

## EDUCATIONAL REFORM FOR MIDDLE-INCOME TRAP UNDER DIGITALIZATION: CULPRITS, CHALLENGES, AND STRATEGIES IN THE PHILIPPINES

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**Abstract:** *The concept of the middle-income trap (MIT) asserts that economies with middle-income levels often struggle to progress to higher income levels, which is particularly evident in Southeast Asia. Escaping the MIT has been a significant concern, with various factors like governance, infrastructure, and labor markets identified as contributors. Education is a crucial element for developing human capital and driving economic growth. Despite efforts to enhance education, the Philippines has a historical challenge of being stuck in the lower-middle-income trap (LMIT). Limited research on effective education reform strategies to overcome the LMIT in the Philippines is available in government plans and existing studies. The research utilized a mixed method involving both qualitative and quantitative approaches. In the initial qualitative phase, the analysis drew from the Murdoch School's critical political economy and strategic management framework. It revealed that insufficient funding for education, unequal allocation of resources between urban and rural areas, and unfavorable home learning environments are significant factors hindering progress. To address these issues and escape the LMIT, a development strategy was proposed, combining formulation and execution into a unified concept. By tackling problems like misaligned investment priorities, improper resource distribution, lack of mobile infrastructure, and unsupportive learning environments, collaboration among private sectors and universities as cluster networks could drive educational reforms. This, in turn, would lead to societal transformation and economic growth by aligning with societal needs and market demands. Focusing on relevant skills in the digital age is a suitable approach, where skill-oriented education could serve as a cornerstone of the reform efforts.*

**Keywords:** education, lower-middle-income trap, Philippines, investment and benefits, digitalization.

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## Introduction

While global economic progress has been significant since World War II, certain economies have faced challenges in achieving growth, prosperity, and development. Notably, some regions, like East Asian countries such as Japan, South Korea, Taiwan, and China, have achieved substantial development since the war (Perkins, 2013). However, it is crucial to promote further development, growth, and societal well-being in other parts of Southeast Asia. Gill and Kharas (2007) have extensively studied strategies to overcome the middle-income trap (MIT) across the world. In 2006, these authors categorized countries into high-, middle-, and low-income groups based on various indicators and introduced the concept of MIT. Within Southeast Asia, countries like Vietnam, Indonesia, and the Philippines have been classified as lower-middle income economies, while China, Thailand, and Malaysia have been identified as higher-middle income economies for a decade or more. Historical data from the 1960s indicates that out of 101 middle-income economies, only 13 managed to achieve high-income levels by 2008 (World Bank and PRC, 2012). Over the past 40 years, most nations have struggled to elevate their national incomes and consequently fallen into the MIT (Tran, 2016). The World Bank (2007) further categorized middle-income economies into higher-middle income economies (HMIEs) and lower-middle income economies (LMIEs) due to variations in their situations. This underscores the pressing challenge of overcoming the MIT as a crucial social issue. Notably, a significant aspect of addressing the MIT is creating opportunities for employment and raising individual income through industrialization. Of particular concern, the Philippines has remained in the lower-middle income bracket for an extended period, spanning over 35 years since 1987, despite favorable conditions for economic growth. Furthermore, with the new Filipino president, Bongbong Marcos, taking office in July 2022, a reevaluation of all development policies in the Philippines is necessary for improved decision-making and focus. By addressing these interconnected issues, this study aims to identify potential factors contributing to the MIT and ultimately propose a development policy to overcome it, thereby enacting changes in public policies to elevate income status specifically in the case of the Philippines.

## Literature Review

The literature review covers four main areas of research: "1. Economic Outlook in Southeast Asia," "2. The Middle-income Trap," "3. Theoretical and Practical Aspects of Education for Economic Development," and "4. Development and Education Challenges in the Philippines." The review also highlights the existing gaps in knowledge as identified from the literature.

### 1-1. Economic Outlook in the Philippines

An uncomplicated example illustrating a country's economic condition is its income level. Gross National Income (GNI) per person is a widely accepted indicator that reflects the individual income status of each nation. Table 1 provides an overview of the GNI per capita trends from 1989 to 2022 in both East and Southeast Asia. It is evident that there is not a clear income disparity between the entire East Asia region and Southeast Asia region as a whole during the period from 1989 to 2022. While Northeast Asian economies have made notable economic advancements, Southeast Asian countries like Indonesia, India, and the Philippines have experienced less remarkable progress. However, a more detailed examination of GNI per capita at the national level reveals further disparities. Several economies in Northeast Asia, including Japan, South Korea, and Singapore, have achieved high-income statuses, while other nations including China and the remaining Southeast Asian economies remained within the middle-income range until 2022.

Table 1. The Trend of GNI per capita (Atlas Method, US\$) in East and Southeast Asia

Region / Country / Year	1989	1995	2001	2007	2013	2019	2021	2022
East Asia								
China	320	540	1,010	2,510	6,740	10,310	11,930	12,850
Japan	27,470	42,570	37,380	39,310	48,850	41,970	43,450	42,440
Republic of Korea	5,380	11,820	11,950	23,440	26,980	33,830	35,110	35,990
Southeast Asia								
Cambodia	n.a.	240	310	590	960	1,560	1,580	1,700
Indonesia	520	980	710	1,580	3,710	4,070	4,170	4,580
Lao P.D.R.	210	350	300	610	1,600	2,520	2,510	2,360
Malaysia	2,330	4,120	3,570	6,540	10,600	10,960	10,710	11,780
Myanmar	40	90	140	280	1,190	1,300	1,170	1,210
Philippines	800	1,170	1,170	1,710	3,140	3,770	3,550	3,950
Singapore	10,320	23,630	22,130	36,010	54,470	58,910	63,000	67,200
Thailand	1,350	2,740	1,960	3,490	5,610	7,080	7,090	7,230
Vietnam	220	250	400	840	2,200	3,340	3,590	4,010
World	4,089	5,243	5,471	8,345	10,832	11,505	12,055	12,804

Note: "n.a." stands for missing data.  
Source: Based on the *World Development Indicators* (2023), author made.

