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THE IMPACT OF ENGLISH LANGUAGE, SOCIAL TOLERANCE, AND QUALITY EDUCATION ON ECONOMIC GROWTH AND INTERCULTURAL AWARENESS

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The aim of this dissertation is to obtain a doctoral (PhD) degree in the scientific field of „Management and Business”

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I undersigned (name: Osama Alhendi**……..**, date of birth: 27/04/1990…….) declare under penalty of perjury and certify with my signature that the dissertation I submitted in order to obtain doctoral (PhD) degree is entirely my own work.

Furthermore, I declare the following:

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- I handled the technical literature sources used in my dissertation fairly and I conformed to the provisions and stipulations related to the dissertation;
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- No dissertation which is fully or partly identical to the present dissertation was submitted to any other university or doctoral school for the purpose of obtaining a PhD degree.

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LIST OF ABBREVIATIONS

CIS- Commonwealth of Independent States

EU- European Union

GDP per capita- Gross Domestic Product per capita

UN- United Nations

SDGs- Sustainable Development Goals

ICC- Intercultural Communicative Competence

KASA- Knowledge, Attitude, Skills, and Awareness

EPI- English Proficiency Index

GMM- Generalized Method of Moments.

EFA- Exploratory Factor Analysis

CFA- Confirmatory Factor Analysis

SEM- Structural Equation Model

ET 2020- Education and Training 2020

UNESCO- United Nations Educational, Scientific and Cultural Organization

CAE- Culture Action Europe

OHCHR- Office of the United Nations High Commissioner for Human Rights

OECD- Organization for Economic Co-operation and Development

EPI- English Proficiency Index

HDI- Human Development Index

HCSO- Hungarian Central Statistical Office

IDI- Intercultural Development Inventory

CCAI- Cross-Cultural Adaptability Inventory

CCWMS- Cross-Cultural World-Mindedness Scale

ISI-Intercultural Sensitivity Inventory

AIC-The Assessment of Intercultural Competence

DMIS-Development Model of Intercultural Sensitivity

FEIL-Federation of the Experiment in International Living

PCA- Principal Component Analysis

ML- Maximum Likelihood

RMSEA- Root Mean Square Error of Approximation

CFI- Comparative Fix Index

SRMR- Standardized Root Mean Squared Residual

CMIN/DF- Minimum Discrepancy per Degree of Freedom

CR- Composite Reliability

AVE- Average Variance Extracted

MSV- Maximum Shared Squared Variance

OXLO- Oslo Extra Large

PISA- Programme for International Student Assessment

ISATs- International Student Achievement Tests

TIMSS- Trends in Mathematics and Science Study

HTMT- Heterotrait-Monotrait

INTRODUCTION

In fact, economic growth triggered the interest of economists a long time ago. Literature has spent the last few decades attempting to explain why there are disparities in wealth levels among various economies. For example, there are multiple issues that require detailed explanations, as in the case of the fast economic growth of East Asian economies in comparison to others, such as Sub-Saharan Africa (Renelt, 1991). As a result, economists developed many different theories in order to explain these differences. Based on the literature, the most well-known theories, which help to estimate and define economic growth, are divided into two important categories: neoclassical as well as endogenous growth theories. This type of theories focused on physical and human capital as main determinants of the economic growth (Lucas Jr, 1988; Romer, 1986; Solow, 1956). For instance, the economic growth theory developed by Solow (1956) is considered one of the well-known neoclassical (i.e., exogenous) economic growth theories. According to this theory, Solow (1956) argues that economic growth can be determined through physical capital as well as the advancement of technology on the short and long run respectively. After that, human capital was added as an important complementary factor besides physical capital in the economic growth models (look at the study of Mankiw et al. (1992) and Islam (1995)). Furthermore, the advocates of endogenous economic growth theory, such as Romer (1986), Lucas (1988), Grossman and Helpman (1991), etc., included another important productivity variables such as leaning by doing as well as research and development as necessary predictors of the economic growth. Hereby, each of physical, human capital as well as technology advancement are considered important determinants of the economic growth in most of the economies. Other economists, such as Easterly and Wetzel (1989) and Fischer (1992), argue that variables influencing the efficiency of savings and investment play an equally essential role in determining economic growth.

Moreover, literature defines economic growth as a process in which there are increases in total output (which is usually estimated by gross domestic product (GDP)). On the other hand, other studies used this definition to describe economic development. In other words, based on that, economic growth and economic development are identically defined and described (Loeb, 1957; Meir & Baldwin, 1957). On the other hand, some argue that economic growth is endogenous process in which the stimulator comes from within the economic system, while others claim that economic development is exogenously resulted (Brenner, 1966). In addition, most of the literature see economic development as structural change. This change can be social, political, or economic. Others also claim that economic development could also contain

economic growth. Hereby, economic development consists of structural change as well as raise of economy's overall output (Johnston & Kilby, 1975; Kindleberger, 1965).

In the last years, due to economic globalization phenomenon, the topic of economic growth was widely discussed by most of the literature. In fact, economic globalization indicates the engagement of several economies in the world's economic growth (Chang & Lee, 2010). Furthermore, its influence was observed in many different aspects including the ease of physical capital flow among different economies, trading, immigration and the diffusion of knowledge and technology (Titalessy, 2018). Despite the fact that globalization is still a trendy issue, most studies that addressed it focused on the economic aspect and neglected the rest, such as society, politics, and culture (Saich, 2000). Based on the study of Grin (2003), there are many trendy issues related to language, ethnicity, and culture which represent critical challenges in the current time. For example, after the collapse of the Berlin wall in 1989, the economies of Eastern Europe and the commonwealth of independent states (CIS) have experienced geographical and political changes. These changes reaffirmed the existence of different identities, which are also related to specific languages. In addition, the twenty-first century is experiencing tremendous and diverse migratory flows. This trend leads to diversity in terms of languages, ethnicities, and cultures in the host economies. On the other hand, the creation of political and economic regions such as the European Union (i.e., EU) contributes to the presence of linguistic diversity and possible conflict between various languages spoken by diverse groups of users. Finally, the rise in the proportion of international commerce in global production and a drop in transportation costs and telecommunications. These two advances could reduce the cost of having frequent interaction with a diverse group of individuals speaking a diverse set of languages (Grin, 2003). Therefore, literature on economic globalization and economic growth must thus take into account both socio-cultural factors.

In order to address these problems, the research tries to study the economic effect of social tolerance toward cultural diversity, economy's people language skills (English language proficiency) as a solution to linguistic diversity, and quality education on the economic growth. The novelty behind this research is the inclusion of language proficiency factor besides each of social tolerance and quality education into the economic model since the majority of the literature has addressed social tolerance and quality education and their effect on the economic growth separately and without giving attention to the linguistic factor. In order to justify the connection between language and each of social tolerance and quality education, let's consider the following studies. Firstly, according to Florida (2003b), tolerance is defined as the level of

openness, inclusion and diversity to all ethnicities, races, etc. Based on that, Florida (2002b) argues that tolerant environments help to attract each of creative people (i.e., creative human capital) as well as technology. On the other hand, speaking a common language helps people adapt to different cultures (Ayrat et al., 2017). Hereby, it can be considered another form of tolerance toward cultural and linguistic diversity. As a result, since diversity implies cultural as well as linguistic differences within the economic region, the research argues that policies which enhance social tolerance and quality of educating widely spoken languages (such as English language) could help to overcome these challenges within the economy. Secondly, the literature demonstrates that English is seen as a proxy for human capital in the labor market. (Chiswick & Miller, 1995). Therefore, enhancing the quality of second language education is necessary for the economic growth. For example, based on the study of Suárez (2005), seeking greater congruence between language education policy and economic strategy enables the economy to attract foreign capital and enhance its exports (as in the case of Singapore and Ireland) (Suárez, 2005). Consequently, since these three variables help to attract skills and knowledge (i.e., Human capital), the research considers them as critical elements of total factor productivity. Following the approach of Mankiw et al (1992), it is possible to include these factors into the economic growth equation (i.e., augmented Solow model) and estimate their effect on the economic growth.

