Volume 13 (2025), pp. 1-20
American Journal of STEM Education: Issues and Perspectives
Star Scholars Press
https://doi.org/10.32674/mm8enm20

Leveraging Remittances for STEM Education: A Capability Approach to Development in the Global South

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ABSTRACT

Income disparities between developed and developing countries hinder global progress, while traditional funding sources like foreign aid and direct investment remain unreliable. This paper proposes a remittance-enhanced development model, grounded in the capability approach, to strengthen higher education in STEM fields. By investing remittances in tertiary education infrastructure and faculty training, developing countries can build human capital vital for innovation and long-term resilience. The model emphasizes aligning remittances-supported initiatives with national STEM priorities, particularly in remittance-dependent regions. This approach offers a sustainable, community-driven strategy for addressing inequality and fostering inclusive development by empowering individuals through education. This paper concludes that remittances are repositioned as a transformative tool for advancing STEM education, preparing the Global South for a knowledge-based future.

Keywords: capability approach, foreign aid, foreign direct investment, income inequality, international development, remittance-enhanced model, STEM education

INTRODUCTION

Over the years, scholars have proposed diverse theories to explain economic development. Among the most influential are modernization theory, dependency theory, the basic needs approach, and the capability approach. Modernization theory, originating in the 1950s, emphasized the adoption of Western technology and values, suggesting that foreign aid and investment could drive growth in underdeveloped societies (Rostow, 1959). In contrast, dependency theory, which gained prominence in the 1970s, critiqued this view by arguing that such flows perpetuate structural inequalities, with wealthier "core" nations exploiting "peripheral" ones (Frank, 1974). While this lens exposed the consequences of global economic imbalance, it underplayed internal mechanisms of change. The basic needs approach of the late 1970s shifted focus inward, underscoring the importance of access to food, healthcare, and education (ILO, 1976). Though empowering at the individual level, it struggled to address entrenched institutional limitations.

Emerging in the early 1990s, the capability approach, championed by Sen (1999) and others (Nussbaum, 1997), offers a broader conceptualization of development as the expansion of individual freedoms—such as the ability to live a healthy life, to be educated, and to earn a livelihood of one's choosing. It shifted attention from mere economic growth to human well-being. Yet, despite its strengths, the capability approach does not adequately address the *practical challenge* of financing capability expansion—especially in countries where state capacity is weak and external funding (such as foreign aid and foreign direct investment) often reflects donor interests or profit motives rather than local development needs.

One underappreciated but increasingly pivotal source of development finance is remittance income. For many developing nations, remittances have become a critical and consistent source of foreign capital. In 2024 alone, remittances to low- and middle-income countries reached $685 billion, up from $30 billion in 1990, $80 billion in 2000, and $530 billion by 2020 (World Bank, 2024). These flows often go directly to households, bypassing bureaucratic inefficiencies and providing immediate support for consumption, savings, and—importantly—investment in education (Askarov & Doucouliagos, 2020; Naseem, 2023).

This paper posits that remittances can play a vital role in capability enhancement, particularly through investment in science, technology, engineering, and mathematics (STEM) education, which is central to economic transformation and sustainable development. In many remittance-dependent countries, families are using remitted funds not only for basic needs but also to educate children in technical and scientific fields (Amega, 2018). This form of grassroots investment builds human capital, creates employment opportunities, and promotes

innovation—thereby strengthening national capabilities from the bottom up (Barkat et al., 2024).

While the capability approach rightly emphasizes freedom and choice, there are limited scholarly studies on how remittances can facilitate access to quality education, particularly in STEM disciplines that are vital for enabling individuals to shape their economic futures and contribute to broader societal development (Askarov & Doucouliagos, 2020; Reinert, 2023; Sen, 1999). Moreover, remittance-funded STEM education enhances a country's absorptive capacity for technology, improves productivity, and fosters long-term economic stability (Naseem, 2023). These benefits are especially vital for smaller or less-developed economies that lack robust public infrastructure or access to competitive global markets. In this paper, we have introduced a remittance-enhanced capability model to fill this conceptual gap. The model integrates remittance inflows into the framework of capability expansion, with a special focus on STEM education as a vehicle for economic empowerment and innovation-led growth.