Furthermore, another notable observation from the table is the consistent growth in Southeast Asia. Particularly noteworthy is the distinct contrast between Malaysia and Thailand, with figures ranging from \$7,000 to \$11,000 USD, and the remaining economies in the region—Indonesia, Myanmar, Cambodia, Lao P.D.R., Vietnam, and the Philippines—falling below \$4,000 USD. Focusing on the Philippines, its income has increased from \$800 USD in 1989 to \$3,950 USD in 2022 over a span of 34 years. However, this growth trajectory is notably different from the rapid income increases seen in Malaysia, Singapore, and other East Asian economies like Japan, South Korea, China, and Hong Kong. The World Bank (2023) has established four income stages: Low-income (less than \$1,085), Lower-middle Income (\$1,086 to \$4,255), Higher-middle Income (\$4,256 to \$13,205), and High Income (over \$13,206). Applying these thresholds, most Southeast Asian economies are situated in the lower-middle and high-income categories, with the exception of Singapore, which is classified as high-income. Another significant statistical metric is the Human Development Index (HDI), developed by the UNDP (2023). Comprising life expectancy, secondary education enrollment rates, and GNI per capita, the HDI adopts Sen's "Capability Approach" (Sen, 1999, p.5) to measure well-being beyond mere income. It ranks countries globally based on index scores. Table 2 demonstrates a substantial HDI disparity in Southeast Asia. Notably, economies like Singapore, Malaysia, and Thailand enjoy higher rankings, while others—particularly Indonesia, the Philippines, Vietnam, Lao P.D.R., Cambodia, and Myanmar—fall between the 107th and 147th ranks in the index as of 2021, spanning 30 years. Consequently, it is significant to highlight the need for enhanced efforts to promote human development in these lower-ranked economies.

Table 2. The Trend of Human Development Index (HDI) in East and Southeast Asia (1990-2021)

No.	Country	HDI Rank (2021)	1990	2000	2010	2015	2019	2020	2021
1	Singapore	11	0.721	0.821	0.909	0.931	0.938	0.939	0.939
2	Japan	19	0.818	0.858	0.887	0.908	0.919	0.923	0.925
3	Republic of Korea	23	0.732	0.823	0.889	0.907	0.916	0.922	0.925
4	Malaysia	62	0.643	0.723	0.772	0.796	0.810	0.806	0.803
5	Thailand	79	0.577	0.652	0.724	0.749	0.777	0.802	0.800
6	China	85	0.499	0.588	0.699	0.739	0.761	0.764	0.768
7	Indonesia	107	0.523	0.603	0.665	0.695	0.718	0.709	0.705
8	Philippines	107	0.593	0.632	0.671	0.701	0.718	0.710	0.703
9	Vietnam	117	0.483	0.586	0.661	0.688	0.704	0.703	0.699
10	Lao P.D.R.	137	0.405	0.471	0.552	0.598	0.613	0.608	0.607
11	Cambodia	144	0.368	0.424	0.539	0.570	0.594	0.596	0.593
12	Myanmar	147	0.342	0.414	0.515	0.557	0.583	0.600	0.585

Source: Based on the UNDP (2023), author made.

## 1-2. Middle-income Trap in Southeast Asia

Various development institutions, like the Asian Development Bank (ADB) and the World Bank, have engaged in discussions regarding the concept of the Middle-Income Trap (MIT) for a substantial period (Gill & Kharas, 2007). These authors categorized countries based on their income levels—high, middle, and low—and introduced the idea of the MIT in their research (Gill & Kharas, 2017). They applied the term "trap" to describe the prolonged challenges faced by economies with middle and low incomes in their efforts to overcome these levels and achieve prosperity, forming the core of the MIT's definition. This situation has been observed in economies like the Philippines and Vietnam in Southeast Asia, which have remained in the lower-middle income bracket for over two decades. Many economies continue to struggle with increasing their income levels, finding themselves stuck under the MIT over the long term (Tran, 2016).

The ADB (2017) identified several factors contributing to the MIT, including unfavorable demographics, limited economic diversification, inefficient financial markets, inadequate infrastructure, low innovation, weak institutions, and an insufficient labor market (ADB, 2017, pp. 16–17). Conversely, conditions essential for fostering economic development were highlighted, such as well-developed infrastructure, an industrialized economic structure, efficient financial and labor markets, effective governance, and social security (ADB, 2011; Allen, 2013; Otsuka, 2020). In the context of overcoming the MIT in Southeast Asia, scholars have consistently underscored the significance of industrialization.

For deeper insights into the MIT's dynamics in Southeast Asia, the economies of ASEAN have a history of catching up with industrialization within the East Asian division of labor framework, leading many of them to achieve middle-income or higher status by 2022. China's remarkable economic advancement since the 2000s has notably influenced ASEAN countries' economies. Tran and Matsumoto (2007) analyzed the influence of regional economic agreements, including the ACFTA, and recognized China's substantial economic progress as an opportunity for the development of ASEAN economies. This analysis highlights the importance of ASEAN countries assuming pivotal roles in the regional and global economies' division of labor to facilitate economic growth in the ASEAN region.

Table 3 displays the income trends in Southeast Asia since 1987. Initially, the four economies categorized as low-income in 1987 (Indonesia, Vietnam, India, and China) have all progressed at least to the lower-middle income threshold. China, notably, has achieved higher-middle income status since 2010, fueled by an annual economic growth rate exceeding 10% over the last 15 years. Additionally, certain lower-middle income economies in 1987 (Malaysia and Thailand) have advanced to higher-middle income status (in 1992 and 2010 respectively). Lastly, India transitioned to the lower-middle income category in 2007 and reached an income of over 2,380 US\$ by 2022.

Table 3. The Income Stage Transition in East, Southeast, and South Asia\*\*

Countries	Income stage in 1987	Years under lower-middle Income	Years under higher-middle Income	Income stage in 2022	Years under middle-income level
Indonesia	L	2003	2021	HM	19
Malaysia	LM	1987	1992	HM	35
Philippines	LM	1987	-	LM	35
Thailand	LM	1987	2010	HM	35
Vietnam	L	2009	-	LM	13
China	L	1997	2010	HM	25
India	L	2007	-	HM	15

\*\* L = Low income, LM = Lower-middle income, HM = Higher-middle income, H = High Income.

Note. Based on Karikomi (2017), author revised.

Tran (2016) outlined the prerequisites for ASEAN nations to enhance their status in the future. The analysis suggests that countries classified as lower-middle-income must focus on instituting reforms in their institutions and improving the efficiency of resource allocation. On the other hand, nations categorized as upper-middle-

income need to elevate their human resources and enhance their competitive advantage structure by promoting advancements in science and technology.

Furthermore, Tran and Karikomi (2019) examined the prolonged stagnation experienced by numerous emerging countries that have reached the middle-income stage, a phenomenon known as the "Middle-income Trap (MIT)." Their analysis delved into the barriers hindering progress towards a higher level and the associated policy challenges for overcoming these barriers. Successful catch-up industrialization demands a dynamic transition towards a more value-added industrial framework. However, the authors highlighted that if a country's industrial system fails to advance as in less developed nations, a scenario of "premature de-industrialization" may occur, involving a shift from manufacturing to the low-productivity service sector. This shift can lead to extended economic stagnation. Essentially, the policy hurdles to overcome this stagnation align with those identified by Tran (2016).