In addition, using the same data of the cross-sectional analysis in this study, the research investigates the economic performance of Hungary in terms of the previously mentioned variables (i.e., English language proficiency, social tolerance, and quality education) at the same time period. In fact, Hungary was chosen as a case study of this research due to the following reasons. Firstly, according to the report of the European Commission (2012), it was found that about 65% of the Hungarian population is not able to communicate in any other language. Furthermore, only 21% of Hungarians rated their English proficiency as very good. Secondly, Hungarian government launched a scholarship program called Stipendium Hungaricum in 2013. The main goal of this initiative is to internationalize and promote Hungarian higher education (Stipendium Hungaricum., 2020). However, this resulted into many different challenges. For example, due to the increasing number of foreign students within education system, Hungarian entities have faced several linguistic and cultural problems such as the lack of the integrative approach which aims to enhance the intercultural communication between Hungarians and foreigners within the university environment (Kovacs & Kasza, 2018). In addition, based on the study of Lannert and Derényi (2021), it was found that institutional

culture and an insufficient understanding of leadership are impediments to higher education's internationalization. Furthermore, when foreign and local students are taught together, staff members have found that Hungarians are less motivated and more constrained than their foreign counterparts (Lannert & Derényi, 2021). Finally, linguistic anxiety could be one of the reasons behind the lack of intercultural communication between the two parties (Z. Hajdú, personal communication, 2018). Based on that, the research tries to address these problems through exploring and explaining the direction of the above mentioned three indicators (English proficiency, social tolerance, and quality education) and their impact on the Hungary's economy over specific time period and by analyzing the Hungarian literature in this regard.

On the other hand, the research also investigates and clarifies the perspective and the reaction of foreign students into these problems during their stay in Hungary. The most suitable model to study foreign student's linguistic and cultural perspective is the one which was developed by Fantini (2007). Based on Fantini (2007), the abilities of people to perform effectively and appropriately when communicating with other cultures are known as intercultural competence. Based on the literature, as observation, tolerance was mostly investigated in the macroeconomic studies, while intercultural competence was studied in the microeconomic ones. However, based on the study of Ihara and Yamamoto (2016), tolerance can be equivalent to intercultural competence. In other words, having low degree of tolerance is equivalent to low level of intercultural sensitivity and vice versa. Hereby, the research used Fantini's model (2007) to clarify and estimate the intercultural competence of foreign students and their attitude toward the host culture and its policies (using survey). Depending on the findings of the two investigations (Hungary's economy and foreign student's intercultural competence), the research can formulate the appropriate policy implications.

Based on the above, the research used the theory of Mankiw et al (1992) in order to investigate the human capital effect on the economic growth. Since human capital represents specific skills and knowledge, the research argues that each of English proficiency, social tolerance (and intercultural competence), and quality education are necessary elements of the total factor productivity and critical to face economic globalizations' different challenges. To support this argument, the research chooses Hungary as a part of this research. In this regard, the research focuses on two different perspectives. The first one is about Hungary economy's English proficiency, social tolerance, and quality education. The second perspective can be clarified by addressing foreigners' intercultural competence (which represented by their knowledge, attitude, skills, and awareness about the host culture). Therefore, the research used the theory

of Fantini (2007) because it focuses on the linguistic and cultural matters. Depending on these two perspectives, the research can support its argument and emphasize the importance of these three economic indicators (on the macroeconomic level) as well as intercultural competence (on the microeconomic level) as necessary requirements in the labor market. In other words, since Hungarian as well as foreign students represent the human capital in the economy of Hungary, government leaders as well as decision makers should develop the policies which enhance each of English proficiency, social tolerance, and quality education on the level of the country, and intercultural competence on the level of education system.

As a result, this study adds to the body of knowledge on the language and its economic and social value, as well as to the literature in Hungary on the experiences of foreign students in the host country by the following (as illustrated in figure 1). First, insufficient research has been done on the connection between English proficiency and economic growth (Coleman, 2010; Seargeant & Erling, 2011). Hereby, this study attempts to fill that gap in the existing body of knowledge.

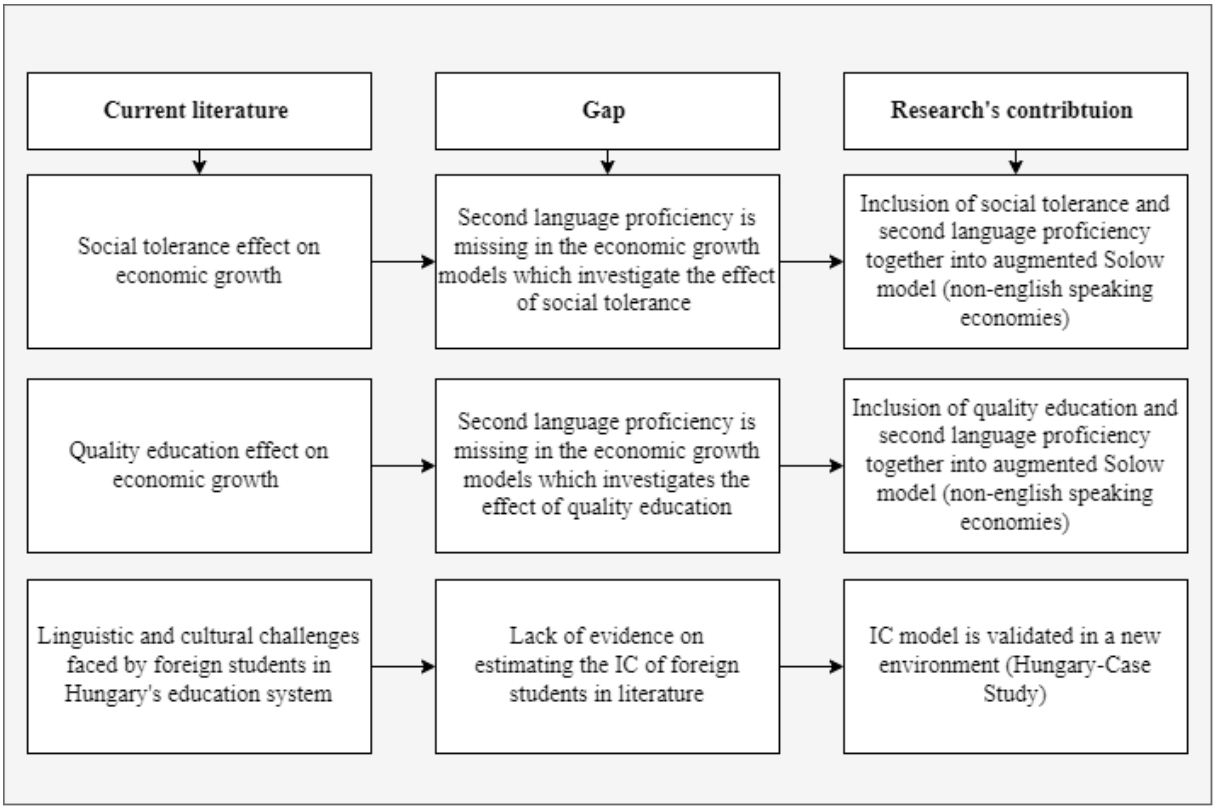

Figure 1. Research Gap analysis

Source: Author's own compilation.

Secondly, this research is one of the few scientific works which gives quantitative proof of the impact of language and quality education on the economic growth using augmented Solow model. In addition, the effect of language and social tolerance toward diversity on economic growth using the same approach as well. Thirdly, it is one of the infrequent studies which uses the western intercultural competence model to investigate the role of common language and intercultural competence within the university environment in the central European context. Fourthly, the research provides policy makers with valuable information. This information may be used to develop suitable policies and regulations that highlight the importance of improving English language quality education in the economy. It also encourages organizations to design tasks and procedures that facilitate greater cultural integration. For these reasons, this will have a beneficial effect on knowledge spread and innovation across institutions and economies.

