

Towards global citizenship–role of cross border higher education across the ASEAN region

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ABSTRACT

The Association of Southeast Asian Nations (ASEAN) region has been experiencing a vibrant economy with heavy investment in higher education as an economic development driver. Being home to over 630 million people and more than 7,000 higher education institutions (HEIs) and over 12 million students, it was critical to evaluate the role of cross-border higher education in the region. This study aimed to investigate the factors and motivations contributing to the success and efficacy of cross-border higher education in the ASEAN region. Additionally, it sought to examine the impact of cross-border education on the development of global citizenship. A quantitative study was conducted using secondary data from the repositories of the World Bank and UNESCO Institute for Statistics (UIS). Data was analyzed using descriptive visualizations and regression analysis. Results indicated variations in HEIs investments, with Brunei having the least. Many students moved from the ASEAN region to seek higher education in other regions, with Vietnam having the highest number of 137,022 students. The majority of these ASEAN countries have more than 10,000 higher education students' abroad. The United States, Australia, and Japan were the significant destinies of students from the ASEAN region. Government expenditure on tertiary education, gross domestic product (GDP), tertiary school enrolment, and GDP growth rate were found to have a significant influence on cross-border higher education mobility. Policy recommendations were the development of international collaborations, cross-border partnerships, and cross-national harmonization to enhance the partnership and mobility of higher education students in the ASEAN region.

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1. INTRODUCTION

The Association of Southeast Asian Nations (ASEAN) region has experienced fundamental transformations in the last two decades through economic growth, modernization, and globalization. The social demand for higher education as an associated cross-border relationship in education matters has also increased on the same magnitude [1], [2]. Chao [3] observed that a lot about national and international education needs to be done, implying that the size and character of international higher education in the region need to be transformed. Also, governments and stakeholders in ASEAN have expressed increasing interest and investments in higher education to achieve domestic competitiveness and economic growth [4], [5]. As a result, the policymakers in higher education are seeking effective means through which full employment of available resources could be achieved to enhance higher education quality and efficiency [6].

Among the various strategies is cross-border higher education collaboration and cooperation among the higher education institutions (HEIs). According to Lorenzo [7], achieving strong higher education systems and institutions in the ASEAN region requires collective effort through working together. This collaboration may come in various forms, including faculty and student exchange, dual or joint degree programs, and developing collaboration networks among universities.

Southeast Asia is an economically vibrant region experiencing faster economic growth. The region has over 630 million people and over 7,000 HEIs [8], with over 12 million students. With increased internationalization and globalization, and as the community expands, the higher education system is also revolutionizing. Several organizations in the region have been established to address the aspects and issues of higher education. For instance, the ASEAN, which developed the ASEAN workplan on education 2016-2020, and the ASEAN University Network (AUN). The association is focused on developing and promoting an inclusive complementary higher education partnership for the region [9]. There is also the Southeast Asia Ministers of Education Organization (SEAMEO), which comprises the ministers of education in the region and the highest decision-makers in the sector. The organization is mandated to promote regional cooperation in education, science, and culture among its members. Among the priorities set for 2015-2035 was the promotion of harmonization in higher education and research [10]. From these initiatives, significant progress has been made to achieve integrated cross-border education and collaboration among the ASEAN region and other regions worldwide.

Despite this progress, Khalid *et al.* [11] suggest that cross-border education in ASEAN HEIs faces myriad new challenges. The COVID-19 pandemic presented a new challenge, including disruption of international mobility through movement restrictions, making it difficult for students to pursue international opportunities. The pandemic forced shifting to online learning, bringing disparities due to technology and internet connectivity [12]–[14]. Additionally, policymakers and other interested stakeholders should monitor and be informed regarding emerging trends and issues. This is critical for them to act responsively to the needs and circumstances of the ASEAN higher education needs. Symaco and Tee [15] also suggest that access and equity are still a big challenge in higher education in ASEAN, as social background is the primary determinant of education access. The availability of higher education opportunities to all population segments without being restricted by factors such as gender, socioeconomic status, or rural-urban location is still a challenge and should be encouraged across the ASEAN region [16]–[18]. There is also a shift from the labor market and skill sets needed in the region due to advancements in technology such as artificial intelligence, the Internet of Things, robotics, and machine learning. The ASEAN region must restructure higher education from low-wage labor-intensive to innovative and high-skill-intensive courses.

The paper addresses the research problem arising from the vibrant economy and substantial investments in higher education in the ASEAN region. This region comprises over 630 million individuals and over 7,000 higher education institutions, serving over 12 million students; there is a critical need to evaluate the role and impact of cross-border higher education in the region and beyond. The study specifically seeks to investigate the factors and motivations contributing to the success and efficacy of cross-border higher education in the ASEAN region. It aims to explore the impact of cross-border education on the development of global citizenship. Through a quantitative analysis of secondary data from the World Bank and UNESCO Institute for Statistics (UIS), the research examines variations in higher education institutions (HEIs) investments, student mobility patterns, and the influence of factors such as government expenditure on tertiary education, gross domestic product, tertiary school enrolment, and gross domestic product (GDP) growth rate on cross-border higher education mobility within the ASEAN region.