### 1-3. Education for Economic Development: Theory and Practice

Previous research conducted by other scholars has highlighted the Middle-Income Trap (MIT) as potentially one of the most substantial global societal challenges. Existing studies have indicated that the most effective means to break free from the MIT (Huang et al., 2018) involves promoting industrialization, which secures employment opportunities and boosts income through enhanced productivity. When examining the growth and prosperity of Asian economies since the 1950s, it becomes evident that industrialization has played a significant role in economic advancement. This process has elevated capital productivity and facilitated human capital development through training and education, particularly from the 1960s to the 1980s (Perkins, 2013). The transition from labor-intensive industries to capital-intensive ones during industrialization has led to swift accumulation of labor and capital, resulting in heightened income levels (Watanabe, 2012). Consequently, industrialization stands as a key catalyst for driving economic growth and surmounting the MIT in Southeast Asia.

Notably, the promotion of secondary education<sup>1</sup> can aid developing nations in increasing their skilled workforce within manufacturing sectors, further propelling industrialization. This, in turn, contributes to economic expansion in the developing world by enhancing global competitiveness through improved labor skills, particularly reflecting the economic history of East Asia (Lewin & Cailods, 2001; Meyer & Hannan, 1979). Considering human capital development, lower and upper secondary education demand distinct skills and attitudes with respect to the labor force. Junior high school students primarily require fundamental skills such as basic numeracy and communication, whereas high school students need analytical, problem-solving, and goal-oriented planning capabilities (Kuroda and Yokozeki, 2005). When considering the skills and outlook needed during lower secondary education, qualities, including self-control and favorable attitudes are typically essential. In higher secondary levels, additional attributes such as precision and an entrepreneurial mindset are valued. In fact, Otsuka and Kurosaki (2003) demonstrated the significance of accuracy and entrepreneurship in the roles of factory managers in China (Otsuka & Kurosaki, 2003). Intriguingly, Hanushek (2021) arrived at the conclusion that for lasting economic progress in developing nations, only skills hold significance.

To surmount the challenges of the LMIT, it is necessary to enhance the competencies of workers by offering additional educational prospects. Schultz (1971) examined how education influences economic advancement in developing nations. Psachalopoulos (1985) took a more focused stance by emphasizing that middle-income economies should establish avenues for secondary education to cultivate skilled individuals through their academic pursuits. In reality, most middle-income economies have achieved significant enrollment rates, particularly in East Asia. Given the current inadequate allocation of resources to education, encompassing both financial and human resources (UNESCO,

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<sup>1</sup> Secondary education refers to the educational phase targeting individuals aged approximately 11–12 to 18–19, bridging the gap between primary education and higher education (UNESCO, 2017). Its purpose is to enhance knowledge and academic foundations, preparing students for both advanced studies and future employment in various organizations. The duration of secondary education varies across countries, typically spanning six years in most nations (comprising three years each for junior and senior secondary levels). However, some countries exhibit a range of 2 to 8 years for their secondary education period (Kuroda & Yokozeki, 2005).



2020), the promotion of educational opportunities needs to attain higher precedence in both higher-middle-income and lower-middle-income economies (Kuroda & Yokozeki, 2005).

Table 4. Indicators on Quantity of Education in East and Southeast Asia\*\*

No.	Countries	Income Status (2022)	School Enrollment Rate, Primary (2018, % Net) **	Primary Completion Rate, total (% , 2021) ***	School Enrollment Rate, Secondary (2018, % Net) ****	Lower-Secondary Completion Rate (% , 2021) *****	School Enrollment Rate, Tertiary (2021, % gross) *****
1	Philippines	LM	93.7	95.7	65.5	89.7	35.5
2	Vietnam	LM	97.9	110.0	n.a. *	97.6	35.3
3	India	LM	92.2	97.3	66.1	85.8	31.3
4	Lao P.D.R.	LM	91.4	88.1	60.0	61.3	12.9
5	Indonesia	HM	93.4	102.3	78.7	89.9	36.3
6	Malaysia	HM	99.6	104.6	72.2	87.0	42.5
7	Thailand	HM	n.a. *	94.7	77.2	126.1	43.8
8	Republic of Korea	H	97.2	99.7	98.0	90.1	102.4

\* “n.a.” stands for missing data.

\*\* The data of School Enrollment Rate, Primary of Malaysia, the Philippines and Republic of Korea are 2017, and India and Vietnam 2013.

\*\*\* The data of Primary Completion Rate of Malaysia and Republic of Korea are 2020, and Indonesia and Vietnam 2018.

\*\*\*\* The data of School Enrollment Rate, Secondary of Republic of Korea is 2017, the Philippines and Thailand 2015, and India 2013.

\*\*\*\*\* The data of Lower-Secondary Completion Rate of Republic of Korea are 2020, Vietnam 2018, and Indonesia 2017.

\*\*\*\*\* The data of School Enrollment Rate, Tertiary of Malaysia and Republic of Korea is 2020, and Indonesia 2018.

Note: LM = Lower-middle income, HM = Higher-middle income, H = High Income.

Note. Based on Hara (2022, p.46) and World Development Indicators (2023), author updated.

Analyzing statistical data on enrollment and completion rates in primary, secondary, and higher education for various Asian economies in 2018 (primary and secondary) and 2021 (higher education), as presented in Table 4, reveals interesting trends. Among the eight economies examined, spanning lower-middle-income, higher-middle-income, and high-income classifications, all have successfully achieved a net enrollment rate of 90% in primary education. However, there remains room for improvement in secondary education participation across seven of these economies, excluding Korea. This is noteworthy despite a relatively high completion rate ranging from 85% to 100% at the secondary level. Regarding tertiary education enrollment, the economies exhibit rates ranging from approximately 15% to 45%.

Shifting focus to the Philippines' educational landscape, a range of issues becomes evident when considering various angles. Primarily, when comparing enrollment and completion rates for primary, secondary, and higher education, the Philippines displayed the lowest figures among the middle-income economies in 2016, standing at 65.9%. The Philippines' situation stands out due to its higher primary education enrollment rate coupled with a lower secondary education rate (NEDA, 2023). Additionally, tertiary education enrollment in these economies varies from 15% to 45%.

In view of these findings and the acknowledged limited allocation of financial and human resources (UNESCO, 2017), it becomes imperative to encourage and enhance educational opportunities, both in higher-middle-income and lower-middle-income economies (Kuroda & Yokozeki, 2005). Particularly, the Philippines needs to address educational quantity concerns, especially in terms of secondary education access.