1. INTRODUCTION OF THE TOPICS AND OBJECTIVES

This section provides a brief clarification regarding the main topics covered by this research. Besides that, it also covers each of the research objectives, questions, hypotheses, structure, and approach.

1.1. Research topics

In this study, the focus is mainly on the economic development of non-English-speaking economies, the most important predictors of the development of these economies, and what kinds of policies non-English speaking-economies should adopt to grow (policy-implication) economically. The research, on the other hand, focuses on the function that speaking a common language play in improving intercultural competency and integrating people into the host culture on a microeconomic level.

Generally, human capital is an essential indicator of economic growth since it can be assessed by the average number of years a person has spent in school or by the number of students enrolled in school. In fact, according to the United Nations (UN), education is considered an essential factor in achieving all identified sustainable development goals (SDGs). Consequently, the European Union gives significant attention to education starting from primary until after secondary schooling. Besides education, and according to the literature, foreign language education is also considered a precious human capital component, especially in the labor market. In addition, the research explains the economic status of toleration toward cultural diversity (besides linguistic diversity) and whether it could positively or negatively influence the development of economies. It is also necessary to analyze and understand how developed economies regulate and control linguistic and ethnic diversity to make their systems productive economically. Based on that, the research covers three inter-related SDGs. The first one is SDG No. 4 (*Quality education*), which aims to solve the problems of poverty, lack of equality and promote health and peace. The second and third SDGs are SDG No. 10 (*reduced inequalities*) and SDG No. 16 (*peace, justice, and strong institutions*), which help to enhance cultural diversity, society's tolerance, and social cohesion. These goals represent two important variables: social tolerance and quality education. In addition, the research highlights the connection between them and English language proficiency. Therefore, the research purposes that literature does not consider second language proficiency as an element of the economic models. Based on that, the research illustrates the economic benefits behind enhancing quality of speaking common language and its link with each of social tolerance and quality education.

To estimate the economic effect of these variables, the research used augmented Solow model (Mankiw et al., 1992).

Whereas the first study focuses on the global analysis of different economies, the second one chooses Hungary's economy as a part of the investigation. Most literature draws attention to the difficulties international students usually face in Hungary's education system (Hámori & Horváth, 2017). It is unfortunate, however, that their degree of integration into the host community is strangely overlooked by the literature (Kovacs & Kasza, 2018). Studying and investigating Hungary's quality second-language education and social tolerance together with international students' ICC (i.e., intercultural communicative competence) levels inside the Hungarian higher education system are critical to addressing this issue. Based on the literature, ICC is generally determined by intercultural knowledge, attitude, skills, and awareness (indicated by the KASA quartet) (Fantini, 2007). Besides these dimensions, speaking a common language (i.e., a second language) helps facilitate intercultural communication and integration among different cultures. Therefore, it helps to provide valuable information and feedback, which can help formulate related policies within the entity environment. These policies can help to benefit from cultural diversity's positive role and its effect on the entity's performance.

1.2. Research objectives

As previously mentioned, this study's primary goal is to determine how important it is for economies to communicate in a common language, like English. The main goal is to investigate the economic impact of English language proficiency on the economic growth. Furthermore, the research aims to illustrate the impact of English language proficiency and social tolerance together on the economic growth. On the other hand, it also seeks to investigate the effect of English language proficiency and quality education together on the economic growth, especially in the non-English speaking economies.

As a real-life example, the research focuses on determining the reasons behind the lack of intercultural communication between Hungarians and foreigners, especially in the education system. Using the same data as well as Hungarian literature, the research analyzes the economic performance of Hungary in terms of its social tolerance, English language proficiency and quality education (as a first perspective). The second perspective the research aims to highlight is about international students' reaction toward the economy and its policies during their stay in Hungary. Therefore, there are three objectives to be addressed. The first objective is to determine the main sociodemographic factors which can be used to compare the intercultural competence levels of foreign students. Secondly, the research aims to investigate the

relationship between foreign students' intercultural knowledge and awareness. Thirdly, the research seeks to illustrate the impact of foreign students' intercultural skills on their intercultural awareness. The fourth objective is to highlight the relationship between their intercultural attitude and awareness. Finally, the fifth objective is to estimate the effect of international students' intercultural awareness on the development of each of intercultural skills, attitude, and knowledge. Based on these two perspectives, the research can develop the important policies which help to enhance English language proficiency, quality education and social tolerance (Globally and on the level of Hungary) as well as intercultural competence (on the level of Hungary's education system).

1.3. Research questions

The study attempts to answer the following questions based on the previously mentioned objectives:

1. How English language proficiency and social tolerance could affect economic growth in non-English speaking economies?
2. How English language proficiency and quality education could influence economic growth in non-English speaking economies?
3. How English language proficiency, social tolerance and quality education could affect the intercultural communication between Hungarian and foreign students?
4. What are the main sociodemographic factors by which the intercultural competence could differ from one foreign student to another in Hungary?
5. What are the most important factors affecting foreign student's intercultural awareness during their stay in Hungary?
6. How intercultural awareness can help to enhance the development of foreign students' intercultural knowledge, skills, and attitude during their stay in Hungary?

1.4. Research hypotheses

According to the previously mentioned questions, hypotheses are developed in the following order.

Hypothesis 1: *English language proficiency is positively related to the economic growth in non-English speaking economies.*

Hypothesis 2: *Social tolerance and English language proficiency have a positive effect on the economic growth in non-English speaking economies.*

Hypothesis 3: *Quality education and English language proficiency have a positive effect on the economic growth in non-English speaking economies.*

Hypothesis 4: *Foreign students do not have the same level of intercultural competence in the university environment.*

Therefore, the sub-hypotheses are:

H4.a: *Students per continent do not have the same levels of intercultural knowledge, skills, attitude, and awareness.*

H4.b: *Students, for each educational level, are not equal in terms of their intercultural knowledge, skills, attitude, and awareness.*

H4.c: *Students do not share the same intercultural knowledge, attitude, skills, awareness regardless of their different periods spent in Hungary.*

H4.d*: Males and Females are not equal in terms of their intercultural knowledge, attitude, skills, and awareness.*

H4.e: *The two groups (based on their intention to learn the Hungarian language) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*

H4.f: *The two groups (whether they faced linguistic difficulty to deal with locals or not) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*

Hypothesis 5: *Intercultural knowledge of foreign students has a positive effect on their intercultural awareness.*

Hypothesis 6: *Intercultural attitude of foreign students has a positive effect on their intercultural awareness.*

Hypothesis 7: *Intercultural skills of foreign students have a positive effect on their intercultural awareness.*

Hypothesis 8: *Intercultural awareness of foreign students has a positive effect on their intercultural knowledge, skills and attitude.*

1.5. Research's structure

The research consists of six chapters. **The first chapter** is the introduction. This part sheds light on the scientific debate regarding the economic value of languages. It also provides a general

illustration of common languages' role in the economy. Besides that, the economic status of the English language is clarified and explained through two essential perspectives. The first perspective considers the role of English in increasing the level of social tolerance toward diversity. The second perspective explains why the investment in second language education is very critical for economic growth. Furthermore, it clarifies the literature gap and how the research has contributed to filling that. On the other hand, the research topics section was briefly covered and structured in an organized manner. Whereas the first study includes English language, quality education, social tolerance, and their relation to the economic growth, the second one narrows this investigation to include each of Hungary's English proficiency index (EPI), second language quality education, social tolerance, and foreign students' ICC, and their integration into the host culture, within Hungarian higher education system.

The second chapter is the literature review. The review starts to shed light on economic development by providing a comprehensive explanation of SDGs and the importance of each goal. The next step is to concentrate on quality education (SDG No. 4) and its role in boosting economic development. Furthermore, the review also focuses on SDG No. 10 (reduced inequalities) and SDG No. 16 (peace, justice, and strong institutions) and the importance of cultural diversity for the economies. After that, the study gives a detailed investigation on the role of languages and the English language and their economic importance.

On the other hand, literature review then focuses on the relationship between intercultural competence and tolerance, the economic effect of intercultural competence on the institutions' performance, higher education, and the Hungarian higher education system. Finally, the study clarifies the essential ICC models suitable to assess the intercultural competence of foreign students in student mobility programs.