Based on this background, this research explores the antecedents and drivers of strong and effective cross-border higher education across the ASEAN region and the role of cross-border education towards global citizenship. To this end, the specific research objectives of the study are: i) to ascertain the number of HEIs in the ASEAN region; ii) to find out how many students from the ASEAN region are currently studying abroad; iii) to determine the top destination countries for ASEAN students moving to study abroad; and iv) to evaluate the determinants of higher education cross-border in the ASEAN region. Following the research objectives, four research questions were developed to guide the study, they include: i) what is the number of HEIs in the ASEAN region? ii) how many students from the ASEAN region are currently studying abroad?; iii) what are the top destination countries for ASEAN students moving to study abroad?; and iv) what are the determinants of higher education cross-border in the ASEAN region?

2. LITERATURE REVIEW

2.1. Cross-border education in ASEAN

Cross-border education in the ASEAN region is characterized by the movement of individuals and research across national boundaries for educational purposes [19]–[21]. Despite the rich diversity of

Southeast Asian countries, including the political, cultural, environmental, and socio-economic conditions, the increased growth in cross-border education has been accelerated by the rapid growth of student enrolment [6], [20]. Other contributing factors to cross-border education in the region include unprecedented economic growth necessitating a quality workforce, advancement in communication technology, and economic restructuring and globalization [22], [23].

The ASEAN cross-border education occurs across ten countries in Southeast Asia, including Thailand, Singapore, Vietnam, and Indonesia, among other countries. In 2021, for instance, Thailand received a high inbound of students from regions such as China, Laos, Vietnam, and Cambodia [24]. Feuer and Hornidge [25] inform that the number of HEIs in the ASEAN region continues to expand, with the region claiming to have around 7,000 HEIs in 2021. The region also boasts a high enrolment of students to universities and colleges of up to 20 million. Although the region's population is 660 million, one-third is considered aged 20 years and below. The student enrolment to higher education rate in the region averages 40% compared to the 90% student enrolment rate in the East Asian countries [24], [26].

The nature of education across the national borders in the ASEAN countries has changed with increased emphasis on commercial education in recent decades. However, the increased commercial emphasis on education has led to quality challenges. For instance, the inadequacy of the inter-institutional agreements and cooperation often leads to quality issues by the domestic tertiary institutions of the receiver countries. Other challenges experienced in the ASEAN cross-border education include increasing the relevance of the curriculum and instruction to match the changing labor market needs.

2.2. Higher education harmonization in ASEAN countries

Higher education in the ASEAN region is important in the quest for equitable human development. The integration of higher learning in the ASEAN region thus aims at framing the education system within the member states to ensure the enhancement of quality employability of the graduates and improve the mobility of labor across the national borders of the member states [27], [28]. Harmonizing the education system ensures compatibility, comparability, and coherence of the education system across the region. The Asian International Mobility for students (AIMS) program is SEAMEO regional center for higher education and development (RIHED) primary regional project to facilitate student mobility and foster collaboration in higher education across Asian nations. The AIMS program was initiated in 2010 by SEAMEO RIHED as a pilot initiative involving Malaysia, Indonesia, and Thailand. The AIMS program has experienced substantial growth in the previous decade, including 9 member countries and 78 member universities. It now allows undergraduate students to engage in a semester-long exchange in one of 10 fields. Since 2010, more than 5,000 students have participated in the AIMS program [29].

Stroupe and Kimura [30] assert that harmonization in the ASEAN higher learning system can be achieved through the development of the region's qualification framework used to guide the national qualifications of the member states. Developing a qualification framework would help recognize the required skills, classification, and identification of knowledge and competencies that meet the labor market needs. Higher learning integration can also be attained through developing a strong quality assurance mechanism. According to Prateppornarong [31], maintaining quality assurance in higher learning systems is critical in enhancing existing programs and promoting the quality of education among HEIs. Throughout the ASEAN region, quality assurance can be attained through the collaboration of the various national quality assurance mechanisms that could be used to develop a regional framework for quality assurance. For instance, in Malaysia, education quality assurance is maintained by the Malaysian qualifications agency, whose standards could be integrated with other agencies to create quality assurance for the ASEAN region.

Credit transfer is the other method the ASEAN HEIs use to harmonize the region's education system. The AUN established the ASEAN credit transfer system (ACTS) to promote student and academic mobility within the ASEAN region. Since 2010, Universitas Indonesia has hosted the AUN-ACTS Secretariat, which manages the system. ACTS has been specifically developed to handle variations in implementing credit systems among member universities without modifying existing institutional or national credit systems [3], [32]. Khalid *et al.* [11] opine that credit transfers in the ASEAN education system exist within and beyond the member states and are critical in ensuring regional university mobility. For instance, increased participation of regional institutions and organizations in the credit transfer scheme helps facilitate easy student credit transfer and promotes the exchange of programs for HEIs within the region. Credit transfer in the ASEAN region also plays a critical role in ensuring international mobility for students to meet the changing global labor market needs.

