

Regional tertiary student mobility and Türkiye

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Article Info	Abstract
<p>Research Article</p> <p>Received: 4 January 2023 Revised: 21 June 2023 Accepted: 22 July 2023</p> <p>Keywords: International tertiary students, Intra-regional internationalization strategies, Emerging countries, Türkiye</p>	<p><i>Intra-regional cooperation between emerging developing countries has represented a clear shift away from Western models of internationalization since the year 2000. As a result, more international students prefer to have higher education in countries geographically and culturally close to them. This paper aims to explore international student mobility in the context of source and destination countries/continents. Additionally, the situation of Türkiye in terms of intra-regional student mobility was also revealed and several practical implications were also discussed for the country. According to the findings, while the total share of the United States of America and the United Kingdom has decreased considerably, there have been several emerging destinations like Australia, Canada, China, and Türkiye. Türkiye has entered the global top ten destination countries through attracting international tertiary students mostly from the nearby regions.</i></p>

1. Introduction

Globally, student migration grows faster than overall migration (King et al., 2010). International students refer to “non-citizens of the country they study” (OECD, 2022a). Internationally, mobile tertiary level students, also called post-secondary students, increased from 107,000 in 1950 (Barnett & Wu, 1995) to 1.6 million in 2000 (Project Atlas, 2020). Since then, the flow of international students has become immense – exceeding 6 million in 2020 (OECD, 2022). The human capital explanation assumes that increasing international student mobility is linked with the rising demand for high-skilled professionals with tertiary-level education, particularly from industrialized countries. The rising demand prompts national students to seek education and work opportunities abroad (Portnoi et al., 2010).

Until recently, the United States of America and the United Kingdom were always the top two destinations for student mobility until very recently. Nevertheless, mobility patterns in international education have had a clear shift away from Western models of internalization (De Wit et al., 2015). Increasingly international students prefer higher education in countries geographically and culturally close to them. As a result, the intra-regional mobility of tertiary students among several emerging countries has increased significantly in the last decade (Kondakci et al., 2017). Besides the United States of America and the United Kingdom, several emerging destinations have been like Australia, Canada, China, Türkiye, Russia, and the United Arab Emirates. Meanwhile, China, Türkiye, Russia, and the United Arab Emirates entered the top global destination countries for international tertiary students in the last decade, according to a report published by (The Department of Education, Skills and Employment of Australia, 2019) Türkiye, Netherlands, United Arab Emirates, and Saudi Arabia as four countries have been classified in the fast-growing ‘Promising’ emerging destinations for international tertiary students. These emerging hubs attract many international students from neighboring countries in the same region. Meanwhile, Asian countries have strengthened their receiver role, on the other hand, African countries have remained source countries in international student mobility (Barnett et al., 2015).

* Ethics committee approval is not required as the data used in this study is based on the Organization for Economic Cooperation and Development (OECD) international student mobility database. All responsibility belongs to the researchers. All parties were involved in the research of their own free will.

To cite this article: Metin, F. (2023). Regional tertiary student mobility and Türkiye. *International Journal of Social Sciences and Education Research*, 9 (3), 211-219. DOI: <https://doi.org/10.24289/ijsser.1229283>

The immense increase in international student flow and significant changes in mobility patterns have started to change the lack of attention of public and international organizations and academicians to international student mobility (King et al., 2010). For instance, OECD has started to publish annual student mobility reports since 2001. The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Organization for Migration (IOM) also publish internationalization of higher and skilled migration reports.

Nevertheless, the internationalization of higher education has also several risks as well. A very small fraction of local students has a chance to go abroad to continue their studies due to limited financial resources and language barriers. Furthermore, it is also difficult to assess or recognize the quality of higher education programs offered by foreign institutions (Marinoni, 2019). Moreover, imbalances of international student flow and the absence of multiple perspectives and voices are some other unintended consequences (De Wit et al., 2017). Apart from that, commercializing of higher education occurring through tuition fees and indirectly is a further arising problem (Marinoni, 2019).

Overall, this paper focuses mainly on the following research questions from the perspective of international tertiary students;

- Which continents and countries are the most popular destinations?
- Which continents and countries are the major origin countries?
- Which academic fields are the most preferred by international students based on countries?
- What is the situation of Türkiye in terms of international students?