After that, the research highlights the most important theories and their relationship to the study (i.e., theoretical framework). Finally, the research depicts the conceptual model and provides a summary on the literature in line with the hypotheses of this study (i.e., hypothesis development).

Chapter three illustrates the materials and methods of this study. An illustration of included economies in line with their data was provided (i.e., Panel data analysis). After that, the section described the development of the model step by step. To conduct the analysis, this study used a two-step system GMM (i.e., Generalized Method of Moments). Finally, cut-off values were presented and clarified in detail.

As a case study, Hungary was chosen. The target population and its sample size are explained and illustrated (foreign students at the University of Debrecen). After that, used instruments, as well as procedures, are detailed (i.e., survey analysis). Regarding data analysis, statistical analysis, such as descriptive statistics and analysis of variance, was conducted. Furthermore, hypothesized model was validated and estimated using each exploratory factor analysis (EFA), first order and second order (also known as Higher order) confirmatory factor analysis (CFA) analysis, as well as structural equation model (SEM). Cut-off values related to the goodness of fit indices, construct validity (convergent and discriminant validities) and construct reliability are presented and explained.

Chapter four includes results and discussion. As for the panel data analysis**,** the output of the two-step system GMM is described and discussed along with previous scientific works. Besides that, long-run GMM coefficients (e.g., English proficiency, social tolerance, and quality education) and their impact on the economy are explained and clarified. After that, the focus is on Hungary's English proficiency index, social tolerance, and quality education between 2009 to 2017. This investigation is supported by different diagrams and studies conducted during the same period (first perspective). In addition, it describes in full the target sample's socio-demographic characteristics. This explanation covers these characteristics in comparison with foreign students' intercultural competence dimensions (second perspective). The following results include descriptive statistics regarding foreign student's attitudes toward linguistic matters. After that, the study describes the results of each of EFA, CFA, and SEM in which model's validity and reliability, the goodness of fit is covered in detail. Moreover, the relationship between dimensions (endogenous and exogenous variables) is discussed.

Chapter five concludes the overall research. This section shows how this research do advance current knowledge. It includes scientific justifications starting from global to specific perspectives and policy implications. In addition, it identifies research limitations and provides insights regarding future studies.

Chapter six gives a brief illustration covering the research's novelty and main conclusions. Finally, the research is ended with an overview of the main related points. In addition, the research lists each of references, tables, figures, included economies, and the survey.

1.6. Research approach

The research follows a gradual approach in reviewing the literature, starting from the macro to the microeconomic perspectives, as illustrated in figure 2 below. The research first concentrates

on the economic performance of countries, sustainable development goals, and scientific theories of economic growth. Moreover, it helps to highlight the literature gap in the field of economics of language. Among the studied economies, Hungary was chosen as a case study. After that, research investigates related Hungarian literature and identifies the main problems regarding the foreign students' intercultural experience during their stay in Hungary. Based on the research hypotheses, these problems may be related to linguistic and cultural challenges in the host economy. In addition, the research argues that these challenges could occur due to the nature of policies and programs developed by Hungarian universities. Finally, the research illustrates the theoretical framework and the suitable conceptual model, which can be helpful to propose solutions and policy implications.

The next stage of this research was to decide the data, statistical techniques, and estimation methods. Firstly, the panel data analysis approach was adopted. In this approach, the aim was to illustrate the performance of 99 non-English speaking economies over nine years. This performance was investigated using the main determinants of the economic growth (Mankiw et al., 1992) as well as *English proficiency, social tolerance, and quality education variables*. Furthermore, model fit indices (e.g., Hansen test, and Arellano-Bond test) were illustrated and clarified in this section.

After that, the research choses Hungary as real-life example. The economic performance of Hungary was depicted and explained in terms of its English language proficiency, social tolerance, and quality education indicators. Furthermore, in order to define the reaction and the attitude of foreign students toward these indicators, the research used primary and secondary data to highlight and justify the main challenges foreign students could face during their stay in the host economy. Whereas secondary data mainly provides essential evidence on Hungary's English proficiency index, primary data supports this by applying IC instrument on the target sample (i.e., foreign students) at the university environment (i.e., University of Debrecen). To ensure the model's validity on the target sample, each of goodness of fit indices, reliability, and construct validity (i.e., convergent and discriminant validity) were estimated and checked. Based on the validated model, SEM was built to show the primary pathways. Based on the research's hypotheses, results are orderly described. The results include cut-off values for every estimation method as well as the relationships between the related variables. The results are illustrated and discussed in line with previous literature. Finally, the research illustrates the novelty behind and determines main conclusions, policy implications, and future studies.

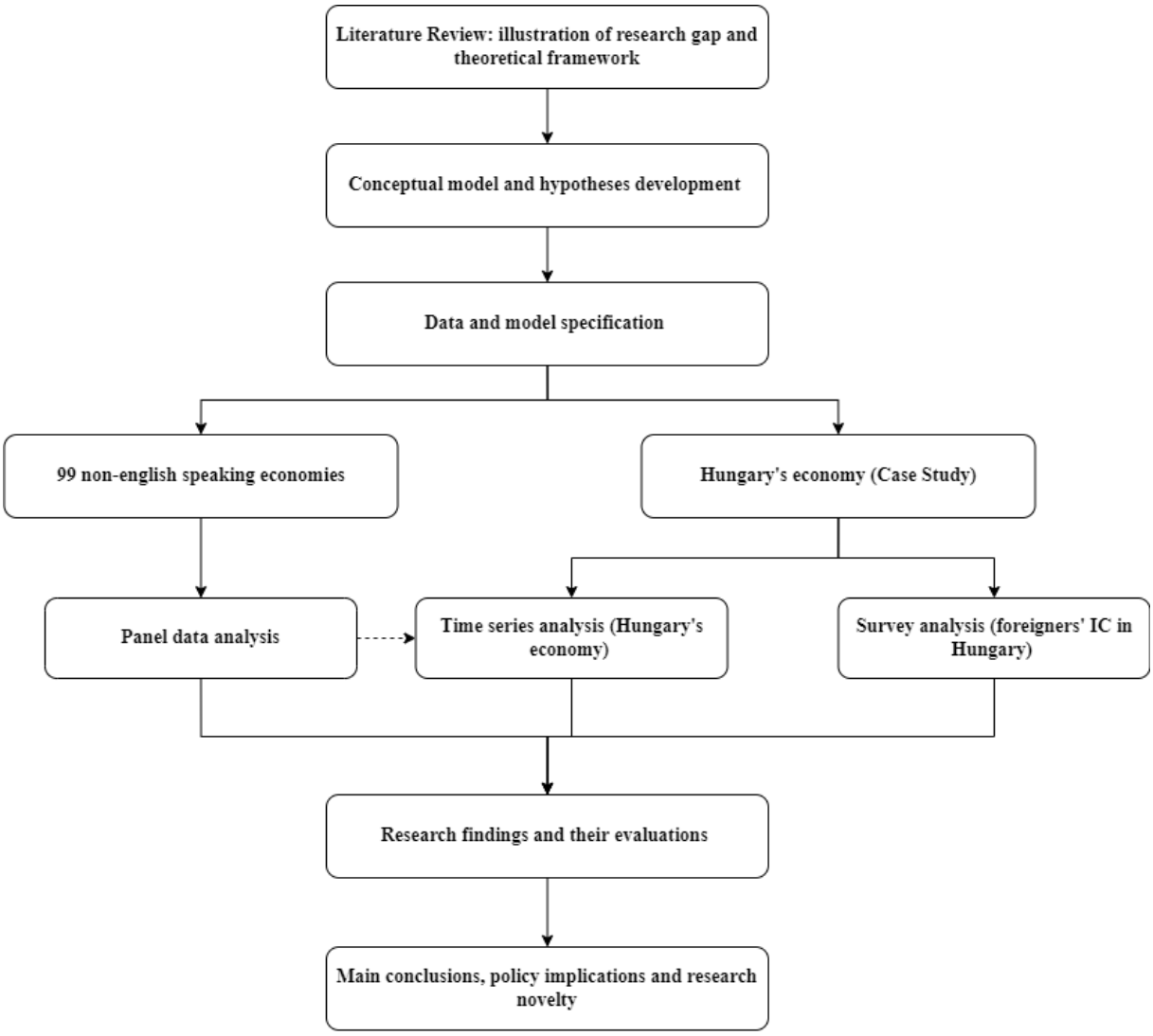

Figure 2. Research approach.

