Mobility in 2015			
	SM	PM	YCM	TM
Sub-Saharan Africa (35)				
Benin	8.42	59.00	6.68	74.09
Botswana	46.85	306.70	15.62	369.17
Burkina Faso	7.32	38.89	2.83	49.04
Burundi	5.41	29.27	.56	35.24
Cabo Verde	3.62	190.16	230.00	423.79
Cameroon	9.13	62.18	4.61	75.91
Central African Republic	2.90	57.89	.41	61.21
Chad	5.23	33.24	2.62	41.09
Congo, Democratic Republic of	1.55	18.70	.46	20.71
Cote d`Ivoire	8.98	66.32	3.39	78.70
Eritrea	10.78	61.08	.00	71.86
Eswatini	95.24	442.71	22.05	560.00
Gabon	9.86	165.15	2.46	177.47
Ghana	13.89	65.39	14.79	94.07
Guinea	5.68	51.78	.69	58.15
Kenya	11.33	46.38	8.73	66.44
Lesotho	25.49	185.51	8.50	219.49
Madagascar	5.15	26.28	.60	32.03
Mali	7.29	55.04	10.99	73.32
Mauritania	21.03	88.95	11.15	121.13
Mauritius	76.56	473.26	11.60	561.42
Mozambique	4.17	23.43	3.39	30.99
Namibia	48.63	206.33	39.87	294.83
Niger	5.66	33.19	2.24	41.09
Nigeria	2.89	24.17	3.55	30.60
Republic of the Congo	14.41	102.88	3.75	121.04
Rwanda	10.22	58.83	4.12	73.18
Senegal	10.59	131.37	16.44	158.40
Seychelles	.00	846.43	.00	846.43

South Africa	15.12	77.13	33.04	125.29
Sudan	2.83	27.95	1.49	32.28
Tanzania	6.28	29.92	7.02	43.22
Togo	15.92	133.14	2.54	151.61
Uganda	9.21	37.65	3.74	50.59
Zimbabwe	11.73	93.68	9.11	114.52
The Near East (15)				
Algeria	6.45	37.88	10.82	55.15
Bahrain	146.09	524.91	138.75	809.75
Egypt	16.78	50.56	9.05	76.39
Iran	2.31	16.52	.57	19.40
Iraq	18.38	55.30	13.48	87.16
Israel	101.40	467.67	73.80	642.88
Jordan	67.83	268.48	65.72	402.03
Kuwait	18.42	126.13	47.84	192.39
Morocco	28.66	86.99	14.04	129.70
Oman	42.46	184.41	22.42	249.30
Palestine	142.49	417.87	144.94	705.30
Qatar	7.87	142.05	21.12	171.04
Saudi Arabia	2.93	50.96	6.20	60.09
Syria	15.57	65.14	4.17	84.87
Tunisia	62.04	207.65	30.89	300.58
East Asia & The Pacific (13)				
Australia	48.78	128.88	3.40	181.06
Cambodia	31.46	33.73	4.80	69.99
China	.38	5.00	.67	6.05
Hong Kong	14.73	121.62	3.38	139.73
Indonesia	13.67	15.30	7.48	36.46
Japan	34.25	60.37	3.06	97.68
Korea (South)	28.30	81.99	10.53	120.82
Laos	41.40	69.84	6.78	118.01
Malaysia	19.99	72.81	22.72	115.52
Mongolia	86.69	193.95	23.61	304.24