2. Intra-regional internalization strategies in higher education

“Regional identity” can be built by developing and strengthening the ideas and values specific to the regions where societies are geographically and culturally close. Regional identity cannot be substituted for national identity because it is an integral element of national identity. Countries that can come together under a common regional identity form a basis for cooperation in different fields, especially in security, politics, trade, education, and culture. Altbach and Knight (2007) argued that internationalization in higher education is not merely an issue for developed countries but also an increasing number of emerging economies. Richters and Teichler (2006) indicated that even though nationality remains a significant descriptor, it is not as significant as it used to be for mobility. A social network analysis conducted by Kondakci et al. (2017) on a dataset covering 229 countries also indicated the rise of several emerging regional hubs (ERHs). The authors argued that these ERHs deviate from traditional internationalization processes by differentiating forms and with rationalities. For instance, while Türkiye attracts students from the Middle East, the Caucasus, the Balkans, and Central Asia, Mexico attracts students from Latin America, South Korea from Southeast Asia, and South Africa from Sub-Saharan Africa were highlighted as critical emergent hubs in their respective regions.

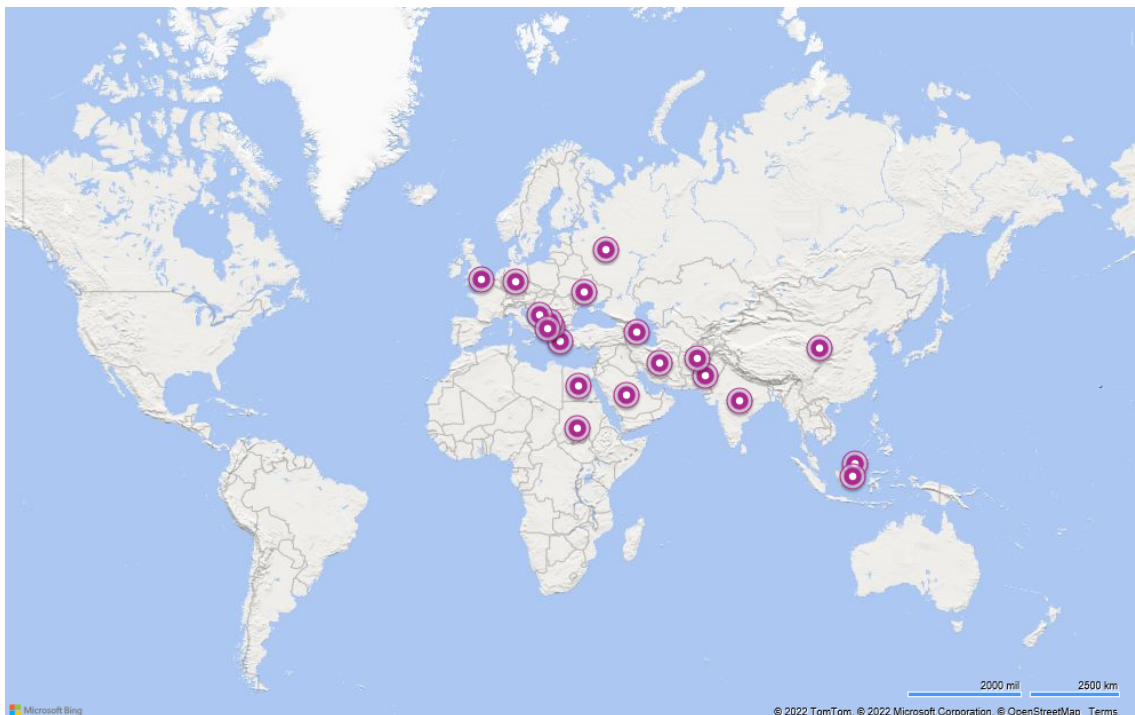
The European Union, the African Union, the Organization of Turkic States, and the Association of Southeast Asian Nations (ASEAN) are some examples of regional identity construction. For instance, the Association of Southeast Asian Nations (ASEAN) was formed by Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam to increase cooperation between countries in the same geographical region. These unions are also an example of “intra-regional internationalization” (De Wit, 2020). Regional identity has a close relationship with the internationalization of higher education. Increasing international student and academic staff mobility contributes to regional identity building by increasing information exchange, cooperation, and cultural interaction between individuals and regional countries (Knight, 2012). By adding a regional dimension to higher education strategies, scientific, cultural, social, economic, and political collaborations are strengthened among regional countries with a common language, religion, culture, history, or values (Metin, 2022).