Source: Author's own compilation.

2. LITERATURE REVIEW

As previously mentioned, this chapter consists of the following. Firstly, it provides a basic overview about sustainable development, SDG No. 4, 10 and 16 (which represent each of quality education and cultural diversity), and their effect on economic growth. Secondly, the literature review is discussed in relation to the economic value of languages and the English language and their relationship with each of social tolerance and quality education. Thirdly, the research tries to highlight the relationship between social tolerance and intercultural competence. Fourthly, the research also illustrates foreign students' intercultural experience during their stay in Hungary. Finally, the research describes the theoretical framework and hypotheses development.

2.1. Sustainable development goals and their importance

During the Rio+20 summit in 2015, the European Union announced the 2030 Agenda for Sustainable Development. These objectives are primarily geared at providing answers for eradicating poverty and enhancing long-term sustainability. A total of 17 SDGs and related targets make up the 2030 Agenda for Sustainable Development. In order to achieve these goals and contribute to sustainable development on a global scale, all nations should pay attention to them as universal interests. (European Commission, 2020b).

As generally known, the Brundtland report was produced in 1987 as a result of the World Commission on Environment and Development (WCED), which was established in 1983, as shown in Figure 3 (The road to Agenda 2030). As a result, it provides sustainable development with the requirements that are now in demand. In addition, in 1989, the UN general assembly examined the report and decided to hold a UN conference on environmental and development issues (ARE, 2021a).

> "Development which makes the current generations able to satisfy their needs without settling future generations" ability to satisfy their needs" (United Nations, 1987).

After that, in 1992, about 172 nations took part in the United Nations Conference on Environment and Development (UNCED) to address key problems such as poverty, the gap between rich and developing nations, and environmental, economic, and social challenges. Three agreements were reached as a result of the meeting. The first meeting was not obligatory such as Agenda 21, Rio Declaration, and Statement of Forest Principles. In contrast, the second (Framework Convention on Climate Change) and third (Convention on Biological Diversity) ones were obligatory and necessary (ARE, 2021b).

In 2000, Millennium Development Goals (MDGs) were developed in a meeting held in New York. As a result, the Millennium Declaration was accepted and adopted by about 189 nations. The declaration urged people all around the globe to put in the effort necessary to achieve global safety and sustainable development. It had eight long-term goals, all of which were supposed to be accomplished by 2015. In addition, these goals were called the millennium development goals (UN Department of Public Information, 2008).

At the UN Conference on Sustainable Development (UNCSD) in 2012, Rio de Janeiro served as the host city for the event (Brazil) (International Institute for Sustainable Development, 2012). "The Future We Want" was the paper that included all of the conference's outcomes. It tackled complex issues like climate change and eradicating poverty. The UN's institutional framework for sustainable development and the environment was also improved as part of the initiative (ARE, 2021c).

It is essential to add here the fact that each of Rio Earth Summit (1992), Millennium Development Goals (MDGs) (2000), and Rio+20 (2012) are considered as the starting point for the development of the 2030 Agenda (2015) (European Commission, 2017). In other words, the 2030 agenda was developed after a series of meetings and conferences over the last four decades. Regarding the 2030 agenda, five crucial aspects are taken under consideration. These aspects are people, prosperity, planet, partnership, and peace (United Nations System Staff College, 2021).

Figure 3. The road to Agenda 2030.

Source: European Commission (2017)

Targets must be quantifiable, according to EU regulations. Overall performance is often assessed by comparing the actual change rate to the predicted one (which must be achieved at a specific period). As a result, four options exist. This implies that at least 95% of the necessary rate must be met in order for substantial progress towards sustainable development (SD) objectives to be made. The second case is to be near to the target route, which implies that between 80 and 95 percent of the necessary ratio has been achieved, indicating modest progress towards SD objectives. As a third option, if we are off course and only accomplish 0% of the

necessary rate, we will fall short of the EU's 2020 development goal. The fourth and last possibility is that the trend will diverge from the EU target (negative ratios) (European Commission, 2017).

In fact, during the last five years, the EU's overall performance on sustainable development has ranged from significant to moderate. For instance, SDG No. 7 (Affordable and clean energy), SDG No. 12 (Responsible production and consumption), SDG No. 15 (Life on land), SDG No. 11 (Sustainable cities and communities), and SDG No. 3(Good health and well-being) were examples of considerable progress achieved by the EU. Meanwhile, moderate progress of EU was in terms of SDG No. 1 (No poverty), SDG No. 2 (Zero hunger), SDG No. 4 (Quality education), SDG No. 5 (Gender equality), SDG No. 8 (Decent work and economic growth), SDG No. 9 (Industry innovation and infrastructure), SDG No. 10 (Reduced inequalities) and SDG No. 17 (Partnership for the SDG). Due to a lack of adequate data during the past five years, it was not feasible to measure the other four SDGs, SDG No. 6 (Clean water and sanitation), SDG No. 13 (Climate Action), SDG No. 14 (Life below water) and SDG No. 16 (Peace, justice, and strong institutions) (European Commission, 2017).

A short definition for each SDG is provided in the following paragraphs. After that, the research provides a comprehensive explanation of SDG 4 (Quality Education), SDG 16 (Peace, justice, and strong institutions), and SDG 10 (Reduced inequalities), since these goals are mainly related to the research’s essential components (e.g., Quality education, social tolerance toward diversity).

Goal 1: No Poverty

Ending poverty by 2030 is a first step in resolving this problem. Poverty can be divided into two types. When a family does not have enough money to cover basic living expenses like food, housing, and clothes, it is considered absolute poverty. The second is relative poverty, which is defined as a household's income being 50% or less of the median family income (Pettinger, 2019). Approximately 700 million people or 10% of the world's population live on less than $1.90 a day, according to the United Nations. Based on that, having sound policy frameworks could make investments to be very feasible in poverty eradication projects (United Nations, 2021c). Usually, the EU funds the projects through a different source such as Development Cooperation Instrument and the European Development Fund (European Parliament, 2018).

Goal 2: Zero Hunger

Hunger and malnutrition pose the greatest threat to long-term sustainable development. The hunger could result in unproductive people who could be afflicted with diseases and therefore incapable of producing or even making their lives better. According to statistics, there are about 800 million hungry people, especially in developing nations (United Nations, 2021s)

To face the hunger problem, the EU adopts several policies. Firstly, it is vital to encourage investment in each of rural infrastructure, agricultural research. Secondly, removing all restrictions against the development of the agricultural market helps to achieve agricultural development, as declared in the mandate of the Doha Development Round. Thirdly, food commodity markets should work adequately (United Nations, 2021d).

Goal 3: Good Health and Well-Being

Most economies, particularly the poor ones, lack enough health facilities, medical equipment, and healthcare staff to meet the increased demand (United Nations, 2021p). Therefore, the EU reacts to this problem by providing financial support to boost healthcare, besides training, developing, and recruiting workforces in this sector. Other procedures include helping emerging economies manage and minimize the danger of of that. Finally, to enhance the nation's accessibility to pharmaceuticals as declared in the Doha Declaration on the TRIPS Agreement and Public Health (United Nations, 2021e).

Goal 4: Quality Education

Education is considered one of the most significant elements influencing growth. The reason behind that is its role in combating poverty and inequality and promoting healthy and peaceful lives (United Nations, 2021f). For instance, European Union education policy emphasizes elementary and secondary school education as well as education fundamentals as a foundation for future learning and skill development. Also, it gives considerable attention to the equality in accessing education, quality education improvements and the development of methodologies for evaluation and control, and the relationship between education and workforce's size required by the market (European Commission, 2019).