2.3. Cross-border education and global citizenship

The aspect of globalization leading to interlinkages between people has led to an increase in the demand for global citizenship education. The need for global solutions to the region's challenges in the ASEAN region has necessitated the growth of global citizenship education [33], [34]. Global citizenship education involves elements that equip learners with knowledge of global issues, including equality, justice,

humanity, and respect. The study by Jeong and Bang [35] indicated that the higher education curriculums for member states had elements; however, some of the member states indicated discrepancies in the actualization of global citizenship education. The national curriculum in the ASEAN countries is often based on national citizenship compared to global citizenship education. The region thus requires improvements to citizenship education to meet the global citizenship education standards [36], [37].

The cultural distinctiveness of each country challenges global citizenship education in the ASEAN region. Addressing the different cultural perspectives towards the concept of global citizenship education will help expand the opportunities for various learning activities and experiences rather than using abstract ways of teaching [38]. In the bid to attain the global citizenship education goals, the ASEAN countries need to ensure the education system focuses on global competencies to improve the student's international competitiveness.

2.4. Empirical review

Numerous scholarly investigations have been undertaken to examine the phenomenon of cross-border higher education within the ASEAN countries. Lek [39] outlines the importance of universities in long-term cross-border development. Universities in developing and developed areas, including the ASEAN, have a role in ensuring the improvement of the quality of education for learners to meet the global labor market needs, including learning foreign language skills and enabling practical job training. Similarly, Pham *et al.* [40] points towards the importance of regionalism in the ASEAN region as the driving force towards cross-border higher education progress. Other studies have recognized that ASEAN regionalism plays a critical role in enhancing university research and the overall global competitiveness of higher education on the global stage [41], [42].

The advancement of the cross-border higher learning system in the ASEAN countries is based on various strategies. Lorenzo [7] asserts that the region's strategic cooperation and collaboration play a critical role in the extended growth of cross-border learning in the ASEAN region. Cross-border collaborative strategies involve universities in the ASEAN region partnering with other countries to enhance higher education. For instance, university partnerships with other countries, organizations, and foreign learning institutions help increase revenue and improve the instructional quality in the institutions. Also, collaborative partnerships help expand curricular offerings and obtain international skills to meet the global labor market needs.

Higher education in Southeast Asian countries aims to attain equitable growth and development. Berse [43] articulates that despite the varying cultural distinctiveness among the member states, the quality of higher education across the ASEAN region is maintained in higher standards through integrating higher education based on institutional arrangements and government policy responses fostered through harmonization. Integration of higher learning in the ASEAN regions is attained through establishing key mechanisms by member countries, including quality assurance, qualifications framework, and credit transfer [44]–[46]. However, despite progress by the governments in responding to policy changes to foster cross-border higher learning, countries in the ASEAN region still need to ensure more inclusion of HEIs in the integration process.

Among the benefits of cross-border higher learning in the ASEAN region involves the ability to ensure an increase in the mobility of students to meet the global labor market needs. Chao [3] explores the opportunities and challenges for international students in the ASEAN higher education system. The intra-ASEAN mobility of students across the ASEAN region is low compared to student mobility from the region. The student mobility rate outbound from the ASEAN region is related to the member country's economic status and development. For instance, countries in the low-middle-income grouping often experience a higher mobility of students outbound compared to upper-middle-income countries.

Also, Hou [45] expresses that the aspects of quality assurance play a critical role in enabling cross-border student mobility in the ASEAN region. The cross-border higher learning system in the ASEAN region aims to ensure quality education to meet the international labor market needs. The governments of member countries play a critical role in engaging in regional, bilateral agreements that support student mobility. Often, quality assurance in higher learning is attained through passing policy measures to maintain high education and research standards. Thus, increased government interventions through higher education financing and passing neoliberal policies play a critical role in internationalizing higher education in globalization.

3. METHOD

This research was geared towards conducting an analytical analysis of cross-border education in the ASEAN region. The study focuses on exploring statistical data that accurately portrays the extent and status of cross-border education in institutions of higher learning. The study was conducted to portray the contribution of cross-border education towards the aspect and concept of global citizenship. Therefore, the approach adopted was the quantitative content analysis research design following scholarly guidelines [47], [48]. The research used secondary data to conduct the analysis, this has been validated in a number of studies

[49]–[51]. The secondary data was obtained from various sources, including the UIS, the European External Action Service (EEAS), and the World Bank data repository. Several methodologies were employed during the data analysis process, taking into account the secondary nature of the data. Limited data-cleaning procedures were implemented, and most sources were deemed reliable and trustworthy [52], [53]. The first analysis conducted was the descriptive and inferential statistics to understand the characteristics of the data used. Comparative analysis was conducted to compare the statistics of higher education students, educators and participants crossing borders within the Southeast Asia nations. Correlation analysis was also conducted to compare between the different metrics considered [54], [55]. Additionally, regression analysis was conducted to investigate the effects of various factors on ASEAN cross-border education [56], [57]. Data analysis was conducted using Python and SPSS software.