New Zealand	222.41	416.50	6.97	645.89
Philippines	20.60	28.79	8.79	58.18
Thailand	20.78	38.10	5.60	64.49
South & Central Asia (12)				
Armenia	232.06	597.17	469.33	1298.55
Azerbaijan	55.76	147.21	140.32	343.29
Bangladesh	2.39	12.10	2.72	17.20
Bhutan	67.27	259.66	8.07	335.00
India	2.54	6.97	.57	10.07
Kazakhstan	36.05	143.19	130.64	309.88
Kyrgyz Republic	67.96	299.75	275.23	642.94
Nepal	17.75	55.09	4.27	77.11
Pakistan	19.89	24.83	5.68	50.41
Sri Lanka	23.72	70.30	4.36	98.38
Tajikistan	27.10	92.68	126.23	246.01
Uzbekistan	18.48	51.12	40.49	110.08
Europe and Eurasia (38)				
Albania	67.65	293.50	86.73	447.88
Austria	232.11	253.86	3.70	489.68
Belarus	32.06	159.47	183.49	375.03
Belgium	124.82	195.05	4.09	323.96
Bulgaria	34.20	257.35	45.70	337.24
Croatia	38.07	278.51	21.39	337.97
Cyprus	863.32	621.59	58.96	1543.87
Czech Republic	23.66	162.20	9.22	195.08
Denmark	261.72	355.42	6.69	623.83
Estonia	85.19	611.57	69.98	766.74
Finland	260.06	511.18	9.67	780.92
France	86.51	115.33	1.79	203.62
Georgia	163.88	547.32	453.44	1164.64
Germany	188.82	164.95	114.84	468.61
Greece	172.12	164.25	11.57	347.93
Hungary	38.40	275.49	48.96	362.85

Ireland	111.45	275.63	152.60	539.68
Italy	52.51	120.45	2.13	175.09
Latvia	66.77	329.83	92.37	488.97
Lithuania	47.24	218.30	65.79	331.34
Luxembourg	100.10	312.61	15.81	428.52
Malta	24.09	781.90	30.66	836.66
Montenegro	93.06	755.56	253.96	1102.58
Netherlands	99.58	179.27	3.40	282.26
Norway	412.88	425.79	5.97	844.64
Poland	20.93	102.95	12.89	136.77
Portugal	90.69	137.57	15.34	243.60
Republic of North Macedonia	47.44	401.34	121.44	570.22
Romania	22.81	138.80	16.38	177.99
Russia	22.67	162.30	145.68	330.65
Serbia	21.81	303.88	142.30	467.98
Slovak Republic	18.80	172.74	30.05	221.59
Slovenia	42.77	380.13	32.68	455.58
Spain	52.16	149.06	1.36	202.58
Sweden	90.26	198.90	2.44	291.59
Switzerland	24.15	57.96	4.35	86.46
Turkey	27.32	53.59	11.79	92.70
Ukraine	48.40	166.75	191.96	407.11
United Kingdom	69.94	186.82	14.75	271.51
The Western Hemisphere (20)				
Argentina	47.58	111.40	6.82	165.80
Brazil	12.15	39.85	3.28	55.28
Canada	11.42	61.04	3.02	75.48
Chile	153.27	142.30	12.14	307.72
Colombia	71.10	66.51	6.15	143.76
Costa Rica	204.48	304.79	39.63	548.90
Cuba	3.26	7.23	.18	10.67
Dominican Republic	65.54	128.68	11.82	206.04
Ecuador	84.53	181.65	23.96	290.14
El Salvador	121.17	280.21	22.31	423.68

Guatemala	46.68	140.24	9.00	195.92
Guyana	112.58	385.41	54.30	552.30
Honduras	78.00	141.91	11.19	231.10
Jamaica	101.99	354.27	48.31	504.57
Mexico	32.17	49.56	7.79	89.52
Nicaragua	112.56	178.29	71.60	362.46
Panama	241.59	334.59	34.62	610.80
Paraguay	68.31	163.65	16.67	248.63
Peru	45.55	85.93	7.16	138.64
Uruguay	166.04	733.51	35.85	935.40