Goal 5: Gender Equality

It seeks to establish gender equality in terms of women's involvement at all political, economic, and public life levels. Despite the accomplishment made, there is still discrimination against their rights throughout the world. For instance, women's role in peace achievement and mediation is not enough. In addition, there is a need to specialize a budget that can be used to support gender equality, especially to enhance women's political participation in the EU's

neighboring countries and inside the European Union. Despite that, the EU develops several strategies to achieve equality. Firstly, girls' and women's physical and psychological integrity must be safeguarded. Second, girls' and women's economic and social rights should be encouraged and strengthened. Third, the right of women and girls to take part and express their views (European Commission, 2021b).

Goal 6: Clean Water and Sanitation

It seeks to ensure the accessibility of improved water management and sanitation. Currently, essential services are inaccessible. For instance, about 2.4 billion people do not have access to essential sanitation services, such as toilets or latrines. Furthermore, 80% of used water by people is discharged into rivers and seas without being processed, resulting in pollution (United Nations, 2021a).

Therefore, the agreed-upon method to resolve the problem, developed in collaboration with member nations and by the UN human rights framework for water and sanitation, is known as the AAAQ-criteria. The acronym AAAQ stands for the following. The first criterion is availability. It means that water shall be available and enough for every person for necessary activities such as drinking water, personal sanitation, washing clothes, etc. Furthermore, it is necessary to provide enough sanitation facilities. Secondly, Accessibility, which is the ability of the human to access water and sanitation services. These services should be available everywhere and without any discrimination. The third criteria are Affordability which means that these services should be available at a reasonable price. Fourthly, the Acceptability criterion ensures having gender-specific facilities constructed to enhance privacy, safety, and dignity. The last criterion is Quality in which water should not be harmful to the health of humans and any king of uses (European Commission, 2021a).

Goal 7: Affordable and Clean Energy

Energy access has begun to increase in developing countries. Furthermore, energy efficiency is rising, and renewable energy is making significant strides in the power industry. However, more work must be done to improve the access of 3 billion people to clean and safe cooking fuels and technologies, to expand the use of renewable energy beyond the electrical sector, and to promote electrification in Sub-Saharan Africa (United Nations, 2021b). To ensure and accelerate human access to affordable and clean energy, nations must ease access to clean energy research and boost investment in energy infrastructure and clean energy technology. In

addition, global collaboration is beneficial and recommended to expand and achieve that to include also developing nations (European Commission, 2021e).

Goal 8: Decent Work and Economic Growth

Depending on the statistics, the worldwide unemployment rate decreased from 6.4% to 5.6% in the period between 2000 and 2017. Furthermore, in 2016, 61% of all workers worldwide were already in informal employment. In addition, the worldwide gender pay gap is 23%, and it would take another 68 years to reach equal pay unless urgent action is taken. Women participate in the labour force at 63%, whereas males participate at 94% (United Nations, 2021q). To deal with this, the EU came up with a variety of plans. In the first place, it's important to make sure that young people who aren't enrolled in school, work, or training have access to jobs. The aim behind that is to prevent the abrasion of skills. Secondly, providing jobs with quality and affordable income is a necessary procedure to achieve prosperity. Thirdly, having global cooperation also helps in enhancing growth and decent employment, especially in developing nations. This could be achieved by boosting aid for trading and having development policies and an international strategy for youth employment (European Commission, 2021f).

Goal 9: Industry, Innovation, and Infrastructure

Infrastructure investment, technology advancement, and industrial sustainability are critical components of economic-social growth and climate change mitigation. Based on UN estimates, about 16% of the world’s population lacks access to phone and mobile services. In addition, in many developing nations, essential infrastructure such as sanitation, electrical power, and water continues to be scarce and unavailable (United Nations, 2021g)

This goal can be achieved through three interdependent objectives essential to strengthen societies and achieve economic growth globally. The first objective is to have a resilient infrastructure that is accessible for everyone in an equal and affordable way. Secondly, having sustainable industries is essential, especially in the least developed economies. This may optimize the industry’s contribution to employment and income in these areas. Thirdly, promoting innovation and technological updates plays an essential role in achieving this goal (European Commission, 2021c).

Goal 10: Reduced Inequalities

Because of inequality, long-term social and economic development is jeopardized, poverty reduction is hampered, and the well-being and sense of value of individuals is diminished. This, in turn, may cause crime, illness, and damage to the environment (United Nations, 2021r). To

reduce inequality, foreign direct investment, as well as development support, should be enhanced in the regions which are in need of that. Also, enhancing social inclusion worldwide is achieved through regulating safe and ordered migration and decreasing transaction costs of migrant remittances. In addition, equality can be achieved by regulating and monitoring financial markets and institutions and reducing inequality in terms of income, sex, age, race, disability, ethnicity, class, religion. Therefore, it is essential to develop policies and rules to fix this issue (European Commission, 2021g).

Goal 11: Sustainable cities and communities

Statistics show that approximately 3.5 billion people worldwide live in cities. Then there would be approximately 5 billion people living in cities by 2030, according to forecasts. Also, it is essential to add here that cities in the world represent about 3% of the planet. Even yet, this tiny fraction is responsible for 60 to 80 percent of global energy use and 75 percent of carbon emissions. Urbanization also influences supplies of fresh water, sewage, and healthcare (United Nations, 2021h).

As a result, it is critical to plan cities such that everyone has access to essential services, energy, housing, transportation, and other amenities. These must also be carried out in a manner that promotes resource efficiency, reduces the environmental effect, and encourages innovation, social cohesion, and personal safety. Furthermore, the objective is to preserve cultural heritage and nature and improve socio-economic and environmental ties between urban, peri-urban, and rural areas. It also aims to enhance global cooperation and help poor nations in the creation of flexible buildings (European Commission, 2021h).

Goal 12: Responsible Consumption and Production

Having bad consumption and production behaviours is likely to be harmful to the overall environment for many reasons. The world's population is expected to grow to 9.6 billion people by 2050, according to estimates. Hereby, this big number is nearly equal to 3 planets which are enough to afford the required natural resources for this life pattern. For example, the planet’s fresh water represents about 3%, of which 2.5% of that is ice kept in each of the Antarctica, Arctic, and glaciers. Regarding energy, about 21% of CO2 emissions have resulted from 29% of household consumption of global energy. Furthermore, about 30% of total global energy consumption and 22% of greenhouse gas emissions have resulted from the food sector (United Nations, 2021i).

To avoid this, it is critical to implement sustainable purchasing habits and raise consumer awareness of environmental issues. Furthermore, academics and scientists should focus on sustainable technology, as well as consumption and production practices, with the goal of maximizing resource efficiency. It is also essential to raise developing countries' awareness of this issue (European Commission, 2021i).

Goal 13: Climate action

Climate change has an impact on every country and region. It has an effect on national economies as well as the daily lives of individuals. Weather patterns are altering, sea levels are increasing, and severe weather is getting more often. CO2 and other greenhouse gas concentrations in the environment rose to a record high in 2019, as well. Countries should improve their resilience to climate risks to respond effectively to climate action. It is thus essential to connect climate action with the policies and goals of the country. In addition, through raising public education and awareness, the effect of climate change may be reduced. Each developing and least-developed country should join this movement through funding and the promotion of the Green Climate Fund (United Nations, 2021j).

Goal 14: Life below water

The ocean is the driving force behind many of the global processes that keep the Earth habitable. The sea provides and regulates our rainfall, drinking water, weather, temperature, coastlines, much of our food, and even the oxygen in the air we breathe. However, coastal watersways are constantly degrading due to pollution. Furthermore, ocean acidification negatively impacts ecosystems and biodiversity. As a consequence of this, small-scale fisheries suffer as well (United Nations, 2021k).

EU takes many actions, globally, regionally, and nationally, to achieve this goal. Firstly, it is vital to have proper fisheries management. In addition, oceans should be protected from illegal fishing. These actions could secure each of food and nutrition. Secondly, marine and coastal ecosystems should be maintained through the development of marine protected areas (MPA). Thirdly, it is important to manage waste and decrease polluted lands that may influence oceans (European Commission, 2021d).