4. RESULTS AND DISCUSSION

4.1. Status of ASEAN higher education

The first analysis evaluated the status of higher education in Southeast Asia. The analysis was intended to understand the efforts and miles made in advancing higher education in the region. The first analysis evaluated the number of higher institutions in the region. The data was extracted from European Union External Action [8]. The statistics indicated that Indonesia recorded the highest number of HEIs, 4537, followed by the Philippines, which has 1943 HEIs as shown in Figure 1. The two countries were the only ones in the region with more than one thousand HEIs. The third was Vietnam with 235 HEIs, and then Thailand with 154. However, some countries indicated quite a low number of HEIs, such as Brunei, which has five and Singapore, which has 14. In addition, the expenditure by the government on education was also evaluated. The government expenditure on education was found to be relatively even as presented in Figure 2, with Cambodia and Vietnam being the highest, allocating 20% of their spending to education, while Thailand was the least, allocating 4.2% of its expenditure to education. Most of the members in ASEAN allocated between 10% to 20% of their income to education, apart from Thailand and Brunei.

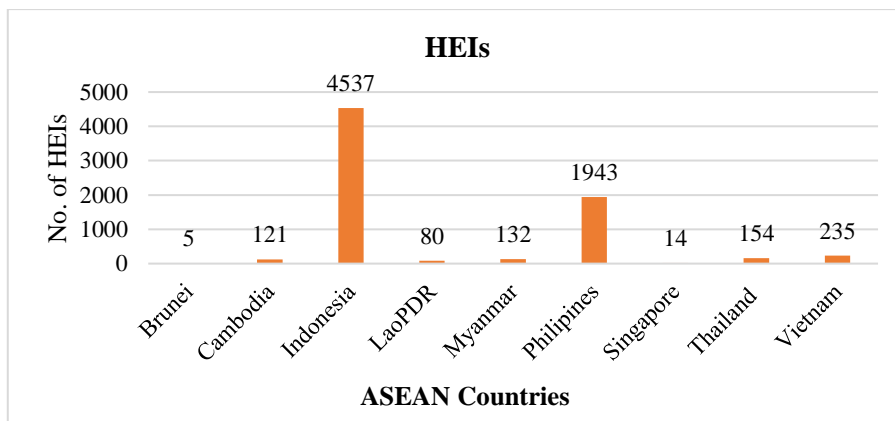


Figure 1. HEIs in Southeast Asia

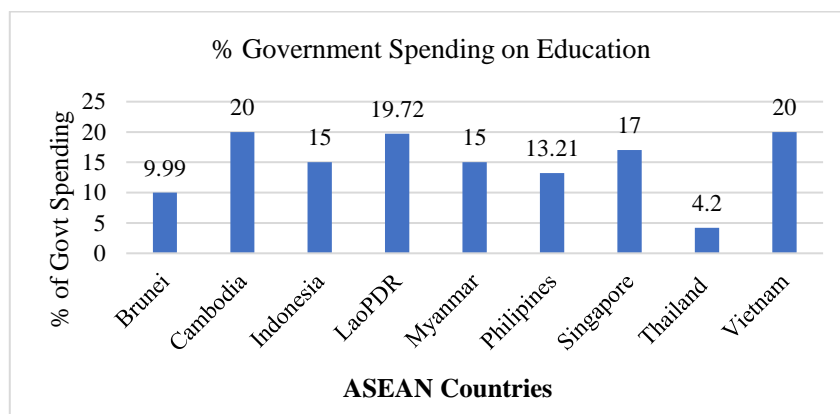


Figure 2. Status of higher education in Southeast Asia

Despite significant advancements in increasing accessibility, there is still a considerable need for improvement due to limited and competing resources. Without implementing significant measures to enhance internal efficiency and introduce innovative educational institutions, any success achieved would be temporary. It is also crucial to explore alternative sources of funding.

4.2. Movement of students abroad

The other aspect regarding the cross-border higher education among the ASEAN countries evaluated was the students' movement in the number of students abroad. The analysis was done using the data for the global flow of tertiary-level students retrieved from the UIS [58]. From the statistical analysis presented in Figures 3 and 4, Vietnam has the highest number of students abroad (137,022 students), comprising 2.1% of the total students in the country. Indonesia followed this with 59,224 students abroad, comprising 0.9% of total students in the country. Malaysia was the third country with the highest number of students abroad (48,810 students), comprising 0.8% of the total students in HEIs. Brunei was the country with the least number of students abroad, which comprised approximately 0% of the country's higher education students. Cambodia also had several tertiary-level students studying abroad (7,401 students), comprising 0.1% of the country's students. In total, 349,979 students were studying abroad.

