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International Student Mobility and Internationalization of Higher Education in Hungary and China: A Comparative Analysis

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ABSTRACT

Global competition is currently reshaping higher education worldwide. Hungarian and Chinese higher education institutions are increasingly channeling resources to higher education development to promote the internationalization of higher education. There have been few studies specified differences between Hungarian and Chinese higher education internationalization. Over the past few years, both Hungarian and Chinese governments have started to prioritize raising international student mobility to enhance countries' competitiveness at the global level. This article outlines the definition of higher education internationalization to provide a comprehensive understanding of this term. This article also briefly describes the background of higher education in Hungary and China and compares determinants of higher education internationalization between the two countries, particularly focusing on the context of international student mobility. This article summarizes and compares higher education internationalization indicators between Hungary and China. This article contributes to a better understanding of the development of higher education internationalization in Hungary and China

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INTRODUCTION

Understanding of Higher Education Internationalization

The understanding of internationalization of higher education is not unified. Efforts have been made to define "internationalization" in a way which can be accepted widely. The commonly accepted definition of internationalization is "the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education" (Knight 2008, p21). Thereby, the definition of higher education internationalization refers to the primary and universal functions of an institution of higher education within the framework of the cross-border communication.

Higher education communication across countries is quite complicated. Different countries have varied emphases and expectations confronted with this theme. Worldwide, internationalization is becoming increasingly important in the higher education sector. A diversity of views calls for further clarification and specification, and the discussions on internationalization are diverse across countries. A country's unique history, indigenous culture(s), resources, priorities, etc. shape its response to and relationships with other countries (Qiang, 2003). Hence, in order to meet the demands of the international cooperation of societies and labor markets, multilingualism and intercultural competency are of great importance. Given the various historical, regional and cultural differences, several countries have put forward characteristic understanding and emphasized the role of higher education internationalization. For example, higher education internationalization in the U.S. highlights the importance of campus leadership in effectively managing the change and coping with the challenges of increasing globalization (Said, Ahmad, Mustaffa & Abd Ghani, 2015). In Germany, higher education institutions pay attention to the growing impact of English language use in higher education internationalization (Erling & Hilgendorf, 2006).

The understanding of higher education internationalization can be described from two perspectives. Firstly, the basic function of higher education is academic, the level of specialization in research and the size of the investments that are indispensable to certain fields of research and development requires collaborative efforts and intensive international cooperation. Secondly, the understanding of higher education internationalization calls for a wider goal that contributes to the sustainability of the international dimension, e.g., restructuring and upgrading of higher education functions and services to meet the requirements and cope with challenges related to globalization.

Higher Education Internationalization in Hungary

Until the late 1980s, a Soviet-type interpretation of internationalization was used in Hungary, which isolated countries of the communist bloc within the Iron Curtain. At that time, government interest went beyond academic or market concerns in higher education. The old type of higher education policy was replaced with a European mode by the first democratic government. Since then, the internationalization process progressed in Hungary. Starting from 1989, multitudes of youth entered the Hungarian higher education system which compelled Hungarian higher education systems to expand their capacity. After joining European Union (EU) in 2004, Hungarian higher education participated in more and more academic cooperation with other European countries as

well as in the formulation of new academic networks among higher educational institutions. The development and transformation of higher education in Hungary has a close connection with politics and policy.

After the collapse of state socialism in Hungary, the socialist concepts of growth and development were replaced by capitalist concepts of growth and development (Kulcsar & Domokos, 2005). Changes in higher education in Hungary are strongly related to those in the economic and social environment since the change of the political system (Pusztai & Szabó, 2008). Post- socialist countries (e.g., eastern Europe countries) are still lagging behind the developed western Europe countries; therefore, Hungary must grow fast to catch up. The reforms of higher education called for a wider aspect to all these challenges, which slowly progressed the internationalization process.

The Bologna process played a radical role in Hungarian higher education reform and internationalization. Driven by the pressures and provisions of the Bologna process (1999), Hungarian higher institutions escalated the significance of student mobility and exchange. Furthermore, Hungarian education policy puts a special emphasis on internationalization strategies based on the foreign student mobility (Pusztai et al. 2006). Hungarian higher education institutions were motivated to participate in the internationalization process because the competitiveness of higher education institutes resides in student mobility. The number of international students coming to Hungary to pursue academic degrees increased every year since 2000.