Appendix 5. Variables Used in Quantitative Analysis

Variable	Description	Source	URL
Development Indicators			
Economy	*GDP per capita*: Gross domestic product divided by mid-year population (thousands of 2015 US$)	WB	https://data.worldbank.org/indicator/NY.GDP.PCAP.KD
Gender	*Female gross tertiary enrollment ratio*: the percent of female students enrolled in tertiary education, regardless of age, in the population of the age group entitled to tertiary education	UIS	https://data.worldbank.org/indicator/SE.TER.ENRR.FE
Justice and freedoms	*Liberal democracy index*: the existence of electoral democracy and the extent to which liberal democracy emphasizes the protection of individuals' and minorities' rights against the state and majority	V-Dem	https://v-dem.net/data/the-v-dem-dataset/
Health	*Life expectancy at birth*: the number of years a newborn infant would live	UN WPP	https://population.un.org/wpp
Education	*Gross primary and secondary enrollment ratio*: the percent of students enrolled in primary and secondary education, regardless of age, in the population of the age group entitled to primary and secondary education	UIS	https://data.uis.unesco.org/Index.aspx?themetreeid=1
ECA-sponsored mobility			
Student mobility	The number of ECA alumni who have participated in student exchange programs per 1 million population	ACES, Fulbright	N/A
Professional mobility	The number of ECA alumni who have participated in professional exchange programs per 1 million population	ACES	N/A
Youth/Cultural mobility	The number of ECA alumni who have participated in youth/cultural exchange programs per 1 million population	ACES	N/A
Total mobility	The number of ECA alumni who have participated in student, professional, or youth/cultural exchange programs per 1 million population	ACES, Fulbright	N/A
Control Variables			
Gross tertiary enrollment ratio	The percent of students enrolled in tertiary education, regardless of age, in the population of the age group that corresponds to tertiary education.	UIS	https://data.worldbank.org/indicator/SE.TER.ENRR
International trade (% of GDP)	The sum of exports and imports of goods and services as a percent of GDP	WB	https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS
Time	Year	ACES	N/A

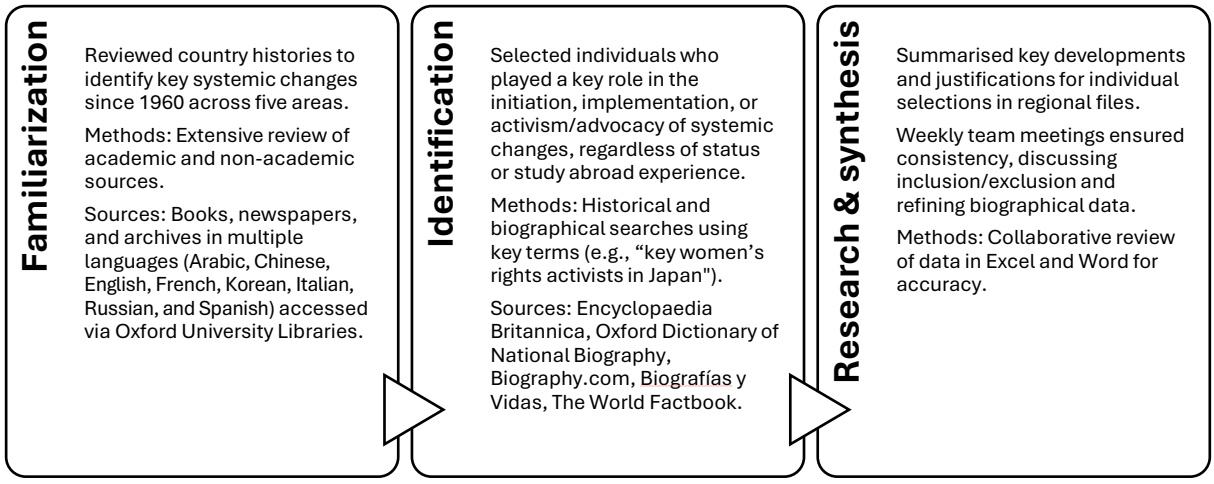
Time^2	Year squared	ACES	N/A
Region			
Sub-Saharan Africa	1=Sub-Saharan Africa, 0=else	ACES	N/A
The Near East	1=The Near East, 0=else	ACES	N/A
East Asia and the Pacific	1=East Asia and The Pacific, 0=else	ACES	N/A
South and Central Asia	1=South and Central Asia, 0=else	ACES	N/A
Europe and Eurasia	1=Europe and Eurasia, 0=else	ACES	N/A
The Western Hemisphere	1=The Western Hemisphere, 0=else	ACES	N/A

Note: ACES=Alumni Contact Engagement System; COSM=Brief Statistics on International Students Studying in China; Fulbright=Annual Reports of the U.S. Department of State and the Board of Foreign Scholarships (J. William Fulbright Foreign Scholarship Board); UIS=UNESCO Institute for Statistics; UN WPP=United Nations World Population Prospects; WB=World Bank Open Data.