On a contrasting note, the concept of educational quality encompasses the overall effectiveness, value, and influence of the learning experience provided to students (Kuroda and Yokozeki, 2005). It extends beyond the mere dissemination of information and encompasses multiple factors that contribute to the holistic growth of learners. Quality education aims to equip students with the necessary knowledge, skills, attitudes, and values for

academic, personal, and professional success. Crucial components and aspects of quality education encompass curriculum development, teaching techniques, learning environments both at school and home, skills enhancement, and measurable outcomes that reflect comprehensive student development (Kuroda and Yokozeki, 2005). When assessing the quality of education in the Philippines from a statistical perspective, noticeable disparities between urban and provincial areas become apparent, particularly in terms of learning achievements, particularly in reading, mathematics, and science exam scores through the Programme for International Student Assessment (PISA) in the country (OECD, 2023). PISA evaluates 15-year-olds' proficiency in reading, mathematics, and science to tackle real-world challenges. An examination of reading proficiency in upper secondary education underscores the gap, with urban areas scoring 47% compared to rural areas at 29% (UNESCO, 2023). Similarly, substantial discrepancies arise in mathematics achievement in upper secondary education, registering 47% in urban areas and 26% in rural areas (UNESCO, 2023). Likewise, the contrast persists in science achievement for upper secondary education, with urban areas reaching 58% compared to 45% in rural areas (UNESCO, 2023). Proficiency in these three subjects is critical for enhancing productivity and broadening job opportunities. However, the marked differences in test results underscore disparities in educational quality, as well as access and completion rates, within the Philippines. These discrepancies warrant attention, and various recommendations related to educational development can be proposed in response.

In order to address disparities in educational opportunities, the utilization of Information and Communications Technology (ICT) has proven instrumental in enhancing access to education worldwide. This has been achieved through the digitization of textbooks, the implementation of online classes or lectures (referred to as "E-Learning"), the facilitation of virtual teaching platforms, the creation of learning materials on tablets, and the provision of laptops to students, among other initiatives (UNESCO, 2013). ICT, short for "Information and Communication Technology," has transformed our lifestyles with advanced devices like tablets, smartphones, IC cards, and ATMs. In the developing world, ICT has been harnessed to advance education and human development, particularly since the outset of the pandemic (UNESCO, 2023). Notably, the adoption of online learning has gained popularity as it allows for remote education, circumventing the need for face-to-face interactions in traditional classrooms. ICT-enabled education has become especially vital for reaching underserved children, those from economically disadvantaged backgrounds, and young adults seeking to continue their education beyond traditional school years.

Scholars have conducted studies on the impact of ICT on education. Wasif et al. (2012) found, based on their previous research involving 429 participants in Pakistan, that ICT education is both cost-effective and time-efficient. They established a comprehensive framework for ICT education centered around four aspects: "Availability," "Usage," "Knowledge," and "Efficiency." Their findings indicate that the availability and usage of ICT enhance students' knowledge and learning skills, ultimately improving educational efficiency. This, in turn, contributes to the formulation of educational policies that can lead to poverty reduction through increased income (Wasif et al., 2012).

Drawing from scholarly fields and observations, it is imperative to elucidate the role of expanding secondary education in fostering industrialization and making significant contributions to economic advancement. Notably, Lewin and Caillods (2001) have emphasized a robust link between investing in secondary education and driving development in East Asian economies during the 1970s and 1980s. Their approach involved leveraging technology to enhance human capital investment, setting the foundation for export-oriented progress. These scholars underscored the significance of directing resources toward secondary education, highlighting that skills like abstract thinking and adaptability play a pivotal role in nurturing skilled labor, which is increasingly crucial across industrial production and service sectors.

Nevertheless, as previously explained, the trajectory of economic development has gradually shifted from industrialization to digitalization in the 21st century. This transition has prompted many developing nations to pursue further socio-economic progress by expanding their service industries. The concept of de-industrialization has gained prominence, particularly since the 2010s, and the global pandemic has expedited the transition towards digitalized economies in numerous regions. Given this substantial shift, the roles of secondary and higher

education have gained greater emphasis. A broader array of skills is now required, not solely from formal schooling, but also through individualized training and re-skilling initiatives to prepare for the evolving demands of digitalization. In light of this transformative digital shift, the forthcoming section will delve into the Philippine Development Plan and its response to educational challenges precipitated by the crisis.

#### 1-4. The Philippine's Development Plan and Education in Crises

The Philippines has formulated a comprehensive development plan with the aim of achieving substantial economic and social transformation. This plan seeks to stimulate job creation, expedite poverty reduction, and rejuvenate the economy's high-growth trajectory. It is designed to guide growth and prosperity across diverse sectors of the nation. Known as the "Philippine Development Plan (PDP)," this plan typically spans a six-year period. It delineates the government's objectives, strategies, and programs to achieve sustainable and inclusive development. The most recent iteration of the plan covers the years 2023-2028 and was officially released by the National Economic and Development Authority (NEDA).

In terms of education policies, NEDA (2023) has updated the strategic framework for enhancing education and lifelong learning. This framework consists of three main pillars: achieving quality, inclusive, adaptive, resilient, and future-ready basic education for all; fostering globally competitive and inclusive technical and vocational education and higher education, along with improved research output for a broader knowledge economy; and enhancing governance for human capital development (NEDA, 2023, p. 51). The Philippine government acknowledges the urgent need for transformation, as education infrastructure continues to grapple with deficiencies in fundamental education resources like classrooms, teachers, textbooks, facilities, and modern equipment, particularly in marginalized communities (NEDA, 2023, p. 45). To address the shift towards a digitalized economy, particularly accelerated by the COVID-19 pandemic, the Philippines has introduced ICT education (DepEd, 2023). However, due to insufficient mobile infrastructure, particularly in provincial areas, online education is not consistently viable despite increased mobile demand (Business Wire, 2021). The Philippines ranks 110th globally for internet speed and has the second slowest speed in ASEAN (Porcalla, 2020).

Moreover, in assessing education policies, the Filipino government has prioritized higher education to cultivate skilled labor for the digitalized economy. However, the underlying challenge lies in the need for comprehensive basic education arrangements for all households, requiring strategic management. Education in the Philippines faces a crisis largely stemming from the lack of basic education infrastructure and environment. The Philippine Business for Education (PBE) has highlighted issues such as declining mental health among students and teachers, lack of teacher support, the practice of mass promotion of learners, and inadequate assessments (Hernando-Malipot, 2023). The PBE acknowledges efforts to reform learning outcomes and employability but emphasizes the urgent necessity to address the learning crisis by intensifying efforts for a better education system (Hernando-Malipot, 2023). Even prior to the pandemic, the Philippines struggled with a learning crisis, with 9 out of 10 students aged 10 unable to read simple texts and poor results in international assessments, alongside childhood malnutrition and stunting worsening over time (Hernando-Malipot, 2023).

These adverse educational outcomes might only scratch the surface, potentially indicative of broader policy gaps in the Philippine education system. Despite a shared recognition of the need for educational transformation among successive Filipino governments, there appear to be underlying issues where certain children do not qualify for public educational services. Addressing these issues is crucial for achieving lasting educational transformation that contributes to long-term growth and prosperity.

#### 2. Identification of a Study Gap

Despite the ongoing efforts to expand educational opportunities, the Philippines has remained trapped in the lower-middle-income category for over 35 years. Hara (2022) introduced a theoretical framework suggesting a notably positive correlation between education and economic advancement in Southeast Asia. However, concerning the Philippines' shift towards digitalization, there's a need for more precise identification of the specific factors driving educational advancement, a facet not thoroughly elucidated in the updated PDP. Notably, the statement from PBE presents an intriguing avenue for exploration. Moreover, a thorough examination of



individual country case studies becomes imperative due to the diverse political-economic and socio-cultural contexts.