Goal 15: Life on land

It aims to solve different issues which are related to forests, desertification, and biodiversity. In fact, about 3.3 million hectares of forests have been wasted in the period between 2010 to 2015. Furthermore, illegal poaching and illegal trading of wildlife still threaten and hinder the action

of conserving life on land. For example, around 7000 types of animals and plants have been recorded as illegal action in 120 nations. Degradation of land has decreased the productivity of 23% of the Earth's land, and pollinator loss may reduce global agricultural production by $235 billion to $577 billion per year (United Nations, 2021l).

To face that challenge, it is critical to increase conservation efforts on land, mountain, and inland water ecosystems. To achieve that, it is necessary to have the fund required to finance the management of forests and stop deforestation, along with the preservation of biodiversity and protecting species that are threatened. Also, the objective is to raise awareness of the uses of genetic resources, spread the advantages of their use, and help increase the number of people who have access to these resources and reduce the effect of exotic species on the ecosystem of land and water. It is also critical to include biodiversity and ecological values into poverty-reduction programs and global collaboration to combat illegal hunting and trade as an essential process for maintaining life on the land (European Commission, 2021j).

Goal 16: Peace, justice, and strong institutions

Having strong institutions is an essential factor for sustainable development. For example, the most corrupted institutions are the judiciary and police. In the case of developing nations, each of corruption, bribery, theft, and tax evasion costs their economies about the US $1.26 trillion which rather could be helpful to enable poor people to live with income above $1.25 a day for nearly six years. Besides that, about 50% of children worldwide experience violence per year. In addition, worldwide, children are exposed to the risk of death due to violence every 7 minutes. To create peaceful and inclusive communities, all forms of violence and associated death rates must be substantially reduced throughout the globe. Also, it is necessary to establish non-discriminatory rules and regulations to help achieve sustainable development. In order to ensure inclusive decision-making that is participatory, responsive, and representational at all levels, it is essential to conduct continuous, comprehensive, ongoing assessments (United Nations, 2021m).

Goal 17: Partnerships for the goals

It necessitates the formation of a global partnership between governments. A partnership that shares a set of values and common objectives should be created. It focuses on the improvement of technology, the expansion of capacity, and facilitation of trade, as well as dealing with systemic problems such as policy and institutional coherence, multi-stakeholder partnerships, and data monitoring and accountability (United Nations, 2021o).

As a result, this goal seeks to establish an international trade system (under the World Trade Organization) and a market free of tariffs and quotas that is accessible to the least developed countries. This aim also promotes international macroeconomic stability and aids developing countries in meeting their long-term financial obligations. Furthermore, developing countries must have adequate statistical data that may be utilized to track their development progress in the future (European Commission, 2021k).

Looking at earlier SDGs, the topics of this research (i.e., *quality education and social tolerance toward diversity*) are inherent in SDG 4, SDG 10, and SDG 16. The following literature review offers a comprehensive explanation of these two topics and their connection to common language proficiency and the overall economic growth.

2.2. Sustainable development goal No. 4, 10, and 16

2.2.1. Quality education (SDG NO. 4) and its economic importance

Education may affect economic growth through three aspects, according to the literature. The first of them is concerned with human capital. Education significantly influences the labor force, which is essential for improving productivity and, therefore, economic growth (as explained in the augmented neoclassical growth theories). Mankiw, Romer, and Weil (1992), for example, are among the academics who have written on this subject. Second, education may aid in the strengthening of each economy's innovation capability, knowledge, and technology, all of which are required for economic growth. This feature is described by endogenous growth theories. Lucas (1988), Romer (1990a), Aghion, and others (1998) have written about it. The third demonstrates the importance of education in disseminating knowledge required to identify and address new information. Processing information may aid in creating new technologies that are critical for economic growth (Benhabib & Spiegel, 2005; Nelson & Phelps, 1966).

At the European Union level, achieving quality education's targets contributes to the accomplishment of all other SDGs. There is a strong emphasis on the need of equitable and high-quality education throughout (from primary, secondary, and tertiary school to technical and vocational training). Besides that, it ensures that education is available to individuals of all ages. In addition, it helps to rise the number of skillful youths and adults, preparing them for decent jobs and, as a result, a better way of life (independent, healthy, and sustainable life). Qualitative education promotes the construction of educational facilities and infrastructure, scholarships for developing nations, and the supply of qualified instructors in order to hasten the attainment of these goals. It is possible to improve creativity, competitiveness, and

production over the long run by providing an excellent education. Therefore, it helps to create jobs (and hence economic growth). Furthermore, it gives significant attention to social and human values such as fighting poverty, equality of gender, health issues, sustainable lifestyle, and peaceful communities (European Commission, 2017).

In fact, the vast majority of literature measures education's effect using the quantitative approach in terms of years of attainment. Furthermore, it seems that researchers are in agreement that the quantity education has an impact on economic growth (Psacharopoulos, 1982). In addition, Colclough (1980) explained the impact of primary schooling (by quantity) on the economy. Through his investigation, he emphasized the importance of investment in primary education due to its importance in making society more productive. Besides that, it has social importance. For instance, it helps to control fertility, healthcare, literacy as well as communication. Based on Colclough's evidence, it was found out that the economic and social gains behind the investment in primary education are more significant in the majority of developing economies (comparing to other types of education's investment). Regarding the poorest nations, although the returns on investment in the industrial and infrastructure sectors are low, the returns on primary schooling seem to be higher. This could be justified due to the characteristics of these nations where there is usually a high percentage of the population who rely on farming and high illiteracy. As a result, investing in primary education in these areas should be considered a national economic priority (Colclough, 1980).

Education is often evaluated, according to the literature, in terms of quantity and quality. Following the seminal study of Mankiw, Romer, and Weil (1992) as well as Barro (1991), most of the literature began to concentrate on the connection between education quantity and economic growth. The majority of the studies established a clear connection between these factors, such as the work of Hanushek (1995), Gemmel (1996). Furthermore, education by quantity was assessed using several indicators in the literature. For example, some used the *rate of schooling enrolment*, such as Mankiw, Romer, and Weil (1992), Barro (1991), Levine and Renelt (1992). Others opted to use other related measures such as *mean years of schooling* (Krueger & Lindahl, 2001), or *rate of adult literacy* (Durlauf & Johnson, 1995) and (Romer, 1990b), or *spending on education* (Baldacci et al., 2008).

Other studies, on the other hand, discovered only a weak relationship between the quantity of education and economic growth. For example, Bils and Klenow (2000) and Pritchett (2001) could not find any connection between these indicators.

Regarding quality education, each of Barro (1999), Hanushek and Kimko (2000), Hanushek and Kim (1995), Hanushek and Woessmann (2008) examined the effect of educational quality on economic growth. For instance, Hanushek and Kimko, Hanushek and Kim and Hanushek and Woessmann assessed labour force quality in terms of intellectual skills in mathematics and science and discovered that it had a substantial effect on economic growth. In addition, Barro discovered a positive connection between the quality of schooling (which is measured using examinations' student scores) and economic growth.

As a result, it is important to clarify that most literature investigating quality education usually relies on test scores. From the mid of 1960s until nowadays, international institutions evaluate students' performance through developing international tests. These tests measure student's mental abilities in specific subjects such as mathematics and science. Thus, the emphasis on mathematics and science corresponds with the attention on the importance of R&D in boosting economic growth (Romer, 1990a). In other words, having students with strong cognitive abilities and the capacity to comprehend mathematics and science is beneficial to boosting the number of engineers and scientists in the economy (Hanushek & Kimko, 2000).