Appendix 6. List of Countries Included in the Study, by Region and HDI

AF		EAP		EUR		NEA		SCA		WHA	
Countries	HDI	Countries	HDI	Countries	HDI	Countries	HDI	Countries	HDI	Countries	HDI
Côte d'Ivoire	Low	Burma	Low	Georgia	Medium	Morocco	Low	Afghanistan	Low	El Salvador	Low
Ethiopia	Low	Cambodia	Low	Moldova	Medium	Yemen	Low	Bangladesh	Low	Nicaragua	Low
Ghana	Low	China	Low	Turkey	Medium	Iraq	Medium	Pakistan	Low	Brazil	Medium
Kenya	Low	Indonesia	Low	Estonia	High	Jordan	Medium	India	Low	Colombia	Medium
Liberia	Low	Vietnam	Low	Hungary	High	Palestinian Territories	Medium	Nepal	Low	Costa Rica	Medium
Mali	Low	Fiji	Medium	Poland	High	Saudi Arabia	Medium	Kazakhstan	Medium	Dominican Republic	Medium
Mozambique	Low	Malaysia	Medium	Russia	high	Tunisia	Medium	Kyrgyzstan	Medium	Ecuador	Medium
Niger	Low	Philippines	Medium	Ukraine	High	Lebanon	High	Sri Lanka	Medium	Mexico	Medium
Nigeria	Low	Thailand	Medium	United Kingdom	High	Libya	High	Tajikistan	Medium	Panama	Medium
Senegal	Low	Singapore	High	Denmark	Very High	Qatar	High	Uzbekistan	Medium	Peru	Medium
Tanzania	Low	South Korea	High	Germany	Very High	United Arab Emirates	High			Argentina	High
South Africa	Medium	Japan	Very high	Netherlands	Very High	Israel	Very high			Chile	High

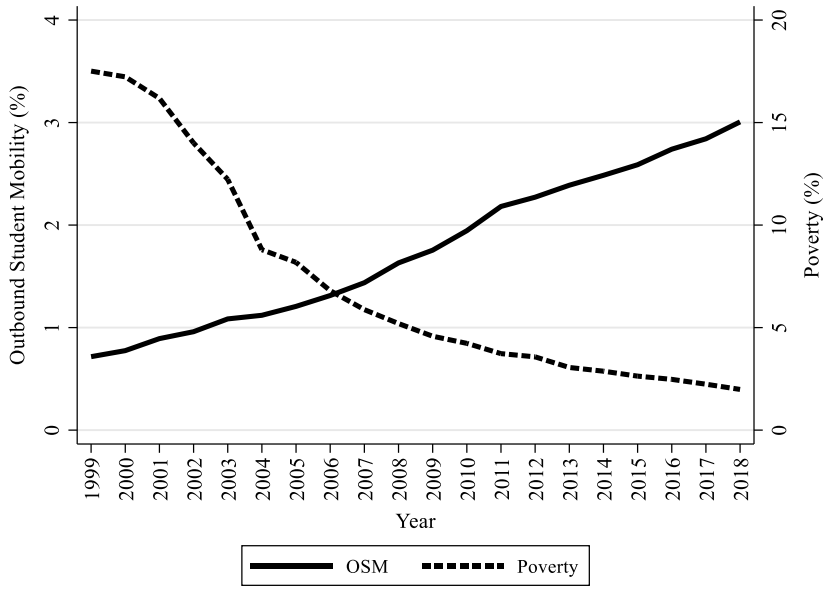
Appendix 7. Selection and Inclusion Process for Biographical Profiles