Existing studies have underscored the importance of revising development policies tailored to each developing nation. Yet, the updated PDP lacks substantial research on a strategic educational policy framework designed to overcome the lower-middle-income trap in the Philippines. In light of the emphasis on sustainable human capital investment as a means to surpass the trap, there's a pressing need to establish a comprehensive framework encompassing the roadmap for economic development through educational design and objectives, especially in the context of digitalization. Notably, governments and international organizations, including the World Bank (2023), have demonstrated the significant impact of promoting economic progress through efficient human capital investment.

Hence, it becomes crucial to explicitly outline a strategic approach for the Philippines to transcend the lower-middle-income trap through targeted educational investment. This necessitates a meticulous analysis of the principal determinants influencing educational reform in the Philippines. Thus, a strategic framework aimed at breaking free from the lower-middle-income trap via educational investment warrants careful scrutiny and analysis.

### 3. Study Objectives and Research Questions

#### 3.1. Study Objective

The purpose of this research is to aid in the resolution of the lower-middle-income trap (LMIT) through educational measures, with a specific focus on Southeast Asia, particularly the Philippines. Given that the Philippines has grappled with the LMIT for an extended period, the study aims to create a strategic framework for surmounting this trap. This will be achieved by examining the key factors that hinder educational reforms, utilizing a mixed-method approach.

#### 3.2. Research Question (RQ)

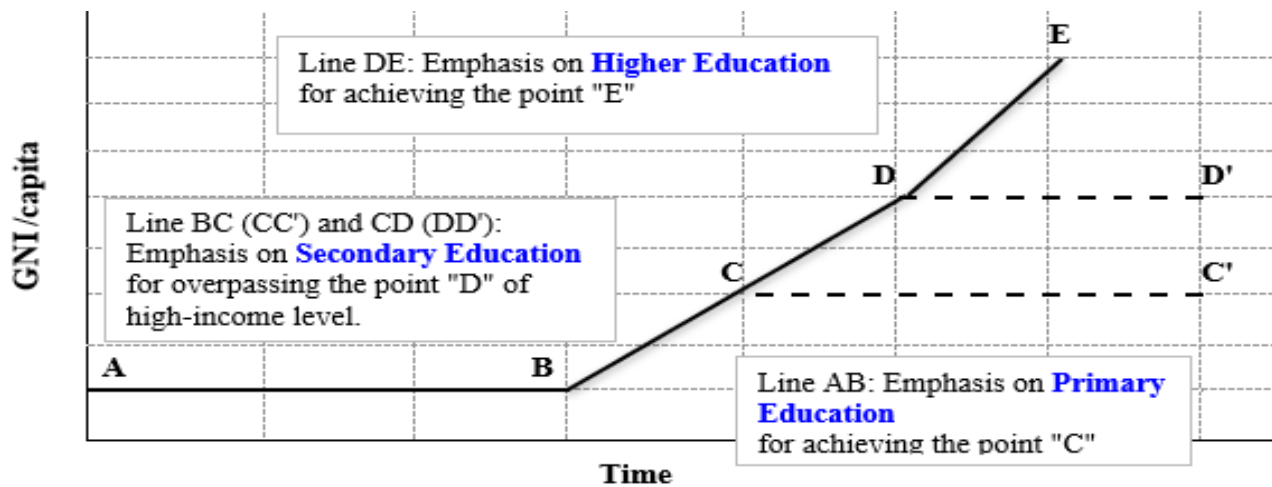
The following RQ is arranged in this paper as follows.

*RQ: How should a socio-economic development strategy to overcome the Lower-Middle-income Trap in the Philippines by identifying major culprits to hamper educational reforms be formed?*

### Frameworks

#### 1. Theoretical Framework: Economic Development Stage and Human Capital Investment through Education

This study aims to contribute to addressing the middle-income trap (MIT) through investments in human capital in Southeast Asia. It focuses on two primary aspects: economic development stages and educational levels. By building upon Tran's model of economic development stages, the research draws from the work of Becker (1964) and Schultz (1971), who highlighted human capital investment as a factor that enhances national income and fosters economic progress in developing nations. Psacharopoulos (1985) contributed to the theoretical foundation by exploring the individual and societal advantages linked to primary, secondary, and tertiary education across various income economies. Hara (2022) introduced a theoretical framework that underscores the relationship between economic development stages and education levels based on income tiers, using Tran's (2016) model as a central reference. Figure 1 provides a visual representation of this framework. Line AB signifies the low-income stage, where a focus on expanding primary education is essential. Progressing to overcome the middle-income trap involves promoting secondary education (Line BC and CC'). As the trajectory moves along Line C-D and DD', the emphasis shifts to advancing science, technology, and innovation, calling for enhanced secondary and higher education promotion. Ultimately, point E marks the escape from the higher-income middle-income trap (HMIT). Hara (2022) contends that this framework effectively illustrates the interplay between individual income and secondary education enrollment, particularly in the context of accentuating industrialization advancement.



**Figure 1. A Theoretical Framework on Economic Development Stages and Educational Investment**

Source: Hara (2022, p.50), author made.

The framework described above is aligned with the main variables of Gross National Income (GNI) per capita associated with the middle-income trap (MIT) and the corresponding educational investment levels. This alignment encompasses all elements of the quantitative analysis, as well as addressing the initial research objective and research question. Of particular significance is the framework's ability to examine the impact of education on GNI per capita. This alignment and rationale are reinforced by the models previously discussed.

## 2. Conceptual Framework: Development Policy on Education for the LMIT in the Philippines:

Ács and Naudé (2011) introduced a theoretical model outlining developmental stages and corresponding focus areas for countries. They identified three stages: "Factor-driven economy" emphasizes entrepreneurship mindset to initiate business activities, "Efficiency-driven economies" aims to boost entrepreneurship through policies like trade liberalization, and "Innovation-driven economy" promotes productive entrepreneurship through dedicated policies (Ács and Naudé, 2011). This framework is useful for devising startup strategies aligned with a country's economic stage. Additionally, Hara (2022) proposed a strategic framework for ICT education to alleviate poverty in Southeast Asia, suggesting the amalgamation of economic and business development policies. This integrated approach facilitates a comprehensive understanding of the Philippines' transition to digitalization (Hara, 2022).

The "Murdoch School" of critical political economy can aid the research question (RQ), given its insights into the intricate political dynamics underlying education policies. This framework, affiliated with Perth's Murdoch University, underscores how state transformation is shaped by social conflict despite policy changes (Rodan, Hewison, and Robison, 2006; Sangman, 2007). This perspective can guide the development strategy by addressing domestic political obstacles, especially in terms of elites' influence. These frameworks, along with the Philippine Development Plan (PDP), can potentially inform a comprehensive development strategy for overcoming the middle-income trap (MIT) by promoting economic development through strategic education policies.