The main strategies to attract highly skilled migrants are as follows; (a) employer-oriented selection strategy, (b) sector-based selection strategy, and (c) individual human capital scoring strategy. In the employer-oriented strategy, recruitment processes such as preparing the documents for obtaining visas and work and residence permits on behalf of migrants are carried out by employers. The H-1B visa type applied in the USA is one example of an employer-oriented selection strategy. In the sector-based selection strategy, priority sectors that need a qualified workforce are determined by countries. Governments arrange employment incentives to facilitate the recruitment of highly skilled migrants in the identified sectors. The German Green Card application, prepared for the information technologies sector in Germany in the early 2000s, can be an example. In the individual human capital

scoring strategy, governments use several ranking systems to assess skills, education, language ability, work experiences, and other profiles of candidate foreign migrants. This method is applied mainly by Canada, the United Kingdom, and the Czech Republic (Sarcin, 2022). Countries with widely spoken languages or organizations using an international language and offering high wages are more likely to attract migrants than countries with unique languages and moderate wages (Chaloff & Lemaître, 2009). The Bologna process was launched in 1999 to align with the European Union's regional strategies. The Bologna process continues under the name of ERASMUS+ to promote student and academician exchange programs and facilitate employability between the region's countries. Aligned with the ERASMUS+, the European Higher Education Area (EHEA) was launched in 2010 and established by the European Union to ensure more comparable, compatible, and coherent European higher education systems. The general objectives of EHEA are providing mutual recognition of higher education diplomas, increasing inter-university agreements, and strengthening the quality assurance systems of the countries (Aba, 2014).

For Türkiye, regional strategies are being developed by the Council of Higher Education of Türkiye (CoHE) to encourage intra-regional student and academic staff mobility. The target regions of Türkiye cover geographies close to Anatolia, mainly the Balkans (Albania, Bosnia and Herzegovina, Greece, Kosovo, Macedonia), the Middle East (Saudi Arabia), Southwest Asia (Afghanistan, China, India, Indonesia, Malaysia, Pakistan), the Caucasus (Azerbaijan, Iran, Russia, Ukraine) and Northeast Africa (Egypt, Sudan). Besides these regions, England and Germany are also on the list of target countries of Türkiye for international students (The Higher Education Council of Türkiye, 2021). In determining the target countries by CoHE, strategies have been formed with the contribution of the Ministry of Foreign Affairs and the Ministry of National Education, the Strategy and Budget Directorate, the Ministry of Science, Industry, and Technology, the Ministry of Culture and Tourism, the Ministry of Health, the Ministry of Youth and Sports and the Ministry of Trade. On the other hand, the internationalization strategies determined by the universities were also considered, and a foresight was created about the cooperation with the countries (The Higher Education Council of Türkiye, 2021).

Figure 1. Target countries of Türkiye for international students



Source: Higher Education Council of Türkiye (2021)

Bologna Process, Erasmus+ programs, Türkiye Scholarships, MEVLANA Exchange Program, Joint Diploma programs, Project-Based International Exchange Program, TURQUAS Project, “Study in Turkey” project, School Recognition, and Equivalency Regulation, the extension of the duration of stay of doctoral students after graduation, and the start of the CoHE granting scholarships to international students are some of the significant initiatives that have strengthened intra-regional cooperation process of Türkiye (The Higher Education Council of Türkiye, 2021).

This paper uses descriptive data sources from OECD to analyze worldwide international student mobility. The purpose, scope, data collection, and analysis approaches were explained in the following section of this paper.

3. Methodology

In this study, international tertiary student mobility patterns are demonstrated by field of study and country of destination and origin to provide a larger picture of international student flows. More precisely, this study aims to underline the limitations of traditional internationalization approaches to explain the vibrant state of key ERHs, particularity of Türkiye. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. It comprises the International Standard Classification of Education (ISCED) levels 5, 6, 7 and 8. ISCED is the classification of education levels for compiling international educational statistics. The tertiary levels 5,6,7, and 8 are labeled as short-cycle tertiary education, Bachelor's or equivalent level, Master's or equivalent level, and doctoral or equivalent level, respectively (OECD, 2015). International students could be described as students who obtained their prior education in their country of origin. International tertiary-level students leave their country of origin and move to another country for short-cycle tertiary education, bachelor's, master's, or doctoral-level education. (OECD, Education at a Glance 2021: OECD Indicators, 2022a).