However, experts analyzing changes from an economic and social point of view are not optimistic concerning the reforms. These reforms do not represent a way to "Bologna heaven", an ultimate expectation to establish the three-cycle degree structure (bachelor, master's, doctorate) nor do they adopt shared instruments, such as the European Credits Transfer and Accumulation System (ECTS) and the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). The changes in higher education should be viewed in a wider economic, social, and historical context. For instance, social consequences answer to the challenges caused by the growing number of participants in higher education internationalization (Kozma, 2004). With regard to Hungary, even though realization of Bologna process received criticised opinions, researchers point out that the comparability and mobility declared as major objectives are still goals rather than features of reality (Bokros, 2007).

Higher Education Internationalization in China

Higher education internationalization in China entered into a period of rapid development since the 1990s with the implementation of open-door policy and reform. At that time, higher education internationalization was a relatively new conception. Research on higher education internationalization mainly focuses on: exploring the meaning and features of higher education internationalization; promoting higher education nationalization; discovering the trend of higher education renovation; and coping with China's politics, economy as well as society, culture etc. In China, the economy developed at a high speed and Chinese society was changing vividly. As a result, the mission of higher education was changing overtime in China. In the recent decade, the research focus in higher education shifted to identifying opportunities, challenges as well as solutions China is facing in the globalization process and to be prepared for worldwide competition.

During the 1980s and 1990s, the Chinese government controlled higher education internationalization, and all types of collaboration with foreign institutions including foreign student enrollments, of which, governmental approval was a requirement. Since 2000, socio-economic development in China has prompted the Chinese government to begin to allow institutions to have more autonomy as well as to speed up the process of internationalization (Li, 2016). Entry into the World Trade Organization (WTO) provided new impetus to the development of transnational educational programs in China. China came to attach great importance to the cultivation of technology, knowledge and talents with the development of economic globalization and internationalization. The economic growth requires overseas higher education support, which is a driving power of higher education internationalization in China. The Chinese government launched a goal to construct Top One World Class Universities in 2015, the most active strategy of which was international exchange of students such as enrollment of foreign students, and sending students abroad for long-term or short-term study (Huang, 2003).

Higher education internationalization brought a lot of benefits to China. On one hand, cross-border education provided powerful support to the knowledge exchange and culture integration between nations. On the other hand, higher education facilitated social development and accelerated the process of globalization in China. The globalization of the Chinese economy has a positive impact on the government's role to internationalize higher education. With the support of the Chinese government, internationalization of higher education in China continues to develop and expand because internationalization of higher education in China is one of China's national goals, and the process is still developing (Lin, 2019).

Progress of Internationalization of Higher Education in Hungary and China

In recent decades, both Hungary and China have made considerable progress in the internationalization of higher education. Higher education institutions (HEI) in Eastern European countries were eager to build connections with other institutions through student mobility since the 1990s (Kasza, 2010). Hungary's government also established scholarship programs and called for the promotion of student mobility. In China, economic development was the main task in the past few decades. International higher education communication and cooperation was relatively weak compared with the western countries 20 years ago. Higher education internationalization in Hungary and China is an increasingly important sector in promoting the work of higher education institutions, and also facilitates socio-economic development. Considering the trend in both countries to promote higher education internationalization, it is of importance to compare their similarities and differences in higher education internationalization process.

Student Mobility

The mobility of international students is a highlighted factor in evaluating the quality of higher education internationalization (De Wit & Knight, 1999). Also, the mobility of international student has been viewed as one of the indicators of campus diversity, internationalization, and a prime source to boost the revenue of the institution of higher education (Bista et al., 2018). Additionally, evidence shows that the mobility of international students impacts the reformation of culture, economics and even politics (Cohen & Sirkeci, 2011; Kell & Vogl, 2008). Therefore, the mobility of international

students is of great importance in formulating the trend of globalization. Given the complexity and multifaceted issues which go beyond international student mobility, Hungary and China launched student mobility programs to attract international students. Both Hungary and China are trying to enroll an increasing number of international students as a strategy to improve national impact globally. To better understand the context of higher education internationalization between Hungary and China, the determinants of international student mobility are discussed followed by comparing student mobility.

RESEARCH METHODS

This study aims to provide a better understanding of higher education internationalization. Additionally, this article describes the brief history of higher education internationalization in Hungary and China. By comparing the higher education internationalization determinants, this article focuses on the context of international student mobility to compare the similarities and differences between the two countries.

The outcomes of the present study follow a two-step process. Firstly, the higher education determinants are selected from previous published articles, which provide comprehensive examples of higher education internationalization indicators. The descriptive analyses compare the data between Hungary and China regarding to the summerized indicators. Secondly, given the importance of student mobility in higher education internationalization, detailed number of inbound and outbound international students in Hungary and China is presented, by which, descriptive comparisons are made.