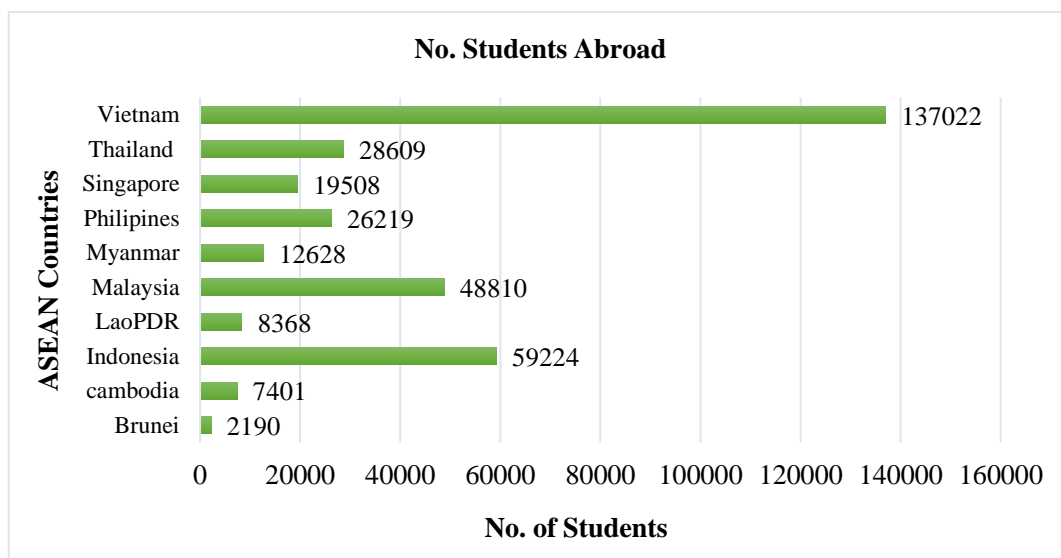


Figure 3. Number of students abroad in ASEAN region

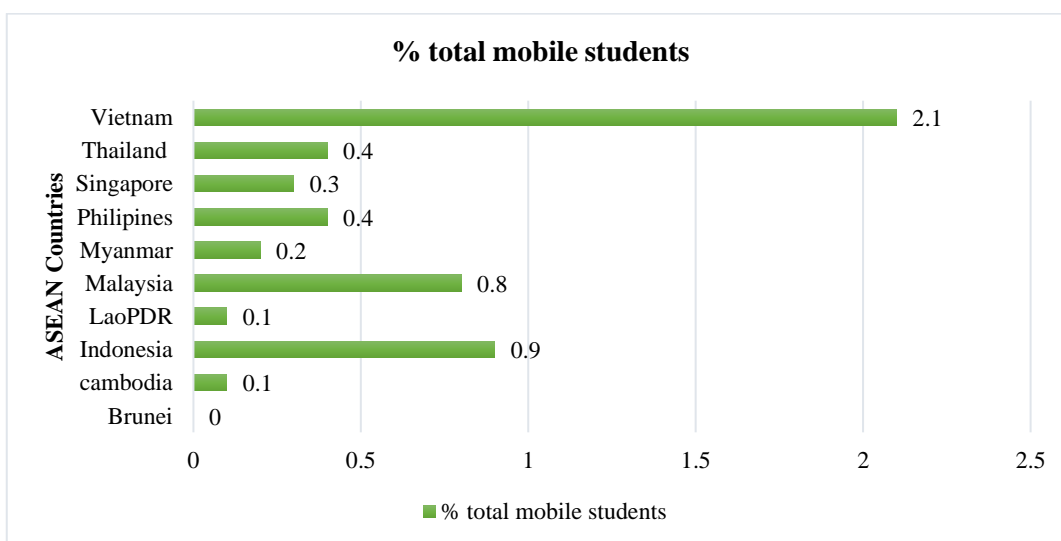


Figure 4. Percentage of students abroad in ASEAN region

4.3. Major destinations

The study further explored the significant destinations of ASEAN students seeking higher education worldwide as reported in UNESCO [58]. The findings are summarized in Table 1 and Figure 5. From the statistics, it is observed that different Southeast Asian countries had their students travel to different countries for higher education. For instance, the three major destinations for Brunei students of higher learning were the United Kingdom, Malaysia and Australia. However, most students moved to Japan, the Korea Republic and the United States for higher education in a different country, Vietnam. In Thailand, the major destinations for students of higher learning included Australia, the United Kingdom and the United States. The research found that they made up nine destinations in total from the major three destinations of each of the 10 ASEAN countries. The first destination country that received the highest number of students was the United States, with 49,382 students, which comprised approximately 23% of the total students in the region. Japan was the next destination after the United States, which received students from the ASEAN region pursuing higher education. The total number to Japan was 47,780, representing approximately 22% of the total students. Australia closely followed these, receiving 46,400 students, representing 22% of the total students. Other significant destinations include Korea Republic, the United Kingdom, and Malaysia. An interesting finding is that only two countries from the ASEAN region—Malaysia and Vietnam—were considered among the top nine destinations of their students. Another interesting finding is that the United States and Australia ranked among the major three destinations by eight countries in the region. Therefore, it was observed that the most popular terms of destination from the ten countries were the United States and Australia.