The data used in this research is based on the international student mobility database of the Organisation for Economic Co-operation and Development (OECD). The OECD Education at a Glance database provides data on the state of education across OECD countries and partner countries. The database contains tertiary education data from the countries and has been updated yearly since 2000. The educational attainment profiles of the countries are classified according to the International Standard Classification of Education (ISCED) coding system. More precisely, this study used the international student mobility indicator of OECD. The indicator shows the percentage of students from each continent and country of origin over the total number of international students. Additionally, the classification of fields of education and training was assembled according to the International Standard Classification of Education: Fields of Education and Training 2013 (ISCED-F). ISCED-F 2013 is an international framework for organizing educational programs and related qualifications by field. The indicator of the share of international students by field was also used to figure out the most popular fields among international inbound students at both continent and country levels.

Table 1. Top destination countries and fields for international inbound students (2000 – 2019)

Country	Year 2000 (%)*	Year 2019 (%)**	Number of inbound students (2019)**	The most popular fields among international inbound students (2019)***				
				Arts and humanities (%)	Business, administration and law (%)	Engineering, manufacturing and construction (%)	Health and welfare (%)	Social sciences, journalism and information (%)
United States	28	16.0	976,853	n/a	n/a	n/a	n/a	n/a
Australia	7	8.4	509,160	6	47	12	9	3
United Kingdom	14	8.0	489,019	13	33	14	7	12
Germany	12	5.5	333,233	15	18	30	6	8
Russia	n/a	4.6	282,922	n/a	n/a	n/a	n/a	n/a
Canada	2	4.6	279,168	8	27	18	5	9
France	8	4.0	246,378	16	29	16	6	10
United Arab Emirates	n/a	3.7	225,339	n/a	n/a	n/a	n/a	n/a
Japan	4	3.3	202,907	n/a	n/a	n/a	n/a	n/a
China	n/a	3.3	201,177	n/a	n/a	n/a	n/a	n/a
Türkiye	n/a	2.5	154,505	13	19	25	13	13
Spain	3	1.3	77,062	9	25	12	22	12
Austria	2	1.2	74,631	14	20	16	9	16
Belgium	2	0.9	52,143	14	14	9	37	10
Others	18	32.6	1,989,430	n/a	n/a	n/a	n/a	n/a

* Source: (Project Atlas, 2020)

** Source: (OECD, International student matrix by country of origin and country of destination, 2022b)

*** Source: (OECD, Share of international students and all students by field, 2021c)

n/a: not available in the reference year

4. Changing target and origin countries for international tertiary students

The trend of destination countries for international tertiary students has changed significantly since 2000. According to Table 1, there were around 1.6 million inbound higher education students in 2000. This number reached 6,093,927 in 2019 (OECD, 2022b). During this period, there have been significant changes in countries' shares. Approximately 43 percent decrease in the total shares of the United States and the United Kingdom takes attention. These two countries held 42 percent of the total international students in 2000, which fell to 24 percent in 2019. The most significant decreases in inbound higher education student shares occur in Germany at 54 percent and France at 50 percent.

Meanwhile, several emerging destinations in the global student flow include Russia, Canada, United Arab Emirates, China, and Türkiye. While Russia, United Arab Emirates, China, and Türkiye entered the list from the fifth, seventh, ninth, and eleventh places, respectively, Spain, Austria, and Belgium are no longer in the top ten list. Additionally, the international student share of Canada has considerably risen between 2000 and 2019 from 2 percent to 4.6 percent, which in turn, Canada has become the sixth most popular destination for international tertiary students in the world. Besides Canada, Australia is the only developed country that increased its international tertiary student share. Lastly, the shares of all other countries have reached 32.6 percent rising 81 percent between 2000 and 2019. This significant increase highlights a significant diversification trend in destination country preferences of international tertiary students.

4.1. The most popular education fields in the most popular countries

According to Table 1, the most popular fields in which international tertiary students complete their studies differ from country to country. In most countries, business administration and law is the most popular field for international students. Principally, in Australia, the second largest host country for international students in the world, 47 percent of the foreign students, accounting for almost 250,000 individuals, study business, administration, and law. The United Kingdom, France, and Canada are the other popular destinations for this field. Besides that, engineering, manufacturing, and construction is the most popular field for international students in Germany and Türkiye. In addition, Spain stands out in health and welfare, with 37 percent for international tertiary students.

Apart from these, when the figures of international students as a percentage of total higher education are evaluated, countries that host the largest shares of international students in comparison to their total higher education populations are listed as follows Australia 31.3%, Canada 23.7%, the U.K. 22.3%, New Zealand 13.5%, France 13.4%, and Netherlands 13.2% (Project Atlas, 2020). Australia has the highest ratio of international students per head of population globally by a large margin.