The selection of the two countries (Hungary and China) was determined for the following reasons:

- Changes of society and economy: Historical evidence shows that changes of society and ecnomic in both Hungary and China calls for attention of higher education internationalization. Therefore, it will be interesting to compare these two countries.
- Governmental control and execution: Both countries have experience in the system of socialism. The sructure of high education development is associated with governmental control, which contributes to the necessity of higher education comparison.
- Culture and language: Chinese and Hungary are both faced with linguistic isolation, culture variance, information isolation and strategic alliances with foreign partners. It will be intersting to discuss the two countries considering these similarities.

RESULTS & DISCUSSION

Comparison of Higher Education Determinants between Hungary and China

This section discusses the major determinants of internationalization in higher education. A comparative analysis of those determinants that may influence student mobility is made between Hungary and China. This article only addresses these two countries for the following reasons. First of all, English language use is regarded as an important indicator of the internationalization of higher education, because both Hungary and China are non-English speaking countries and their native languages are regarded as the most difficult languages in the world. Second, both countries emphasize student

mobility in higher education internationalization. Thirdly, the two countries can serve as examples of internationalization of higher education. For instance, China represents a country in Asia; Hungary, represents a country in Europe. By comparing the similarities and distinctive aspects of higher education internationalization between these two countries, this article obtains insights into higher education determinants.

Studies in the European area have surveyed the influencing factors on student flow. Country size, cost of living, distance, educational background, university quality, the host country language, climate as well as a country's characteristics and time effects are all found to be significant determinants (González et al., 2011). To our best knowledge, there is no article discussing the higher education determinants in Hungary, however, a study investigated 33 European countries (including Hungary) and demonstrated that educational factors, political/ social/cultural factors and economic factors influence international student mobility (Caruso & De Wit, 2015). In China, findings reveal that "cost" and "quality of education" play leading roles higher education internationalization (Cao, Zhu & Meng, 2016). This article summarized a number of determinants that have been reported as influential indicators for internationalization of higher education. The summarized indicators are shown in Table 1.

Table 1: Comparison of Higher Education Internationalization Indicators between Hungary and China

Determinants	**Hungary**	**China**
Native Language	Hungarian	Chinese
Climate	Typical European continental influenced climate with warm, dry summers and fairly cold winters.	There is tropical zone, subtropical zone, warm temperate zone, middle temperate zone, cold temperate zone and plateau zone.
Location	Central Europe	East Asia
Socio-economic status**	Developed country	Developing country
Top1000 ranked universities (by QS) #	6	42 (mainland China)
Higher education system	Three-circle education (4 years' bachelor; 1.5/2 years' master; 4 years' PhD)	Three-circle education (4 years' bachelor; 3 years' master; 3 years' PhD)
Main discipline focus	Medical and Health Science; Agricultural Science; Computer Science and Information Technology; Arts; Architecture; Business; Chemistry; Engineering; Finance;	Clinical Medicine; International Economics and Trade; Computer Science and Technology; Business Administration; Chinese Language and Literature; Civil Engineering;

	Mathematics; Sport science	Mechanical Engineering; Architecture; Communication Engineering; Chinese Language Training

Note: ** source of data: World Bank; # source of data: QS Top university ranking 2020

Hungary and China share a number of broader similarities that are relevant to discourse on higher education internationalization. In addition to the comparisons of higher education described above, Hungary and China share different external interactions to higher education internationalization. Hungary, with the entry into European Union, develops its higher education under the framework of European Higher Education Area. China, as the biggest country in Asia, is trying to find its own way together with taking experiences from developed countries to promote its internationalization of higher education.

International Student Mobility in Hungary and China

International student mobility and exchange is one of the most significant ingredients for assessing internationalization (Ternai & Szabó 2016). Hungary has one of the lowest levels of general mobility of the population compared to western European countries (Hárs & Sik 2008; Juhász 2003). Yet, the Hungarian higher education system expanded very quickly as measured by numbers of higher education institutions, numbers of students and disciplines after reforming the higher education system with the enaction of Higher Education Act (1993). In China, the international student mobility changed between 1999 and 2020 with the economy's needs and motivations to build research excellence (Choudaha, 2017). Chinese government control is arguably semi-peripheral economically and symbolically and there are asymmetries and inequalities in international student mobility in China (Yang, 2020).