The paper is structured as follows: Section Two reviews existing development theories and critiques their limitations in addressing contemporary sources of capital and capability-building. Section Three explores the relationship between foreign capital—including foreign aid, foreign direct investment (FDI), and remittances—and income distribution. Section Four presents a new model of remittance-induced capability expansion, emphasizing STEM education in remittance-dependent countries. The final section summarizes key contributions, reflects the model's limitations, and outlines future research directions.

REVISITING DEVELOPMENT THEORIES: ARE THEY STILL RELEVANT?

Development theories have long provided conceptual frameworks to understand the complex trajectories of economic and social transformation (Miller, 2022). Since the post–World War II era, paradigms such as modernization theory, dependency theory, the basic needs approach, and the capability approach have shaped global development discourse (Frank, 1974; Gessi, 2024; Inkeles, 1969; ILO, 1976; Rostow, 1959; Sen, 1999). However, the contemporary global landscape—characterized by rapid technological innovation, transnational migration, climate change, and rising inequality—demands critically reexamining these theories. While each offers important insights, they often fall short in accounting for modern development's dynamic and interdisciplinary dimensions, particularly the evolving role of STEM education and the growing impact of remittance economies (Minto-Coy & Chrysostome, 2019; Sharma, 2019).

Modernization Theory and Its Technological Myopia

Modernization theory, which gained prominence in the late 1940s and 1950s, posits a linear model of progress whereby societies evolve from traditional to modern industrialized states (Bernstein, 1971; Kishan, 2023; Rostow, 1959). Influenced by the success of the Marshall Plan and Cold War politics, this model emphasizes economic growth, industrialization, technological adoption, and the internalization of Western values as keys to development (Kishan, 2023; Rostow, 1959).

Despite highlighting the importance of technological advancement, the theory underplays the role of education systems—especially STEM education—in enabling such transformation. It also assumes that non-Western countries must emulate the developmental paths of Western nations, thereby ignoring socio-cultural diversity and local innovation ecosystems (Kyianytsia, 2021). In an era where digital literacy, artificial intelligence, green technologies, and biomedical innovation are central to sustainable development, a theory that treats technology as a byproduct of economic growth rather than a foundational driver appears increasingly outdated.

Dependency Theory and the Role of Global Knowledge Flows

Emerging in the 1960s and 1970s, dependency theory challenged the optimistic assumptions of modernization theory, highlighting exploitative global economic structures that keep developing nations perpetually dependent on wealthier countries (Dietz, 1980; Cardoso et al., 2024; Frank, 1974). It criticized the legacy of colonialism, unequal trade relations, and the transfer of raw materials and cheap labor from the periphery to the core (Friedmann & Wayne, 1977; Kay & Gwynne, 2000).

While this theory remains influential in its structural critique, it often presents developing nations as passive actors, neglecting the impact that comes from investing in human capital, particularly through STEM education. Today, many countries that once fit the "periphery" model are nurturing vibrant tech sectors, scientific research hubs, and innovation ecosystems—often propelled by diaspora engagement, knowledge transfer, and returnee professionals. The rise of STEM-trained expatriates contributing to home-country development challenges the deterministic narrative of dependency theory and calls for a more flexible, networked understanding of global interdependence (Harrison, 2013).

The Basic Needs Approach: From Service Provision to Capability Enrichment

The basic needs approach, formally introduced through the 1976 ILO World Employment Conference, advocated for meeting individuals' fundamental needs—food, health, shelter, and basic education—as prerequisites for

development (Reinert, 2023). It marked a shift from aggregate economic growth to poverty reduction and social welfare.

Yet in a world shaped by data-driven decision-making, automation, and climate science, meeting basic needs without equipping populations with STEM competencies risks entrenching dependency on external aid and technology. A revised version of the basic needs approach must go beyond service provision to include capacity building in science and technology, ensuring that communities are not merely passive recipients of aid but active participants in shaping their futures.

The Capability Approach: Freedom Through Knowledge and Innovation

The capability approach, developed by Amartya Sen (1999) and later expanded by Nussbaum (2001) and Robeyns (2005), shifts focus from income to the substantive freedoms individuals must have to lead lives they value. It identifies education, health, political participation, environmental sustainability, and gender equality as key pillars of development.