4.2. Major origin continents of the most popular countries

When we look at the origins of international tertiary students, more than fifty percent of them come from Asian countries. The top three most popular destinations for Asian students are the United States of America, Australia, and the United Kingdom. For European students, the United Kingdom is the most popular destination, followed by Germany and the United States of America. Meanwhile, African tertiary students mostly prefer to study in France by a large margin. Students from Latin America and the Caribbean countries mainly desire to complete their studies in United States of America.

Table 2. Inbound international student matrix by country of destination and continent of origin

Global top ten destination countries	Continent of origin							
	Total	Asia	Europe	Africa	Latin America and the Caribbean	Northern America	Oceania	Areas not specified
United States	976,853	748,532	66,937	47,864	79,515	26,889	7,115	1
Australia	509,160	439,706	16,014	10,971	20,004	6,446	3,950	12,069
United Kingdom	489,019	269,355	150,761	29,302	10,214	26,583	2,804	0
Germany	333,233	127,962	122,139	31,028	16,678	9,796	1,532	24,098
Russia	282,922	217,991	41,426	13,047	1,738	243	21	8,456
Canada	279,168	194,274	27,519	25,848	16,722	9,504	729	4,572
France	246,378	54,402	40,767	123,385	15,406	4,622	258	7,538
Japan	202,907	190,083	5,740	2,190	1,311	2,849	723	11
Türkiye	154,505	110,769	20,229	21,564	324	822	118	679
Total	6,093,927	3,137,706	1,031,578	555,195	403,414	152,777	31,850	781,403

Source: (OECD, International student matrix by country of origin and country of destination, 2022b)

Lastly, for Northern American students, the United States of America and the United Kingdom are the two main destination countries. Apart from these, except in France, Germany, and the United Kingdom, Asian students account for more than 70 percent of international students. Origin continent balance of Germany takes attention (Please see Table 2. Inbound international student matrix by country of destination and continent of origin for more details).

4.3. Major origin countries of the most popular countries

When we look closely at the top three origin countries of the global top ten destination countries for tertiary students, there are fifteen origin countries listed in Table 3. China as a source country is in the top three list for all top ten destination countries besides Russia and Türkiye. Russia's major source countries are Kazakhstan, Turkmenistan, and Uzbekistan correspondingly. Furthermore, almost half of the inbound students from the United States of America, Australia, Canada, and Japan come from China and India. The hegemony of Chinese students in Japan also takes attention with 45.1 percent. Lastly, it is also noteworthy that France and particularly Germany have no dominant source of country for inbound international students. Considering the situation of Türkiye in this field, Kılınç et al. (2021) mentioned the changes in the global student flows. It underlined the increasing share of Türkiye in the global arena. The authors claimed that the significant rise in the number of international students in Türkiye is mainly related to the effects of instability in the country's hinterland. Additionally, Şimşek and Bakır (2016) argued that the major source countries of Türkiye are Turkic republics such as Kazakhstan and Uzbekistan and African countries.

Table 3. Inbound international student matrix by top ten country of destinations and origins

Global top ten destination countries*	Top three origin countries (%)														
	CN	IN	KZ	TM	VN	NP	SY	MA	AZ	DZ	UZ	F	KR	US	A
United States	34.8	13.6											5.1		
Australia	30.6	18.3				8.2									
United Kingdom	25.0	5.6												4.0	
Germany	9.7	5.6													3.9
Russia			25.2	9.9							9.7				
Canada	27.1	26.6										6.3			
France	9.5							12.7		10.0					
Japan	45.1				20.0	7.4									
Türkiye				11.4			17.5		12.5						

CN: China, IN: India, KZ: Kazakhstan, TM: Turkmenistan, VN: Vietnam, NP: Nepal, SY: Syria, MA: Morocco, AZ: Azerbaijan, DZ: Algeria, UZ: Uzbekistan, F: France, KR: Republic of Korea, US: United States of America, A: Austria
Source: (OECD, Enrolment of international students by country of origin, 2021a)

Nevertheless, for Türkiye, the major origin countries are Syria, Azerbaijan, and Turkmenistan, respectively, and except for Syria, there is no instability in the other main source countries of Türkiye (Please see Table 3). Furthermore, the major origin continents of Türkiye for international students are Asia (71.7%), Africa (13.9%), and Europe (13.1%). The rate of European students pays attention here. Aydemir (2011) noted that many international students coming to Türkiye from European countries are Turkish citizens born abroad.