Appendix 8. International Student Mobility and Poverty Reduction

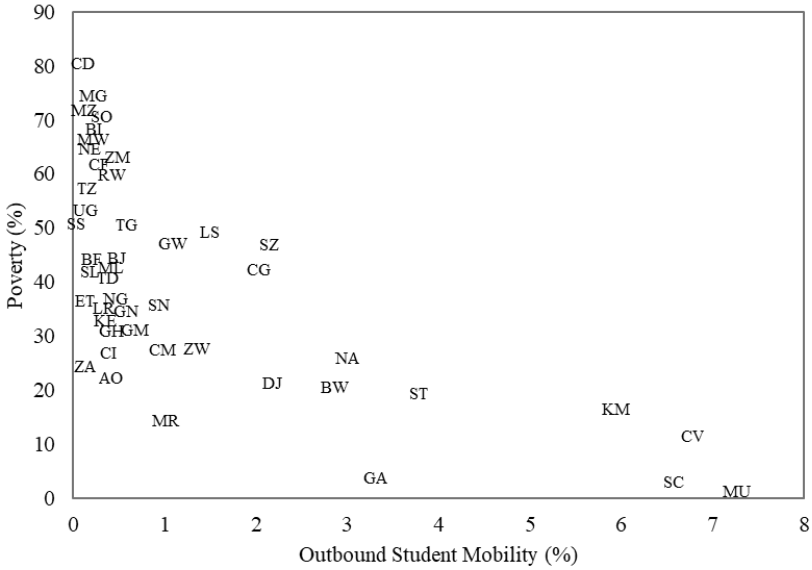
As part of this project, we examined the impact of general SM—which includes both self-funded and students on poverty reduction in students' home countries, specifically focusing on low- and middle-income nations. In the sample of 43 countries, outbound student mobility, which is the average percentage of the tertiary education-age population studying abroad, rose from 0.7 percent in 1999 to 3 percent in 2018 (Figure 18). Over the same period, the mean poverty rate (population living on less than $2.15 per day) decreased from 17.5 percent to 2 percent. These trends highlight a potential correlation between increased outbound student mobility and reduced poverty rates in student countries of origin.

Figure 18. Outbound Student Mobility and Poverty (N=43 Countries)



To analyze the connection between student mobility and poverty reduction in their home countries, this study used dynamic panel models over 1999–2018 for 43 low- and middle-income countries. We found that while the immediate effect of student mobility on reducing extreme poverty is not significant, its long-term association (over 15 years) is impactful. These findings underscore the role of international higher education in sustainable development, suggesting a systemic, long-term effect on poverty alleviation. Furthermore, a strong negative correlation exists between mean outbound student mobility and poverty level in 46 African countries (excluded from the analysis due to data limitations), reinforcing the potential of international education in poverty reduction strategies (Figure *19*).

Figure 19. *Mean Outbound Student Mobility and Poverty in African Countries between 1999 and 2018 (r=-0.677, N=46 Countries)*



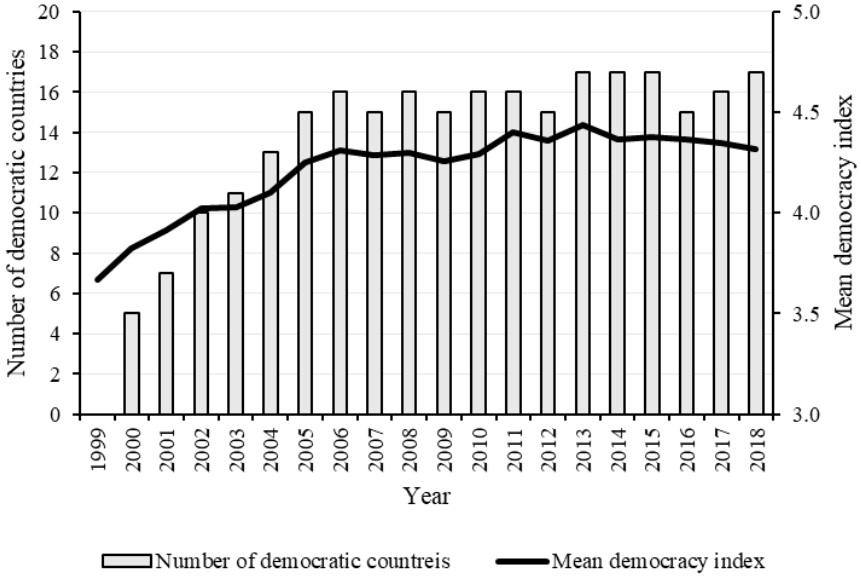
For full details, see the published article in the *International Journal of Educational Research* (Kwak & Chankseliani, 2024).