However, a crucial dimension that deserves greater attention in this framework is STEM education as a catalyst for enhancing capabilities. Access to scientific knowledge and technological tools empowers individuals to innovate, solve local problems, and adapt to global shifts (UNCTAD, 2025). Whether it is using AI in agriculture or mobile technologies in healthcare, the capabilities that matter most today often hinge on STEM literacy (Heeks, 2018). Integrating STEM into the capability approach would not only enrich its conceptual robustness but also improve its practical relevance in designing educational policies and inclusive innovation strategies.

REMITTANCES AND THE STEM-INFUSED DEVELOPMENT MODEL

While traditional theories rarely address labor migration and remittance flows, these have become pivotal in many developing countries' development strategies. At first glance, this might appear as a continuation of the core-periphery dynamic described by dependency theory (Frank, 1974). However, a closer examination reveals a more nuanced picture. Remittances do not simply represent financial inflows; they also signify a transfer of human capital, ideas, and technical skills—especially when migrants are trained in STEM fields abroad and contribute to their home countries through direct investments, mentoring, or innovation ecosystems (Askarov & Doucouliagos, 2020).

Unlike foreign loans or profit-seeking FDI, remittances empower households to invest in education, healthcare, entrepreneurship, and digital access—often aligned with the very principles of the capability approach (Askarov & Doucouliagos, 2020; Sen, 1999). In South Asian countries like Nepal, Bangladesh, and Sri Lanka, a significant portion of remittance income is used to

fund children's education—including STEM education—creating intergenerational upliftment and contributing to local problem-solving capacities (World Bank, 2020; World Bank, 2024).

The potential synergy between remittance economies and STEM-based development deserves greater theoretical and policy attention. By facilitating access to technical education and digital infrastructure, remittance inflows can accelerate capability formation, reduce inequality, and stimulate homegrown innovation (Askarov & Doucouliagos, 2020). This perspective invites a rethinking of how global labor mobility and development intersect—not as a tragic necessity but as an enabler of inclusive growth. The limitations of traditional development theories in the face of today's global challenges call for a more integrated and future-oriented approach. STEM education is not merely a tool for economic productivity; it is a developmental right and a capability—a foundation for dignity and autonomy in the 21st century (Amega, 2018). When embedded within remittance-supported household investments and national development strategies, it can be a transformative force for STEM education, particularly in developing nations.

We argue that a new paradigm should recognize the diverse and non-linear trajectories of development. It should appreciate the structural critiques of dependency theory, the welfare ethos of the basic needs approach, the freedoms espoused by the capability approach, and the technological aspirations hinted at in modernization theory—while placing STEM education at the center of sustainable and equitable development strategies. This shift is essential to confronting global inequalities, bridging the digital divide, and empowering communities to design and direct their futures in an increasingly complex world.

CAPABILITY CREATION AND THE IMPERATIVE OF STEM EDUCATION

Income disparity—both across and within nations—continues to present a formidable barrier to capability creation in low- and middle-income countries. As of 2023, the wealthiest 10% of the global population owned nearly 75% of the world's wealth, while the bottom half held a negligible share (World Inequality Database, 2023). Approximately 700 million people, or 8.5% of the global population, still live on less than $2.15 a day, the extreme poverty threshold for low-income countries (World Bank Group, 2023). Extreme poverty remains concentrated in the least-developed nations, fragile states, and remote communities (United Nations, 2023). Although global income rose by 2.5% in 2022 as economies recovered from the Covid-19 pandemic, the poorest populations were left behind, deepening the inequality gap (World Inequality Database, 2023).

Economic development literature posits that sustained growth, often measured by gross domestic product, is crucial for poverty alleviation. Yet many

developing nations lack the capital, infrastructure, and technical expertise necessary for endogenous growth. Foreign capital—whether in the form of aid or investment—has long been recommended to help overcome these constraints. However, debates continue regarding the efficacy and equity of both foreign aid and FDI.

Empirical research generally supports a positive relationship between FDI and economic growth (Basu & Guariglia, 2007; Carkovic & Levine, 2005; Farkas, 2012; Halmos, 2011; Li & Liu, 2005), though its impact on income distribution is mixed. In regions like East Asia, FDI-led growth has coincided with more equitable income distribution. Conversely, growth has often amplified inequality in parts of Africa and Latin America. The effectiveness of FDI depends heavily on absorptive capacity, particularly the availability of human capital and functional institutions (Herzer & Nunnenkamp, 2013; Huynh, 2021; Yuldaslav et al., 2023).