Thus far, destination countries of international students are mentioned mostly. In Table 4, the origin countries of international students are displayed to provide a further point of view. At first glance, Asian countries draw attention, particularly China and India are by far the two countries that send the highest number of higher education students abroad in Table 4. Parenthetically, Germany, France, and the United States of America are in the top ten in both destination and origin country lists. Lastly, Turkmenistan and Kazakhstan significantly draw attention with high ratios of their number of outbound students by the total population. For instance, there were 46 thousand outbound students from Turkmenistan, with six million populations. The ratio of outbound students per population reaches 77 per thousand.

A total of 25,663 Turkish students (outbound) were abroad to complete their tertiary-level studies in 2019. Meanwhile, there were 154,505 international tertiary students (inbound) in Türkiye in the same year (OECD, Enrolment of international students by country of origin, 2021a). The net flow ratio of internationally mobile students (inbound - outbound) of Türkiye is positive with a high margin. The numbers indicate that Türkiye receives six times more international students than it sends abroad. Apart from these, Metin (2022) identified ten target countries where Türkiye has a very high potential to increase the number of international students and thus

export education services. These countries are listed as Kazakhstan, Uzbekistan, Ukraine, Russia, Saudi Arabia, Nigeria, Morocco, Pakistan, Bangladesh, and Indonesia.

Table 4. Leading origin countries of international tertiary students

No	Country of origin	Number of outbound students*	Population (in millions)**	Ratio Per Thousand (‰)
1	China	859,718	1,402	0.6
2	India	305,251	1,380	2
3	Vietnam	112,531	97	12
4	Germany	92,814	83	11
5	Republic of Korea	84,780	51	17
6	Kazakhstan	82,356	18	46
7	Nepal	76,795	29	26
8	France	67,035	67	10
9	Ukraine	66,321	44	15
10	United States	63,063	329	2
11	Italy	55,699	59	9
12	Saudi Arabia	54,582	34	16
13	Malaysia	46,675	32	15
14	Turkmenistan	46,038	6	77
15	Canada	43,201	38	11
33	Türkiye	25,663	84	3

*Source: (OECD, Enrolment of international students by country of origin, 2021a)

**Source: (The World Bank, 2021)

5. Conclusions and discussions

5.1. Main findings and theoretical contributions

Even though many countries perceive Europe and the United States of America as critical partners, intra-regional and South-South cooperation between several emerging countries represents a clear shift in the focus away from Western models of internationalization (De Wit et al., 2015). Regional strategic collaborations can also pave the way for the formation of “regional isomorphism” that will be built based on the needs of regions rather than a single global isomorphism in higher education. In this way, the visibility of some regional best practices may also increase in other parts of the world. Thus, the global education system can take on a more multicultural and diverse structure by feeding not only on Western values and practices but also on practices from different parts of the world. Countries that can implement unique internationalization strategies by blending local and regional societies' economic, social, cultural, political, and technological needs will achieve a sustainable competitive advantage in higher education.

Since 2000, the top ten popular destinations for international students have changed significantly. While Russia, United Arab Emirates, China, and Türkiye entered the list from the fifth, seventh, ninth, and eleventh places, respectively, Spain, Austria, and Belgium are no longer in the top ten list. Additionally, the international student share of Canada has considerably risen between 2000 and 2019 from 2 percent to 4.6 percent, which in turn, Canada has become the sixth most popular destination for international tertiary students in the world. Besides Canada, Australia is the only developed country that increased its international tertiary student share. As a result, Australia has become the second most popular country for international tertiary students.

From a geographic perspective, international student mobility literature focuses on the mobility between countries. Nevertheless, regional dynamics, such as current and historical ties between countries in close regions, influence international student mobility. Therefore, this paper also evaluated student mobility by adding a continent dimension. Türkiye has strong historical and cultural ties with the Balkans, Caucasus, Central Asia, Middle East, North and Sub-Saharan Africa, and South Asia. Because regional internationalization gains importance worldwide, strengthening Türkiye's geographically and culturally close ties offers a strategic advantage in attracting more international students to Türkiye. In fact, Türkiye has been turning this strategic advantage into an opportunity, especially since 2010. Regional internationalization strategies of Türkiye have attracted around 300.000 international students from nearby geographies. Türkiye has taken place among the top ten countries international students prefer. According to the findings of this paper, Asian students lead with a rate of 71% among international

university students coming to Türkiye. Interestingly, the rate of African students (13.9%) and European students (13.1%) were close to each other in Türkiye.