Table 1. Students and their major destinations

Country	Major destinies	No of students	Country	Major destinies	No of students
Brunei	United Kingdom	747	Myanmar	Japan	3,652
	Malaysia	540		Thailand	2,134
	Australia	292		United States	1,821
Cambodia	Australia	1,763	Philippines	Australia	9,588
	Thailand	1,216		Canada	2,967
	United States	962		United States	2,890
Indonesia	Australia	11,683	Singapore	United Kingdom	6,564
	Malaysia	9,862		Australia	5,252
	United States	7,445		United States	3,349
Lao PDR	Vietnam	5,626	Thailand	Australia	6,121
	Thailand	686		United States	4,836
	Australia	282		United Kingdom	4,460
Malaysia	United Kingdom	11,485	Vietnam	Japan	44,128
	Australia	11,419		Korea Republic	24,928
	United States	4,924		United States	23,155

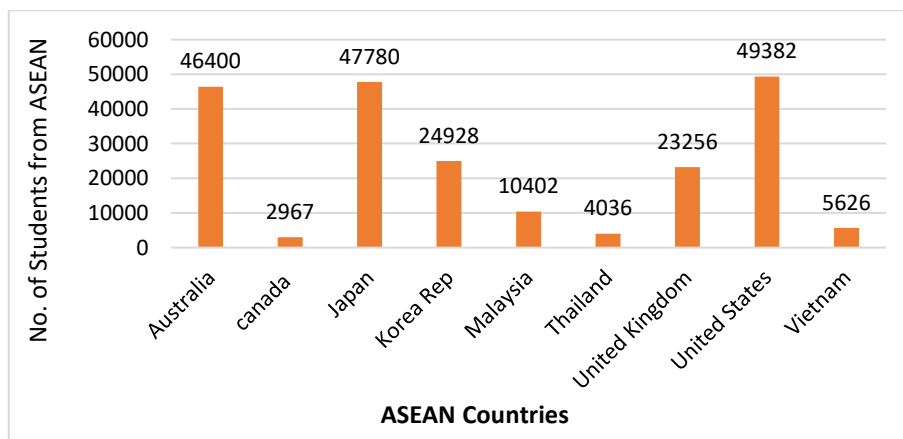


Figure 5. Students and their major destinations

The other aspect evaluated regarding higher education in the ASEAN region was students' inbound and outbound mobility within the region. Inbound mobile students implied the number of students from the ASEAN region who have moved to other countries (either within ASEAN or other parts of the world) to seek higher education. Inbound mobile students are the students who have moved to ASEAN countries to seek higher education in the region. The statistics were presented for data between 2001 and 2021 according to

availability. Considering the outbound students, an increasing trend is observed in almost all countries. In other countries, Vietnam recorded the highest number of mobile tertiary students seeking higher education as shown in Figure 6.

Considering the inbound mobile students, there were significant fluctuations in the students received. Malaysia was found to have received the highest number of international students, though the number fluctuates in different years. Singapore and Thailand received quite a significant proportion of students seeking higher education in the ASEAN region as depicted in Figure 7. Overall, the data indicated an increasing trend over time.

The regression analysis was also conducted from data sourced from the World Bank [59] to evaluate the factors affecting cross-border higher education in terms of outbound tertiary mobile students and the results are presented in Table 2. Multiple regression analysis was adopted, where the independent variable was outbound mobile tertiary students, while the independent variables included government expenditure on tertiary education (Million \$), GDP growth (annual %), GDP (US\$), researchers (per million inhabitants) and school enrolment (% gross). The results indicated that government expenditure on tertiary education has a negative and significant influence on the outbound mobility of tertiary students ($\beta=-2.061, p=0.015$). The GDP growth rate was found to have a negative and significant influence on the outbound mobility of tertiary students ($\beta=-5156.97, p=0.004$). Researchers (per million inhabitants) were found to have a positive and insignificant influence on the outbound mobility of tertiary students ($\beta=0.880, p=0.527$). Tertiary school enrolment was found to have a positive and significant influence on the outbound mobility of students ($\beta=412.929, p=0.004$). GDP was found to have a positive and significant influence on the outbound mobility of tertiary students ($\beta=36.742, p=0.002$). In summary, Table 2 shows that government expenditure on tertiary education, GDP, school enrollment in tertiary education, and GDP growth are all statistically significant determinants of higher education cross-border activity in the ASEAN region, based on the given p-values, researchers per million inhabitants, however, are not statistically significant.