Appendix 9. International Student Mobility and Democratization in Authoritarian Countries

An ongoing Oxford study explores the connection between international student mobility and democratization in authoritarian countries. Students from authoritarian regimes studying in democratic nations are exposed to different political and social environments, which can profoundly influence their home countries upon their return. However, the impact of these experiences varies significantly depending on the political context of the host countries.

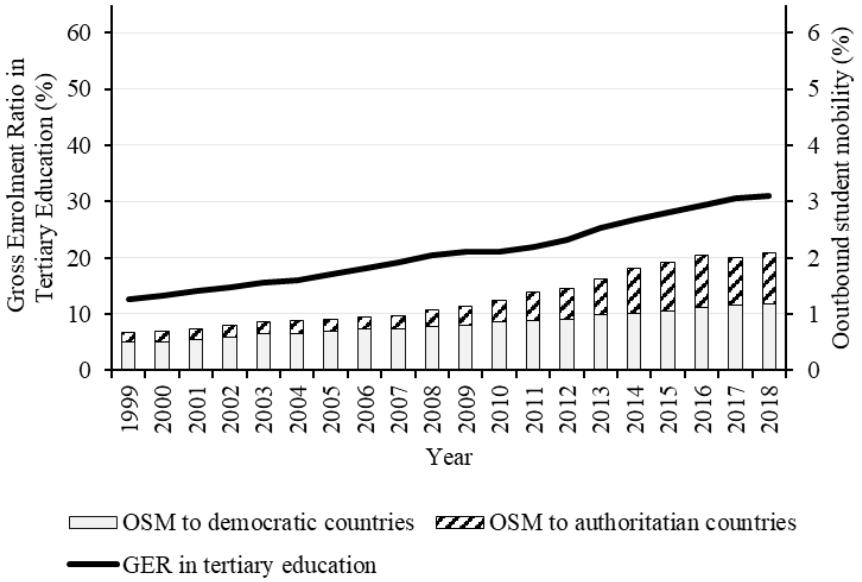
Employing a composite measure of democracy derived from Freedom House Index and Polity Index, 84 authoritarian countries were selected based on their 1999 democracy levels (scoring below the threshold of 7.0 on the democracy index). These countries experienced notable democratization through the mid-2000s, with 16 countries exceeding the democracy threshold by 2006 (Figure *20*). While progress fluctuated and stagnated in subsequent years, by 2018, 17 countries exceeded the democracy threshold.

Figure 20. Democratization within 84 Authoritarian Countries from 1999 to 2018



Among the 84 authoritarian countries, the mean gross enrollment ratio in tertiary education increased from 12.6 percent in 1999 to 31.1 percent in 2018 (Figure 21). Similarly, the percentage of students studying abroad grew from 0.7 percent to 2.1 percent during this period. Notably, the proportion of student mobility to authoritarian countries increased from 25 percent to 44 percent of all outbound students.

Figure 21. Domestic and International Educational Expansion in 84 Authoritarian Countries from 1999 to 2018



Through dynamic panel regression on data from 1999 to 2018, the analysis shows that international student mobility, especially to democratic destinations, contributes to democratization in authoritarian countries. In contrast, higher education within authoritarian regimes tends to uphold existing political systems, limiting opportunities for democratic engagement. These results highlight the importance of the political context of destination countries in shaping students' contributions to democratic progress upon their return.

Despite international education's potential to support democracy, several factors can limit its impact. In China, despite significant expansion in higher education, with the Gross Enrolment Ratio soaring from 6.39% in 1999 to 50.6% in 2018, and outbound student mobility increasing from 0.12% to 1.10%, the democracy index has stagnated at 1.41. Several factors contribute to this limited impact of mobility on democratization in China, including the relatively low percentage of students studying abroad, the initial low level of democratic structures, stringent political control upon their return, and the concentration of students in fields less associated with political activism, such as business/management and engineering (Open Doors, 2023). These factors may restrict returnees' ability to drive broader societal and political changes towards democracy.

This study underscores the critical role of strategically supporting international educational exchanges and promoting democratic values within domestic higher education systems to advance democratization.