Zaki Ewiss (2021) introduced a post-COVID-19 educational development framework, emphasizing political will, stability, governance, transparency, and funding availability. The framework encompasses pillars such as teaching methods, human resources, budgeting, evaluation, policies, equipment, management, curricula, and responsibility (Zaki Ewiss, 2021). While this roadmap is valuable, it lacks a specific measurement approach for a comprehensive framework. Therefore, examining the Philippines' educational system from diverse perspectives is essential to enhance the framework's formulation.

These frameworks contribute to shaping a strategic framework for human capital development through education, specifically in addressing the MIT. By integrating economic and business development elements, categorizing strategies by income levels, and considering factors like political dynamics and post-pandemic educational needs, a well-rounded strategy for promoting startups and overcoming the MIT in the Philippines can be developed.

## Methodology

### 1. Data-Collection and Treatment

In employing a mixed-method approach involving qualitative analyses, I procured essential data pertaining to educational investment in the Philippines, aiming to address the challenge of overcoming the lower-middle income trap (LMIT). With a keen focus on understanding the reasons behind the Philippines' struggle to foster economic development, I meticulously examined the advantages and drawbacks of its education system in terms of both quantity and quality. This analysis involved a comparative assessment with low-income and higher-middle income economies in East and Southeast Asia. The primary data sources comprised archive data from international organizations, Philippine government agencies, and existing scholarly works, which held paramount significance for this research question.

Following the identification of the factors hindering educational advancement in the Philippines, I delved into development strategies aimed at evading the middle-income trap and education policy frameworks. For this phase, I again utilized archive data, primarily from development agencies and Filipino government entities, given their central relevance to the research question. This resulted in a set of 12 samples, forming the foundation for document analysis using the Murdoch School approach. The analytical framework was structured around three main platforms: "(Problem-Setting) Obstacles against Education Systems," "(Strategy) Action Plans for Accelerating Educational Investment," and "(Tactics) Action Items for Promoting Education to Escape the LMIT."

Upon data collection, I proceeded to analyze the gathered information, specifically focusing on direct correlations to the aforementioned platforms. A key focus was the intricate process linking investment in education to subsequent economic gains. This analytical approach fostered interaction between scholars and practitioners responsible for implementing education policies to overcome the LMIT. It enabled data comparison, and techniques for data reduction and consolidation were applied.

Subsequently, my attention shifted towards obtaining pertinent data related to development strategies and frameworks aimed at surmounting the middle-income trap through education. I drew primarily from archive data, notably sourced from development agencies and Filipino government bodies, as these entities held pivotal significance for addressing this research question. Particularly, I sought out archive data that pertained to strategies promoting education for economic development.

### 2. Methodology and Procedure

In addressing the research question (RQ), I employed a mixed-method approach that involves qualitative to qualitative analysis. This methodology encompasses combining two distinct qualitative approaches, a configuration termed as intra-paradigm research, where diverse qualitative methodologies underlie a single qualitative paradigm. This qualitative analysis was particularly suited for crafting a conceptual framework and addressing the RQ. Leveraging the analytical framework of the "Murdoch School" of critical political economy offers several advantages, notably avoiding an overemphasis on policy and institutional factors. This framework underscores how social conflict processes continue to shape state transformation and operation, regardless of shifts in state institutions and policies. This perspective allowed for the development of a strategy within the education system of the Philippines, addressing obstacles stemming from domestic political economy dynamics, particularly the influence of domestic elites in contrast to global influences.

In this context, I opted for the mixed-method with Qualitative to Qualitative for this endeavor. The two-step procedure was as follows: Firstly, to identify the primary factors hindering the Philippines from improving its education system, and secondly, to formulate a framework that promotes education to evade the LMIT. To fulfill the first step, I engaged in qualitative analysis. This involved document and archival analysis, referencing papers, journals, and articles pertinent to the strategy of online education's impact on poverty reduction in Southeast Asia's context of overcoming the MIT. For strategy formulation, I analyzed data and extracted relevant texts aligned with specific platforms. The qualitative analysis was structured into three phases: open coding, axial coding, and selective coding. Open coding involved categorizing significant

information into categories, creating broad thematic domains. Axial coding connected these categories, forming integrated themes. For the second platform, samples were categorized per income levels, and poverty reduction strategies were scrutinized. Finally, selective coding distilled these categories into smaller ones, aligned with the three platforms, ultimately contributing to the development of a theoretical proposition.

To proceed with the second step, I established a five-step framework for educational development strategies after referencing Philip (2022). Central to this process was identifying key variables/entities, specifically GNI per capita and startups, essential for economic and business development. A qualitative analysis was conducted, referencing papers, journals, and articles on education policies, including those from economies that overcame the LMIT, like Indonesia and Thailand. This analysis was guided by the cross-sector strategy, focusing on education under the transition to digitalization, and informed by frameworks such as the "Murdoch School," the development strategy model by Hara (2022), and Zaki Ewiss's education strategy roadmap. Factors were categorized around key axes (resource, quality, quantity), culminating in five elements: "Analysis," "Strategy Formation," "Objectives," "Structure," and "Management & Evaluation" (Philip, 2022). With a focus on promoting startups, this approach led to the construction of an innovation strategy aligned with these aspects.

## Study Results

I conducted an analysis centered on the variables of education and GNI per capita to identify factors that could hinder the Philippines' progress in overcoming the MIT through education. The results of this analysis are presented in Table 5. Using an open, axial, and selective coding process involving 12 samples, I developed a framework aimed at escaping the MIT through education, addressing the identified hindrances. The framework is outlined as follows:

- 1. INPUT and OUTPUT Platforms:** The framework encompasses two main platforms, "INPUT" and "OUTPUT." The connection between these platforms is represented by "Possible Converters" from "INPUT" to "OUTPUT." These converters include "Educational Training" and "Escape from MIT."
- 2. "Lower-middle Income" Countries:** For economies in this group, the focus should be on enhancing the "INPUT" by improving basic education access and completion, ultimately leading to poverty reduction through employability and job-making skills.
- 3. "Higher-middle Income" Economies:** This category should prioritize higher education as the primary "INPUT," which contributes to a knowledge economy through research and development, fostering intellectual advancement.
- 4. Key Converters from "INPUT" to "OUTPUT":** Essential converters include factors such as "Knowledge and Skills (Socialization, Leadership, and Entrepreneurship)," "Socialization (Network, Communication)," "Leadership/Entrepreneurship," "Motivation (Grit)," and "Availability and Equity of Resources for Education."
- 5. Major Culprits to Discourage Overcoming MIT via INPUT to OUTPUT:**
  - Lower-middle Income Economies: Frequent culprits include "Hidden cost for primary and secondary education," "Dissatisfactory learning and home environment," "Insufficient mobile infrastructure," "Prioritizing higher education rather than basic education," "Resource and budget misallocation between urban and provinces," and "Political speculation and Corruption."
  - Higher-middle Income Economies: The prevalent culprits are "Resource and budget misallocation between urban and provinces" and "Political speculation and Corruption."