In recent decades, international student mobility has become an increasingly important part of the international higher education landscape. Significant changes in the infrastructures and capacity of higher education systems encountered speedy growth across the world. Also, the international student market is changing by seeking potential benefits for stakeholders. It is widely acknowledged that an increasing number of higher education opportunities for study at home and abroad is contributing to raising competition in the international student market. At the same time, a majority of national governments have been allocating more funds to higher education to improve the quantity and quality of tertiary education with the purpose of education reputation at the world level.

European countries are increasingly seeking to recruit international students and send their native students out for international study because, in an era of globalization, international students hold several short- and long-term gains for institutions and countries. Meanwhile, Asian countries have entered the market with declared ambitions to become regional and global education centers by attracting as many international students as possible to their countries. This article chooses Hungary and China as examples to represent Europe and Asia, and compares the international student mobility data to provide a clear picture of internationalization of higher education by comparing the number of student mobility. Table 2 shows the number of inbound and outbound students in Hungary and China from 2014 to 2018. The "Rate" in Table 2 indicates the

inbound and outbound rate of international students compared to the total number of students.

Table 2: Number of Inbound and Outbound Students in Hungary and China

Year	Inbound Students				Outbound Students			
	Hungary	Rate	China	Rate	Hungary	Rate	China	Rate
2014	23208	7.04	108217	0.26	9566	2.90	770784	1.84
2015	21707	7.05	123127	0.28	10643	3.46	819855	1.89
2016	26155	8.86	137527	0.31	11634	3.94	868319	1.98
2017	28628	9.97	157108	0.36	12397	4.32	928365	2.10
2018	32332	11.41	178271	0.40	12865	4.54	993367	2.21

Note: The dataset only focuses data on mainland China. http://data.uis.unesco.org/

Despite that there was a temporary decrease of inbound students in 2015, Hungary enrolled an increasing number of international students and sent out a climbing number of native students. The Erasmus program promoted short-term Hungarian student outbound mobility within Europe. From 2013, with the establishment of the StipendiumHungaricum Scholarship, an increasing number of international students outside Europe come to study in Hungary (Tompos, 2019). In China, both inbound and outbound international students are increasing, but as shown in Table 2, China sends more students to study abroad than attracting students to study in China. There is an imbalance in outbound and inbound student mobility in China, which indicates that China is "outward-oriented" in higher education internationalization (Wu, 2019). However, Hungary is more successful in attracting students to study in Hungary than sending native students abroad compared with China. In Hungary, even though the number of inbound and outbound students are lower than China, both inbound and outbound mobility rate is higher than China.

IMPLICATIONS AND CONCLUSION

Over the past decade, Hungary and China have made significant progress in promoting higher education internationalization with the strategy of enhancing student mobility. The student mobility flow has considerably increased in both countries. To our best knowledge, this is the first study to compare the higher education internationalization and student mobility between Hungary and China. Given the similarities and differences from historical, social and economic perspectives in both countries, the present study shows comparability of the two countries and presents interesting results. This study discusses student mobility, which is a dominant indicator of evaluating higher education internationalization. With the increased number of mobilized students, higher education evolutes from national level towards international level. The

justification of higher education internationalization determinants is county-specific. The collected data in the study provides an overview comparison of the Hungary and China, which helps to better understand the reality of higher education internationalization processes.

Hungarian and Chinese governments hold positive attitudes toward internationalization student mobility initiatives and activities. They promote higher education internationalization as an important initiative due to their increasing awareness of the strategic position of higher education on international impact. From the experience of higher education internationalization, the role of government should be highlighted. The strategy of student mobility and expectations on student mobility reflect the country's role as either sending partner or hosting partner. Both outbound-oriented and inbound-oriented strategies may enhance its worldwide positive impacts and its status in the world community system. In addition, the typology of "inbound-oriented" and "outbound-oriented" higher education internationalization provides appropriate perspectives to identify each country's long-term and short-term goals in promoting higher education and international relations. Student mobility is an effective strategy in higher education internationalization. Rather than focusing on student mobility, the governmental policy should also formulate the trend of higher education internationalization. Considering the differences in higher education determinants, it is reasonable to encourage each country to make decisions on higher education internationalization based on their own situations by emphasizing the international role of higher education.

The main significance of the study is that the goal of higher education internationalization is associated with globalization including economic, culture, politics, etc. By summarizing higher education internationalization determinants and comparing the data of student mobility, this study provides critical analysis for the development of higher education internationalization. The comparison between Hungary and China can add evidence in today's discussion on higher education internationalization and has an impact on the international trend of promoting higher education progress.

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