5.1. Practical implications

The most popular subjects for international students in Türkiye engineering, manufacturing, and construction (25%) and business, administration, and law (19%). Türkiye's rapid growth in the engineering, manufacturing and construction sectors may also have been a factor that increased the rate of international students choosing these fields. A strategic target for Türkiye could be that specific disciplines or topics, which are significant for Türkiye, such as medicine, computer engineering, electronic engineering, and mechatronic engineering, could be identified, and successful international students could be funded in these programs.

In the near future, Türkiye could target several countries to increase its market share in the short run. For instance, more than 50 thousand students from Kazakhstan, Uzbekistan, Ukraine, Russia, Saudi Arabia, Nigeria, Morocco, Pakistan, Bangladesh, and Indonesia have higher education abroad. Most of these countries are geographically and/or culturally close to Türkiye. Nevertheless, it has been observed that five of these ten countries were not among *the priority target countries* determined within the scope of "The Target-Oriented Internationalization in Higher Education" project published by CoHE in June 2021. Thus, focusing on the aforementioned five additional countries can increase the number of international students in Türkiye.

Lastly, the internationalization of higher education also has several risks, such as quality assurance issues, commercializing of higher education, and educational inequality access to higher education except by elites. Indeed, compromising the quality of education to increase income from 'education', particularly by decreasing the acceptance levels of students, may result in unqualified higher education graduates. Therefore, quality and quantity expectations should be balanced in higher education strategies at the country and institutional levels. In other words, higher education institutions should not compromise on the quality of education while targeting to increase the number of international students, particularly in emerging countries like Türkiye. In this regard, the education outcomes of international students should be closely monitored and evaluated by explicit targets. Monitoring graduation rates of international students, transcript of records (grade-point averages), and employability of new graduates could be some examples of explicit targets.

5.2. Limitations and future directions

Some international students may prefer to reside and work in Türkiye after graduation. Thus, future research could be conducted to figure out the brain gain rates of Türkiye by international graduates. Both countries of origin and educational fields could also calculate the brain gain rates of Türkiye through international graduates. To achieve that, the higher education graduation data of CoHE and the international labor force work permit data of the Labour and Social Security General Directorate could be integrated to figure out how many international graduates from which educational fields

References

- Aba, D. (2014). Internationalization of Higher Education and Student Mobility in Europe and the Case of Turkey. *Cukurova University Faculty Of Education Journal*, 42(2), 99-110. Retrieved from <https://dergipark.org.tr/en/pub/uefd/issue/4136/54295>
- Altbach, P., & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, 11(3-4), 290-305. doi:10.1177/1028315307303542
- Barnett, G., & Wu, R. (1995). The International Student Exchange Network: 1970 & 1989. *Higher Education*, 30(4), 353-368.
- Barnett, G., Lee, M., Jiang, K., & Park, H. (2015). The flow of international students from a macro perspective: a network analysis. *Compare: A Journal of Comparative and International Education*, 46(4), 533-559.
- Chaloff, J., & Lemaître, G. (2009). Managing Highly Skilled Labour Migration: A Comparative Analysis of Migration Policies and Challenges in OECD Countries. *OECD Social, Employment and Migration Working Papers*. doi:10.1787/1815199X
- De Wit, H. (2020). Internationalisation in Higher Education: A Western Paradigm or a Global, Intentional and Inclusive Concept? *International Journal of African Higher Education*, 7(2). doi:10.6017/ijahe.v7i2.12891
- De Wit, H., Gacel-Avila, J., Jones, E., & Jooste, N. (2017). *The globalization of internationalization : emerging voices and perspectives*. Routledge. Retrieved from <https://www.becs-bloomsbury.com/encyclopedia?docid=b-9781315657547>.
- De Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015). *Internationalisation of Higher Education*. European Parliament Centre for Higher Education Internationalisation (CHEI) European Association for International Education (EAIE) & International Association of Universities (IAU). doi:10.2861/444393