Foreign aid, too, presents a mixed picture. While some studies suggest that foreign aid can promote income equality (Bourguignon et al., 2008), others report the opposite (Bjørnskov, 2010; Chong et al., 2009). Sectoral focus, governance quality, and corruption often influence whether aid achieves its redistributive aims (Saidon et al., 2013; Canaviere-Bacarreza et al., 2015; Dietrich, 2021).

One of the core challenges in translating both foreign aid and FDI into inclusive development lies in building local capabilities—especially those aligned with the evolving demands of a global, technology-driven economy. In this context, STEM education emerges as a critical enabler of both absorptive capacity and long-term development. Investment in STEM skills empowers individuals to participate meaningfully in modern labor markets, drives innovation, and enhances the productivity of aid and investment alike. Unfortunately, such investment has often lagged, particularly in countries with weak educational infrastructure and limited fiscal space.

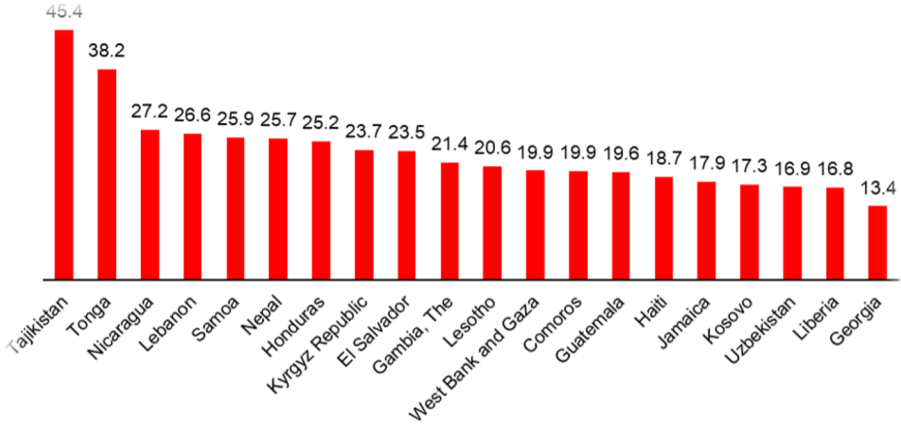
Amid these complexities, remittances have emerged as a reliable and impactful channel for resource transfer to low- and middle-income countries—now far surpassing foreign aid and often rivaling foreign direct investment (FDI). Between 2014 and 2023, remittance flows to low- and middle-income countries consistently surpassed both foreign aid and net FDI, reaching a peak of $647 billion in 2023 (see Table 1). This trend underscores the growing significance of remittances as a stable and vital source of external financing, particularly in contrast to the more volatile patterns observed in FDI and aid (World Bank, 2024; UNCTAD, 2024; OECD, 2024). The data reflect a structural shift in development finance, with remittances increasingly supporting household consumption and economic stability.

Table 1: Foreign Aid, Remittance, and Foreign Direct Investment (FDI) in Low- and Middle-Income Countries (in billions of US$)

Year	Foreign Aid	Net Foreign Direct Investment	Remittance
2014	161	231	434
2015	147	363	431
2016	159	263	435
2017	165	234	465
2018	167	325	510
2019	185	306	536
2020	194	264	530
2021	198	384	587
2022	204	378	640
2023	223	376	647