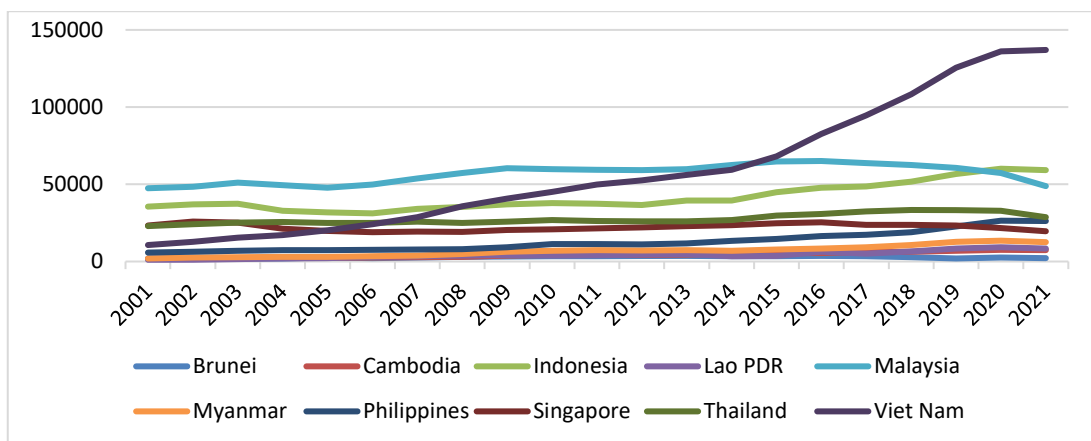


Figure 6. Outbound students' mobility in the ASEAN region

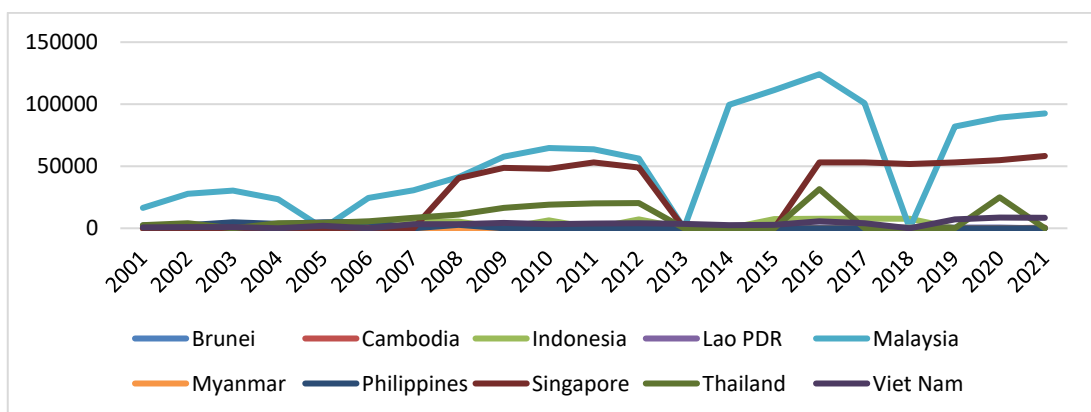


Figure 7. Inbound students' mobility in the ASEAN region

Table 2. Determinants of higher education cross-border in the ASEAN region

	Unstandardized coefficients		Standardized coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	102709.643	18157.291			5.657	.000
Govt Exp on Ter Edu (\$mil)	-2.061	.752	-.137		-2.739	.015
GDP (billion\$)	36.742	9.501	.492		3.867	.002
Researchers/mil inhabitants	.880	1.360	.032		.647	.527
School enrolment, tertiary	412.929	120.368	.415		3.431	.004
GDP growth (% annual)	-5156.972	1537.997	-.168		-3.353	.004

Note: dependent variable: outbound; R-squared=97.5%; F(5, 15)=115.209, p=0.000

This last decade has marked an increased global interest in cooperation and access to higher education as a booster of the global economy. While Khalid *et al.* [11] discussed hurdles faced by prospective students, the global disruption occasioned by the pandemic impacted student mobility within the ASEAN region in addition to socioeconomic and cultural factors [12]–[18]. The restrictions occasioned by the lockdowns also encouraged the adoption of other learning methods such as fully remote learning and blended learning involving taking some aspects of an educational program online and others in class [20], [60]. The strengthening of higher education, according to Kuroda *et al.* [61] supports international and national economic growth. For this reason, the United States agency for international development has prioritized higher and tertiary education as among the three areas of its funding. In response to this call, the ASEAN region has also made significant progress towards strengthening higher education, particularly with the perspective of cross-border higher education, by supporting the mobility of students and cooperation of institutions of higher learning [62]. This has received significant support from various organizations, including increased funding from the Asian Development Bank [63].

This research empirically explored the effort made by the ASEAN region regarding cross-border higher education and its contribution towards global citizenship. The research had exciting findings regarding the effort in the ASEAN region in the HEIs. These statistics indicated quite a significant gap in the number of HEIs in the ASEAN countries. While some countries indicated a significant effort, others indicated that considerable investment is needed to boost higher education and the affected cross-border relationship within the region, for instance. At the same time, Indonesia has made significant efforts in the HEIs establishment, and Brunei and Singapore need to consider investing more to boost higher education. Marginson and Xu [64] clarifies that HEIs and well-developed curricula are critical in boosting higher education and the resultant translation of knowledge to actionable policies for optimal decision-making. Considering that most of them were allocating more than 10% of their government expenditure to education indicates that the nations were concerned with the welfare of education and the importance and contribution of education to economic development.