The framework elucidates how different economies at distinct income levels should focus on specific aspects of education to facilitate their respective developmental goals. For "Lower-middle Income" countries, enhancing the access and quality of basic education is crucial, while "Higher-middle Income" economies should prioritize higher education and research for a knowledge economy. Essential converters ensure the effective transition from education ("INPUT") to desired outcomes ("OUTPUT"). The identified major culprits that hinder educational progress in different economies underscore the significance of resource

allocation, learning environments, mobile infrastructure, and political factors. This framework provides a structured approach to address educational challenges in the context of overcoming the MIT, catering to diverse economic levels and facilitating poverty reduction, employability, and knowledge economy aspirations.

Table 5. Educational Input to Output Converter and Major Culprits against MIT in Southeast Asia

Income Level	INPUT (Educational Training)		Possible Converters from INPUT into OUTPUTS	OUTPUT (Escape from MIT)	Major Culprits to be discouraged from overcome MIT via INPUT to OUTPUT
	Primary focus on <b>QUANTITY</b> of Education (Access and Completion)	Primary focus on <b>QUALITY</b> of Education (Learning Achievement)		Primary focus on <b>Human Capital Development through Education</b>	
Lower-middle Income	Generalization of Primary and Secondary Education	<ol style="list-style-type: none"> <li>1. Students' Learning Achievement and Motivation</li> <li>2. Arrangement of Learning Environments</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge and Skills (Socialization, Leadership, and Entrepreneurship)</li> <li>2. Socialization (Network, Communication)</li> <li>3. Leadership/ Entrepreneurship</li> <li>4. Motivation (Glit)</li> <li>5. Availability and Equity of Resources for Education</li> </ol>	<ol style="list-style-type: none"> <li>1. Employability</li> <li>2. Job-making skills</li> </ol>	<ol style="list-style-type: none"> <li>1. Hidden cost for primary and secondary education</li> <li>2. Dissatisfactory Learning and Home Environment</li> <li>3. Insufficient Mobile-Infrastructure</li> <li>4. Prioritizing Higher education rather than basic education</li> <li>5. Resource and Budget Misallocation between urban and provinces</li> <li>6. Political Speculation and Corruption</li> </ol>
Higher-middle Income	Promotion of Higher Education	<ol style="list-style-type: none"> <li>1. Students' Learning Achievement and Motivation</li> <li>2. Research and Development for knowledge economy</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge and Skills (Socialization, Leadership, and Entrepreneurship)</li> <li>2. Socialization (Network, Communication)</li> <li>3. Leadership/ Entrepreneurship</li> <li>4. Motivation (Glit)</li> <li>5. Availability and Equity of Resources for Education</li> </ol>	<ol style="list-style-type: none"> <li>1. Employability</li> <li>2. Job-making skills</li> </ol>	<ol style="list-style-type: none"> <li>1. Resource and Budget Misallocation between urban and provinces</li> <li>2. Political Speculation and Corruption</li> </ol>

Source: Based on ADB (2022), Hara (2022), Otsuka&Kurosaki (2003), and UNESCO (2012), author made.

Following the initial step of identifying the barriers hindering educational progress in Southeast Asia, and drawing upon frameworks proposed by Hara (2022) and Philip (2022) along with insights from 12 samples, the ultimate stage of crafting a framework to address the RQ can be succinctly summarized below:

- 1 The top priority of the Philippine government should be providing financial aid to the younger population, specifically for primary and secondary education, rather than giving primary focus to higher education.
- 2 It would be important to further encourage the enhancement of mobile infrastructure to facilitate better learning environments at home. This can be achieved by utilizing foreign direct investment and official development assistance.
- 3 A recommended legal change involves making primary and secondary education obligatory. This step aims to prevent children from being out of school and to decrease the rate of students leaving education prematurely. This approach is seen as a grassroots method of developing human potential to overcome lower levels of labor market integration.



Table 6. Suggested Strategic Framework for Overcoming LMIT through Education Reform in the Philippines

■ Vision: Development Strategy to Promote Economic Development through Education in the Philippines				
■ Mission: Reforming Education for Growth in the Philippines under the Transition to Digitalization				
■ Objective: Analyzing Challenges on LMIT via Education and Building a Framework in the Philippines				
< Formulation > Identification of Challenges for Promoting Economic Development through Education			< Execution > Efforts towards Enhancing Educational Reforms	
【Analysis】 Analyzing Society and Economy in the Philippines	【Identification】 Educational Challenges in the Philippines	【Goals】 Identifying Culprits again Education	【Structures】 Problem-solving Action Items	【Management and Evaluation】 Outcomes and Improvement
■ External Environments	Lower enrollment and completion rates in secondary education	Further investment on Higher education than primary and secondary education	Promotion of infrastructure development through ODA.	To achieve education for all the children, adjustment of financing primary and secondary education needs to be further considered, rather than higher education
1. The population is growing. 2. Low GDP/GNI level 3. Human capital investment through education is low. 4. Huge economic difference between urban and provinces.	Lack of online education as complementary procedure for those who cannot access face-to-face education	Unstable mobile-infrastructure for promoting ICT education in all of the households	Establishing independent organizations to ameliorate the mobile-infrastructure, especially through Foreign Direct Investment and/or Official Development Assistance	The Filipino Government needs monitor and evaluate the mobile infrastructural progress frequently to arrange better educational environment.
■ Industrial Situation	Unfriendly Learning and Home Environment for children	Primary and secondary education are not compulsory	Legalization of compulsory education for primary and secondary should be arranged.	Efforts for legal amendments for the compulsory education in the Filipino diet should be addressed and discussed for realization
1. Corporate profitability tends to be low. 2. There is high labor mobility and low employment rigidity in the workforce. 3. Labor is excessively available	Inappropriate allocation of resources and funding for education between urban and provinces	How much resources allocation are in shortage needs to be investigated, and execution of complementary support are not done.	Further investigation of provincial areas where insufficient educational finance and opportunities need to be searched	The Filipino government need to make further efforts to improve the access to education through system enhancements, working with local government units, private corporations, and universities.

Source: Based on Philip (2022), author made.

The information presented in Table 6 illustrates the organization of five elements: "Analysis," "Identification," "Goals," "Structures," and "Management and Evaluation." These components fall within the frameworks of both "< Formulation > Identification of Challenges for Promoting Economic Development through Education" and "< Execution > Efforts towards Enhancing Educational Challenges," as outlined. A key focal point lies in clarifying issues and responsible parties, particularly in the stages of "Identification" and "Goals," as indicated in the initial step detailed in Table 6. I opted to address four primary concerns: improper investment prioritization, inadequate resource allocation, insufficient mobile infrastructure, and unfavorable learning and home environments. Based on the identified factors, the subsequent sections of "Structures" and "Management and Evaluation" were devised as potential measures for hypothetically enhancing the education system. An advisable approach to enhance the education system entails collaborative efforts between Filipino public officials, private sectors, and universities, forming cluster networks through academia-industry-government collaboration. This collaboration has demonstrated the ability to drive societal change and economic growth by influencing both society and markets.