Sources: *World Bank (2024), OECD (2024), UNCTAD (2024).*

Figure 1: Remittance as a Percentage of GDP for Select Countries

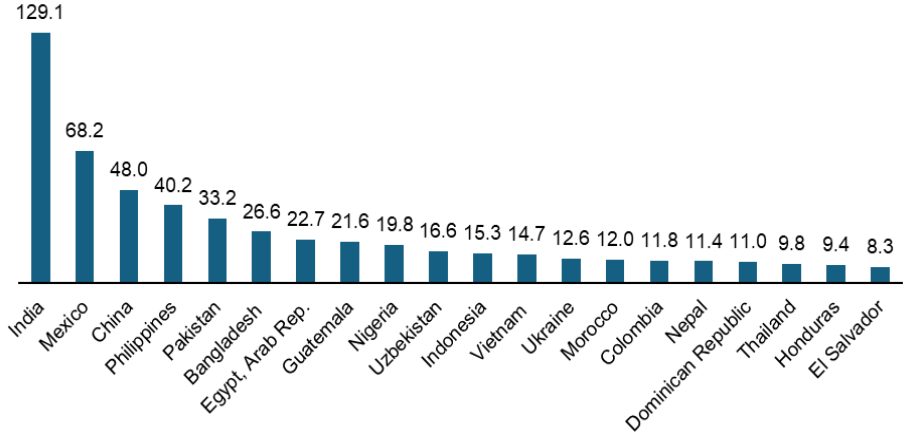


Remittances are not only more evenly distributed across countries than FDI or foreign aid, but they are also typically directed toward households and communities rather than governments or corporations. This makes them more immediately responsive to grassroots needs, such as consumption smoothing, healthcare access, and—critically—educational investment. In many remittance-receiving countries, these inflows now account for over 25% of GDP, as shown in Figure 1, which presents the top 20 low- and middle-income countries ranked by remittance inflows as a percentage of GDP in 2022, with Tajikistan (45.4%), Tonga (38.2%), and Nicaragua (27.2%) leading the list. These high ratios

underscore the critical role remittances play in sustaining the economies of these nations, reflecting their dependence on diaspora contributions for economic growth and development (World Bank, 2024).

Figure 2 displays the top recipients of remittance inflows among low- and middle-income countries in 2024, with India receiving the highest amount at $129.1 billion, followed by Mexico ($68.2 billion) and China ($48.0 billion). These figures highlight the substantial economic impact of remittances, particularly in countries with large diasporas, reinforcing their importance as a stable source of external financing (World Bank, 2024).

Figure 2: Top Recipients of Remittances among Low- & Middle-Income Countries (Total amount in $ billion)



While traditionally used for consumption, housing, and health, remittances are increasingly being channeled into education—with promising long-term impacts. Notably, there is growing evidence and international consensus that households prioritize education spending when remittances are stable and sufficient (Amega, 2018; de Haas, 2007; UNDP, 2009). Askarov and Doucouliagos (2020) analyzed 73 studies covering 30 countries to assess the impact of remittances on educational investment. Using a meta-regression analysis of 1,343 estimates, they found that remittances increase education expenditure by approximately 35% across most countries. This suggests that remittances are a significant financial channel for supporting education in developing countries.

By enabling access to quality STEM education—from secondary schooling through tertiary and vocational programs—remittances can help bridge the technical skills gap that has long hindered growth and innovation in developing countries. There are several cases where diaspora communities have sent money to provide scholarships and grants to outstanding students and to hire teachers in areas where there are shortages. For instance, a study of Nigerian diaspora groups in the United Kingdom found that they contributed an average of £210 per person

annually over a five-year period to support their former schools in Nigeria (Bolaji, 2023). In the Philippines, the Commission on Filipinos Overseas has operated the LINKAPIL (Lingkod as Kapwa Pilipino) program since 1989. This initiative (cfo-linkapil.org.ph) fosters meaningful partnerships between overseas Filipinos and communities in the Philippines, enabling the diaspora to contribute to projects in education, health, and technology and skills development. Investments in STEM through such programs not only prepare youth for global labor markets but also enhance domestic capacities to absorb, adapt, and scale new technologies—making both FDI and foreign aid more effective in the long term (Naseem, 2023).

In the context of today's global knowledge economy, where digital technologies and automation are reshaping industries, the relevance of STEM education cannot be overstated. Its integration into remittance-financed development strategies can shift the trajectory of entire communities—from dependence to self-reliance, and from consumption-led growth to innovation-driven transformation. Evidence from Bangladesh and other developing countries indicates that remittances have a substantial impact on tertiary-level enrollment and completion rates, particularly in fields concentrated in STEM education (Tiza, 2019). Households receiving remittances are more likely to support their children through university, thereby increasing the number of students eligible to pursue degrees in science, technology, engineering, and mathematics.