- Kılınc, M., Kurt, A., & Ortaç, F. (2021). International Student Mobility and Turquality Perspective in Higher Education. *Journal of University Research*, 4(2), 119-126.
- King, R., Findlay, A., & Ahrens, J. (2010). *International Student Mobility Literature Review*. HEFCE.
- Knight, J. (2012). Student Mobility and Internationalization: Trends and Tribulations. *Research in Comparative and International Education*, 7(1), 20-33. doi:10.2304/rcie.2012.7.1.20
- Kondakci, Y., Bedenlier, S., & Zawacki-Richter, O. (2017). Social network analysis of international student mobility: uncovering the rise of regional hubs. *Higher Education*, 75, 517-535. doi:10.1007/s10734-017-0154-9
- Malcolm, T. (2022). Internationalisation of higher education beyond the West: challenges and opportunities – the research evidence. *Educational Research and Evaluation*, 239-259. doi:10.1080/13803611.2022.2041853
- Marinoni, G. (2019). *Internationalization of higher education: An evolving landscape, locally and globally: IAU 5th Global Survey*. DUZ Verlags-und Medienhaus GmbH.
- Metin, F. (2022). *Yükseköğretimde Uluslararasılaşma. Türkiye'nin Rekabet Gücünün Analizi*. Ankara: Pegem Akademi.
- OECD. (2015). *Overview of ISCED 2011 Tertiary Education Levels*. Retrieved from <https://www.oecd-ilibrary.org/docserver/9789264228368-9-en.pdf?expires=1633528188&id=id&accname=oid007997&checksum=E87739A0570E0D8C7413D11DA9740566>
- OECD. (2021a). *Enrolment of international students by country of origin*. Retrieved from OECD Education Statistics (database): https://stats.oecd.org/Index.aspx?DataSetCode=EDU_ENRL_MOBILE#
- OECD. (2021b). *Mobile student matrix by country of destination*. Retrieved from OECD Education Statistics (database): https://stats.oecd.org/Index.aspx?DataSetCode=EAG_MOBILES_ORIGIN
- OECD. (2021c). *Share of international students and all students by field*. Retrieved from OECD Education Statistics (database): <https://stats.oecd.org/Index.aspx?QueryId=108571#>
- OECD. (2022). *Education at Glance*. OECD.
- OECD. (2022a). *Education at a Glance 2021: OECD Indicators*. Paris: OECD Publishing.
- OECD. (2022b). *International student matrix by country of origin and country of destination*. Retrieved from OECD Education Statistics (database): https://stats.oecd.org/Index.aspx?DataSetCode=EAG_ENRL_MOBILES_FIELDS#
- Portnoi, L., Rust, V., & Bagley, S. (2010). *Higher education, policy, and the global competition phenomenon*. New York: Palgrave Macmillan.
- Project Atlas. (2020). *A Quick Look At Global Mobility Trends*. Retrieved from Project Atlas: <https://ie.widen.net/s/rfw2c7rrbd/project-atlas-infographics-2020>
- Richters, E., & Teichler, U. (2006). Student Mobility Data: Current Methodologic Issues and Future Prospects. In M. Kelo, U. Teichler, & B. Wachter, *Student Mobility in European Higher Education* (pp. 78-95). Lemmens Verlag.
- Sarcan, E. (2022). Yüksek Vasıflı İşgücünün Göçü: Beyin Göçü. *Ankara Üniversitesi Sosyal Bilimler Dergisi*, 13(2), 69-75. doi:10.33537/sobild.2022.13.2.7
- Şimşek, B., & Bakır, S. (2016). Uluslararası Öğrenci Hareketliliği ve Atatürk Üniversitesinin Uluslararasılaşma Süreci. *Atatürk Üniversitesi Türkiyat Araştırmaları Enstitüsü Dergisi*, 0(55), 509-542.
- The Department of Education, Skills and Employment of Australia. (2019, December). (2019). *Understanding the maturity of destination countries and the drivers for emerging destinations*. Retrieved from https://internationaleducation.gov.au/international-network/australia/InternationalStrategy/EGIPProjects/Documents/Global%20student%20mobility_Case%20study%201_%20Emerging%20destination%20countries.pdf
- The Higher Education Council of Türkiye. (2021). *Target-Focused Internationalization in Higher Education*. Ankara: Higher Education Council of Türkiye. Retrieved from <https://www.yok.gov.tr/Documents/Yayinlar/Yayinlarimiz/2021/yuksekogretimde-hedef-odakli-uluslararasilasma.pdf>
- The World Bank. (2021). *Population, total. All Countries and Economies*. Retrieved from <https://data.worldbank.org/indicator/SP.POP.TOTL>

Author contribution statements

The author contributed to the research's design and implementation, the results, the analysis, and the manuscript's writing.

Disclosure statement

The author reported no potential conflict of interest.

Ethics committee approval

Ethics committee approval is not required as the data used in this study is based on the Organization for Economic Cooperation and Development (OECD) international student mobility database. All violations arising from this article are the responsibility of the author(s). In addition, the comments regarding the findings obtained within the scope of this research belong only to the researchers and do not impose any responsibility on the Turkish Statistical Institute.