It is observable that regional cooperation and cross-border cooperation in higher education are getting bigger with much interest from the stakeholders and policymakers. There is an increase in the number of countries and institutions across Asia participating in cross-border collaborations to strengthen their higher education systems [65], [66]. The focus of this research was on Southeast Asia, where universities have established partnerships among themselves in the region and with other universities in the United States, Europe and Australia. However, as suggested by Lorenzo [7], the perspective has recently focused on the intra-regional partnerships in the past, focused on improving the region's higher education systems and performance to achieve regional competitiveness. The findings indicated that many students are moving to other countries for higher education in the ASEAN region. For instance, by 2020, the statistics indicated that Vietnam had the highest number of students abroad, to 137,022. It is evident from these statistics that while other countries were quite open to sending their students abroad for higher education levels, others could have been faster in this initiative. However, significant effort has been considered in this regard. The majority of the countries in the Southeast region have more than 10,000 thousand higher education students abroad.

Southeast Asia was found to send its students to various countries globally in search of higher education. The United States, Australia and Japan were major destinations in terms of the number of students received. According to Lek [39], this could be attributed to the perception that these countries have a more advanced higher education system in terms of research, syllabuses and content covered. Regarding the popularity of destinations, the United States and Australia were the major destinations, as almost all countries sent their students to these countries.

The increasing trend indicates that the ASEAN region is significantly contributing to regional and global cross-border higher education by sending their students to other countries. The research found an increasing trend for both inbound (students coming to seek higher education in the ASEAN region) and outbound (students moving to other regions and countries to seek higher education). This indicates that as far as cross-border higher education is concerned, the ASEAN region plays a critical role within and without the

region. As inferred by Chaisse and Hsieh [67], these partnerships and collaborations aim to increase the sharing of skills and knowledge, enhance instructional quality, expand curriculum offerings, and raise institutional prestige. High-speed and effective communications are vital for enhancing collaboration opportunities. An extended analysis investigated the factors influencing cross-border education within the ASEAN region. Increasing school enrolment in tertiary education boosted economic growth and boosted students' movement from the region to other regions in search of higher education.

4.4. Practical and theoretical implications

The result achieved by this research has helped solidify the application of secondary research data in understanding patterns associated with human behavior, in this instance, cross-border migration by students in the ASEAN region. This study emphasized several theoretical implications and policy recommendations. This research has been able to practically show that ASEAN countries have increased the budgetary allocations to HEIs. It also found that though the ASEAN region has made significant efforts to establish and promote cross-border higher education, the opportunity has yet to be fully explored. Greater effort is needed from the perspective of development and policy formulation. This research proposed several types of collaboration that would boost cross-border higher education studentship. The first is international collaboration in instruction and content delivery. This would involve setting up mechanisms and policies involving student exchange, branch campuses, and joint degree programs to increase revenues. The second aspect is cross-border partnership, which would entail cooperation in developing non-instructional activities and collaborations in various aspects such as research, curriculum development, accreditation and faculty development. With the recent wave of technology advancement, the ASEAN HEIs should consider collaboration focused on technology sharing joint science and technology initiatives. This would rhyme well with the increased government funding and investment in developing research capacity. Within Southeast Asia, cross-national harmonization is another aspect worth investing in.

This would aim for more compatible and comparable settings regarding higher institution admissions, degree standards, curriculum development and content covered, and regional QA standards. This would significantly increase cross-border and cross-institutional mobility of students and the instructional staff. More importantly, this research recommends and advocates that the ASEAN institutions established in this regard must work together. This would reduce the duplication of roles and harmonization of objectives towards cross-border higher education improvement. For instance, the Association of Southeast Asian Institutions of higher learning, the AUN, the Asia-Pacific quality network, and the SEAMEO, RIHED should work together in a bid to promote collaboration around issues of teaching, research, student and staff mobility.

5. CONCLUSION




This research sought to investigate the role of cross-border higher education in the ASEAN region and its contribution towards global citizenship in this era of technological advancement and globalization. Considering Southeast Asia is an economically vibrant region experiencing faster economic growth, it was interesting to find the contribution of higher education collaboration to economic development and global change. The research used secondary data from various sources, including World Bank data respiratory and the UIS. Various methods were adopted in data analysis, including descriptive statistics, correlation analysis and regression analysis. The results indicated Southeast Asia has significantly invested in higher education through established institutions. However, some countries, such as Brunei, had few HEIs. It was also found that governments make a significant contribution by investing a significant proportion of their income in education. The study additionally emphasizes that many students from the ASEAN region have opted to pursue higher education in regions beyond their home countries, with Vietnam having the highest number, with 137,022 students. The majority of these ASEAN countries have more than 10,000 students' higher education students abroad. The research evaluated the major destinies and found that the United States, Australia and Japan were the major destinies students from the ASEAN region moved. The trend of cross-border movement was evaluated, where students' inbound and outbound movement indicated an increasing trend over the last 20 years. The factors that significantly influenced cross-border higher education are government expenditure on tertiary education, GDP, tertiary school enrolment and GDP growth rate. This research recommends that the ASEAN region implement a more collaborative schema comprising international collaborations, cross-border partnership and cross-national harmonization to enhance the overall education system and associated cross-border higher education mobility.

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