While both FDI and foreign aid remain important, their distribution is highly uneven and often shaped by corporate or geopolitical interests. In contrast, remittances provide a stable, decentralized, and increasingly vital source of funding for development—particularly in capability creation. With intentional policies and institutional support, remittances can be leveraged not just to improve livelihoods but to build future-ready human capital through STEM education.

The next section introduces a remittance-induced model of development that illustrates how these flows can be systematically harnessed to reduce inequality, enhance capabilities, and foster inclusive, sustainable economic development—especially when aligned with a national commitment to STEM advancement.

REMITTANCE-INDUCED DEVELOPMENT MODEL: ENHANCING STEM EDUCATION FOR ECONOMIC GROWTH

The contemporary global economic landscape has led to a marked rise in international migration, increasing remittance flows to developing countries. These remittances have become a vital economic lifeline, particularly in nations with limited access to foreign direct investment (FDI) and foreign aid. More than just private financial transfers, remittances serve as a critical resource for addressing development challenges, most notably by enhancing human capital

through targeted investment in education, including STEM disciplines. Strengthening STEM education can foster innovation, productivity, and long-term economic resilience in remittance-receiving countries.

Theoretical Perspectives on Migration and Remittances

Three dominant theoretical frameworks are frequently used to analyze the implications of migration and remittances:

- *Neoclassical Perspective*: Focuses on wage differentials as the primary driver of migration. Remittances are seen as a rational reallocation of global labor resources, improving household income and economic efficiency (World Bank, 2014).
- *Keynesian Perspective*: Views remittances as tools for stimulating consumption, savings, and investment. The resultant multiplier effects can boost GDP and employment, particularly if remittances are channeled into productive sectors like education and infrastructure (Gonzalez & Sovilla, 2014; Meyer & Shera, 2017). However, sustained growth depends on robust governance and strategic planning.
- *Dependency Perspective*: Argues that migration and remittances perpetuate structural inequalities between the Global North and South. Critics highlight "brain drain" and "brawn drain" effects, which deplete local talent pools and undermine self-sustaining development (Penninx, 1982; Binford, 2003).

While these views offer valuable insights, they often overlook the potentials of remittances when they are strategically invested in capability-enhancing sectors, especially STEM education. As Naseem (2023, p. 102) has stated, "When remittances are used to invest in education and skill-building, they can help develop a more productive and innovative workforce that can, in turn, produce and export more complex products."

STEM Education as a Catalyst for Capability Building

The nexus between remittances and capacity building is particularly evident in the education sector. By directing remittance flows toward STEM education, remittance-receiving countries can equip their populations with the technical and analytical skills required in modern economies. This approach directly supports economic transformation by creating a more skilled and globally competitive workforce, encouraging innovation and entrepreneurship in high-value sectors, increasing employability and income potential of future migrants, and by reducing dependence on low-skilled migration and associated vulnerabilities.

Families that receive remittances frequently prioritize educational expenditures for their children. Azizi (2018), analyzing data for 122 developing countries between 1990 and 2015, found that remittances positively influence human capital by increasing school enrollment, completion rates, and private school attendance. Similarly, Xia, Qamruzzaman & Adow (2022) reported a positive and statistically significant relationship between remittance inflows and human capital development--measured by the Human Capital Development Index and secondary school enrollment--across top ten remittance-receiving countries from 1980 to 2019. These findings suggest that, with a deliberate government and institutional support—such as scholarships in STEM fields, enhanced educational infrastructure, and teacher training—household-level investment driven by remittances can be leveraged into broader national development initiatives.

TOWARD A CIRCULAR DEVELOPMENT MODEL

International migration and remittances create a circular and interdependent development model that benefits all stakeholders: (a) migrant-sending countries receive vital financial inflows, (b) migrant-receiving countries address labor shortages and benefit from diaspora contributions, and (c) Migrants gain access to better employment and skill acquisition opportunities.

In this cycle, remittances can fund STEM education and skills training in the home country, producing a new generation of high-skilled workers whose enhanced capacities may lead to better job placements abroad or within domestic innovation ecosystems. This upward spiral not only increases remittance volumes but also fosters endogenous development.

The effective mobilization of remittance resources for STEM education and other capability-building efforts requires deliberate policy frameworks. Governments play a crucial role in: (i) designing targeted programs to channel remittances into high-impact sectors like STEM education, healthcare, and entrepreneurship, (ii) incentivizing diaspora investment in vocational training centers, research institutions, and startups, and (iii) creating enabling environments that ensure transparency, protect migrant rights, and offer returns on education-based investments.