While several OECD economies, such as Japan, Korea, the U.S., and certain European economies, have successfully employed cluster networks for innovation (MEXT, 2023), the Philippines might not have achieved the same success due to insufficient collaboration among these three entities within the education system. Thus, cluster networks hold promise as a potential long-term solution to transform the education landscape in the Philippines.

Several advantages stem from implementing this comprehensive strategy. Primarily, the integration of economic development and education policies within a single strategy allows public officials to gain a comprehensive understanding of issues and India's position. Addressing the root causes of education improvement and devising appropriate solutions is imperative. Transparency and accountability demand that problem-solving efforts involve non-state entities and citizens, at the very least with government involvement. Equally significant is aligning economic and educational development strategies with overarching vision, mission, and goals. This alignment fosters shared perspectives and directions among public officials toward national, organizational, and individual development. The key to success lies in simplifying and streamlining the strategies and policies aimed at revitalizing the Philippine economy. Cumbersome legal procedures can discourage public officials who aspire to contribute to the country's development and citizens' well-being. Hence, a concise strategy promotes effective policy implementation.

## Conclusions

### 1. Interpretations of Study Results and Frameworks

Regarding the research question (RQ), I employed a mixed-method approach that progressed from qualitative analysis to qualitative assessment. This approach aimed to identify the primary reasons hindering education promotion and contributing to deteriorating economic development in the Philippines. I utilized open-coding analysis on archival and interview data. Conceptually, this method helped uncover the causes of the Philippines' prolonged stagnation in the Lower-Middle-Income Trap (LMIT) compared to other Southeast Asian economies, particularly Indonesia. The framework notably underscores the importance of education promotion by revealing impediments and comparing them to Indonesia's higher-middle-income status. While it effectively illustrates the positive role of education in addressing the issue of Middle-Income Trap (MIT), it offers room for me to generate innovative strategies to efficiently overcome the MIT through education.

Of paramount importance is the development of a strategic framework for educational reform aimed at evading the LMIT in the Philippines. This framework seamlessly merges the concepts of "Economic Development" and "Educational Reform" into one, envisioning a transformative society in the Philippines. Notably, this framework accentuates the efficient means to surmount the LMIT through education. It illuminates the significance of advocating for educational reform to break free from the LMIT, highlighting both advantages and impediments when compared to higher-income economies.

In conclusion, the frameworks I devised to address the research question, as delineated in Table 5, have the potential to contribute significantly to policymaking in the Philippines. Broadly, they offer a justifiable and hypothetical roadmap by visually mapping the connection between income levels and favorable education reform for application in developing nations. Additionally, I presented a developmental strategy to overcome the MIT in the Philippines. This strategy amalgamates economic development and educational reform within the context of transitioning to digitalization. To ensure its practicality, the development plan can be tailored to progress towards the subsequent income stage.

### 2. Discussion: Academic background-oriented vs. Skills-oriented in the Digitalized World

According to Hanushek (2021), skills are the primary determinant in today's globalized economy. Attaining educational degrees can provide individuals with a dignified way of life. Across the world, academic qualifications have traditionally held significant value. However, the advent of digitalization, accelerated in part by the pandemic, has the potential to reshape lifestyles. While some individuals might require advanced degrees for knowledge and academic recognition, others may thrive with foundational skills like literacy, numeracy, and

communication, enabling a basic level of socialization. In essence, these fundamental skills form a diverse foundation for various ways of life. Pursuing higher education, including university degrees, might not be a necessity for everyone unless specifically demanded. Interestingly, Japan boasts numerous successful entrepreneurs without traditional bachelor's degrees.

In the broader context, educational reform should cater to those in need of foundational education. It is crucial for Philippine public officials to recognize the significance of prioritizing basic education up to the secondary level to ensure comprehensive education accessibility, irrespective of the learning methods.

To delve deeper, basic education, particularly completing secondary education, holds undeniable importance in Lower-Middle-Income Economies (LMIEs), including the Philippines. Hence, at this income stage, the emphasis on promoting higher education should be tempered due to the still incomplete establishment of basic educational foundations. As previously discussed, academic credentials may not adequately prepare individuals for the demands of a digitalized world; instead, acquiring lifelong skills becomes paramount. Realistic and essential earning opportunities are crucial for those in need, and foundational skills and knowledge can greatly contribute to this aspect. Therefore, the pursuit of education for socio-economic development within a digitalized landscape necessitates careful consideration, pursuit, and discourse.

### 3. Study Limitations

Two potential limitations stand out as valuable areas for future advancement in this study.

Firstly, a more comprehensive examination from an educational standpoint is warranted to uncover the underlying reasons for the relatively limited advantages observed within private sectors, especially within Lower-Middle-Income Economies (LMIEs). The Philippines, in particular, faces a range of intricate educational challenges, trailing even behind more developed nations. To address this, a holistic approach is advisable, incorporating not just economic analysis but also insights from fields like management and sociology. This integrated approach would enable a thorough exploration of the Philippine education landscape and the factors contributing to its lower-income status. Furthermore, exploring educational policies designed to stimulate interest in entrepreneurship should be an integral part of this endeavor. Thus, by approaching the promotion of startups through an educational lens, a more effective strategy might emerge.

Secondly, educational research should concentrate on specific areas, such as budget allocation, classroom dynamics, curriculum design, the impact of the pandemic on the mental well-being of students and educators, compulsory education processes in the Philippines, and the establishment of cluster networks in middle-income economies, including the Philippines. Delving into these facets would provide a deeper understanding. To gain a true insight into the educational reality, field surveys should also be contemplated as a means to seize the opportunity for firsthand observation.

### 4. Recommendations

Here are the rephrased recommendations:

Incorporating political, cultural, and religious dimensions is essential even when studying development issues. Sociocultural contexts can swiftly challenge or reshape theories and frameworks. While it's undoubtedly a complex endeavor, examining economic and business subjects from cultural, historical, or religious perspectives holds promise for generating practical theories.

A mixed-method approach is advisable, recognizing that thorough analyses and surveys demand significant time from researchers. While both standalone quantitative and qualitative studies have their merits, leveraging a mixed-method approach can yield richer insights when the research question allows. Hence, careful consideration is needed when selecting methodologies for international development studies.

Collaboration is advantageous when conducting research in areas like development, education, and MIT, involving professionals such as development specialists, private sector employees, local stakeholders, and subject matter experts. Collaborative efforts enhance data collection, research trends, and constructive discussions, contributing to more comprehensive and valuable research on global issues.

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