When remittance flows are used to expand opportunities rather than finance mere consumption, their long-term impact is multiplied. Governments can further institutionalize these gains by partnering with local universities, NGOs, and diaspora organizations to implement STEM-focused development programs. Sen's capability approach provides a normative lens through which remittance-induced development can be evaluated. In this framework, true development is about expanding people's freedoms and capabilities to lead lives they value—not merely increasing income. Remittances, when strategically directed toward capability-

expanding areas such as education, health, and entrepreneurial opportunity, align seamlessly with this vision.

STEM education enhances individual freedom, widens the horizon of economic choice, and equips citizens to solve pressing local and global challenges. It also helps communities transition from consumers of imported technologies to creators of homegrown solutions. To realize the full potential of a remittance-driven development model that centers STEM education, policymakers should:

- Promote public-private partnerships to co-finance STEM initiatives using remittance funds,
- Create incentives for diaspora professionals to contribute to curriculum development, mentorship, and research,
- Develop financial instruments such as "remittance bonds" dedicated to education and infrastructure, and
- Encourage returning migrants to share knowledge, experiences, and technical know-how with local institutions.

Remittances hold tremendous transformative power. When embedded in a broader strategy for human capital development—especially in STEM disciplines—they become more than financial inflows: they evolve into a force for structural transformation, innovation, and sustainable development. By aligning remittance policy with the capability approach, remittance-receiving countries can empower their citizens, enhance global competitiveness, and break cycles of dependency. A remittance-induced development model, therefore, not only addresses immediate economic needs but also lays the foundation for a knowledge-driven, inclusive, and resilient future.

CONCLUDING REMARKS

This paper has demonstrated that remittances are far more than mere financial transfers—they are a vital enabler of economic development and capability expansion in many remittance-dependent countries. As counter-cyclical flows, remittances provide a stable and reliable source of capital, particularly during periods of economic downturn or external shocks when other sources such as FDI or official development assistance may contract. By flowing directly to households, remittances bypass bureaucratic inefficiencies and immediately support poverty reduction, improve consumption, and expand access to essential services like healthcare and education.

However, the developmental value of remittances extends far beyond immediate household benefits. When tactically mobilized, remittance resources can serve as a foundation for long-term economic transformation—especially when invested in science, technology, engineering, and mathematics (STEM)

education. Investment in STEM not only enhances individual employability in a global knowledge economy but also fosters innovation, productivity, and entrepreneurship in remittance-receiving countries. It builds a pool of skilled professionals equipped to address local challenges, adapt global technologies, and lead knowledge-driven development.

The proposed remittance-induced development model aligns closely with Amartya Sen's capability approach, emphasizing the role of remittances in expanding individual freedoms and choices. STEM education, supported by remittance flows, contributes directly to this expansion by enabling people to lead lives they value, improve their livelihoods, and contribute to community and national development. By transforming remittances into investments in human capital, especially in high-potential fields like STEM, countries can move from a consumption-oriented to a capability- and productivity-oriented trajectory of development.

At the policy level, the challenge is to design systems that move beyond the passive receipt of remittances to actively channeling them into capacity-building activities—particularly in STEM-related education and innovation sectors. Governments and development partners must craft enabling environments through public-private partnerships, targeted incentives, migrant investment schemes, and support for returning migrants with STEM backgrounds. Strengthening institutional frameworks, protecting migrant rights, and building transnational knowledge-sharing networks will also be essential to ensure that remittances serve as engines of inclusive and sustainable growth.

In an era of accelerating global migration and evolving labor markets, the strategic deployment of remittances in support of STEM education offers a transformative opportunity. By aligning financial inflows with capability-enhancing investments, countries can shift from remittance dependency to self-reliant development grounded in innovation, productivity, and human potential. In doing so, they pave the way toward a more equitable, empowered, and prosperous future.

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Acknowledgment

If authors used AI Tools:

The authors would like to acknowledge EditGPT's assistance with proofreading this manuscript and fine-tuning language. The AI tool provided assistance in refining language and ensuring clarity, helping to enhance the quality of this work.