Similarly, based on European Commission's study, a quantitative method was used to evaluate the education quality and quantity. For instance, in an EU setting, measuring SDG 4 concentrates on basic education, tertiary education, and adult learning. Regarding basic education, its performance, over a certain time period, is evaluated using the following indicators. The first indicator is called *early leavers from education and training*. This indicator represents the proportion of people aged 18 to 24 with at least a lower secondary education who did not participate in any education or training. Secondly, *early childhood education participation* seeks to estimate the percentage of children aged four till the commencement of compulsory primary school. The third one is *the underachievement in reading, math, and science indicators*. It assesses the proportion of young 15-year-old children who do not reach the second level (the "basic skill level") for the three key learning disciplines (reading, mathematics, and science) of the programme for International Student Assessment (PISA) (European Commission, 2020b).

To evaluate tertiary education, two indicators are used. The first is *tertiary educational attainment*. It shows what percentage of individuals between the ages of 30 and 34 have completed a postsecondary education (i.e., at a university or a higher technical institution). The second one is the *employment rate of recent graduates*. It indicates the proportion of the population aged 20 to 34 with at least upper-secondary education who are employed, have not

been enrolled in any education or training, and who have successfully finished their highest educational attainment (European Commission, 2020b).

Regarding adult learning, it is measured using adult participation in learning. Adult learning encompasses general and vocational learning activities done by adults who have completed their primary and secondary education and training. It refers to individuals aged 25 to 64 who have declared that they have obtained formal or informal education and training (numerator). The denominator includes the whole population of the same age group (European Commission, 2020b).

Based on that, quality education can be attained by meeting the benchmarks for each criterion. This also leads to many *economic and social benefits*. For example, inclusionary and high-quality education for anyone that removes school segregation is a key component of long-term growth. In addition, with the devastating effects of dropping out, SDG 4 asks for all girls and boys to have access to basic and secondary education and be able to complete their education. In the labor market, those with lower levels of education may face more difficulties and are more likely to be poor and isolated. SDG 4 further emphasizes the need of expanding and improving access to excellent education and training for all people. Furthermore, low tertiary education may impede competitiveness, innovation, and productivity and limit potential development. Also, adult learning aids in the improvement and development of skills, the adaptation to technology changes, the advancement of one's profession, or the assistance in the return to the labor market (European Commission, 2020b).

Consequently, investing in *human capital education* in the economy is seen, according to the preceding subparagraphs, as a crucial step towards economic and social success. In reality, it is important to point out that the term of human capital was first used by academics such as Mincer (1958), Goode (1959), Schultz (1961), and Becker (1975) in the 1960s and 1970s. They also have diverse ideas about what human capital is. However, this term has gained importance through the theory of endogenous growth developed by Lucas (1988) and Romer (1990a). Besides that, human capital was included in the production function by Mankiw et al. (1992). This inclusion serves to highlight the critical role played by human capital investments in economic growth.

As a result, education is the primary process that should be considered to grow and flourish economically. It also aids in the development of an individual’s capabilities. As a result, education is critical to human competence and sovereignty (Sen, 2001). Also, Kim & Terada-Hagiwara (2010) have highlighted the significance of a well-educated workforce in the

economy and its role in spreading and adopting new technologies and production approaches. This element is critical in the economic process, particularly in developing economies with limited physical and human resources (Adawo, 2011).

In sum, education, as the primary component of human capital production, has attracted the attention of economists in the literature, leading to the development of different economic models. More importantly, they believe education is a critical variable in determining a nation's economic growth.

2.2.2. Social tolerance toward diversity (SDG NO. 10 and 16) and its economic importance

According to the UNESCO, cultural diversity is defined as “respect for the diversity of cultures, tolerance, dialogue, and cooperation, in a climate of mutual trust and understanding are among the best guarantees of international peace and security.” Furthermore, culture and the SDGs are deeply interconnected. SDGs ensure the growth of cultures, but cultures drive the SDGs as well. From an economic standpoint, culture serves as a multiplier that stimulates innovation in fields such as information and communications technology, audiovisual production, and others. Cultural and artistic legacies benefit society by fostering community cohesiveness. To help combat climate change, the cultural sector may lower their carbon footprint by making operations more environmentally friendly (De Vries & Institut Für Auslandsbeziehungen, 2020).

In fact, culture is notably missing from the 17 SDGs. However, the final Agenda explicitly mentions it in many instances. For example, target 4.7 of SDG 4 ensures students' acquisition of necessary information and skills to support sustainable development, such as understanding and appreciating global citizenship and respecting cultural differences and culture’s role toward sustainable development. Also, target 8.3 of SDG 8 is designed to encourage development-oriented policies supporting production activities, creativity, and innovation, among other things. In addition, regarding SDG 8 and 12, each of targets 8.9 as well as 12.b relate to the need of developing and implementing policies that encourage sustainable tourism, particularly by means of local culture and goods, and the need to create appropriate monitoring methods in this field. Finally, SDG 11’s target 11.4 is cantered on the notion that there is a need to improve efforts in preserving and safeguarding the world's cultural and natural assets (Cities & Governments, 2018).

However, other SDGs may highlight cultural diversity better, such as SDG 10 and SDG 16. For instance, SDG 10’s target 10.2 aims to enhance social, economic, and political inclusiveness,

regardless of age, sex, disabilities, color, ethnicity, origin, religion, or economic position (De Vries & Institut Für Auslandsbeziehungen, 2020). Other than that, SDG 10 is mainly concerned with the successful integration of migrants to promote future European prosperity, solidarity, and cohesion. To help immigrants and their children to successfully integrate into the host economy, it is crucial to improve the circumstances for their social participation, including their engagement in school and their involvement in the labor market (OECD & European Union, 2015). On the other hand, SDG 16's target 16.b advocates for and implements non-discriminatory policies for long-term economic growth (United Nations, 2021n). At this moment, the EU's strategic approach to international cultural relations stresses the importance of intercultural communication and cultural diversity as they pertain to promoting human rights, tolerance, and non-discrimination (CAE, 2019).

Regarding the estimation approach, by looking at the report of the European Commission (2020b), there are no straightforward estimate techniques that adequately indicate the percentage of cultural diversity in the economy. However, the indicators of SDG 10 and 16 may be seen as relevant to the subject. For instance, SDG 10 includes different indicators such as the citizenship gap between EU and non-EU people in terms of income poverty, early leavers from education and training by citizenship, as well as asylum applications (which displays the number of first-time asylum seekers per million people as well as the number of positive first-instance decisions per million people) (European Commission, 2020b). On the other hand, SDG 16 includes only one related indicator (i.e., indicator 16.b.1). This indicator illustrates the percentage of the population who say they have experienced discrimination or harassment in the preceding 12 months. According to the computation method used by the Office of the United Nations High Commissioner for Human Rights (OHCHR), it can be calculated by the number of survey respondents who encountered discrimination or harassment divided by the total number of respondents, multiplied by 100 (OHCHR, 2018). Based on this, it seems that SDG 10 and 16 both seek to eliminate inequities and discrimination. This may assist to increase social tolerance toward diversity in the economy.

In reality, the term "diversity" may have many distinct meanings. It could be ethnic, religious, linguistic, or other factors. Whatever diversity entails, numerous issues regarding its effect on the economy have caught the interest of economists throughout time. Furthermore, numerous problems were addressed from an economic standpoint of scholars, such as immigration, social integration or inclusion, multicultural cities, and so on. There was also disagreement in the literature as to whether cultural variety is beneficial or harmful to development.

Researchers in many various disciplines, such as economics, management, and political studies, are becoming interested in the influence of ethnic diversity on economic growth (Alesina & La Ferrara, 2005; Horwitz & Horwitz, 2007). Furthermore, researchers' concern in the connection between migration and economic growth has recently risen, especially after a long time of negligence (De Haan, 1999).

In this regard, it's critical to understand the so-called economics of diversity. In fact, the economics of diversity becomes an interesting topic for researchers. Many related issues were taken into the consideration through literature such as the changes in the world's demography, the emergence of growing ethnic and cultural regions in the Western nations due to immigration, which is considered one of the trendy issues in the current time (Putnam, 2007). These changes stimulate debate over whether societies with cultural diversity are economically and socially feasible (Florida, 2002a; Gilroy, 2004) or not (Collier, 2013; Goodhart, 2013). After gaining a clear picture of migration's impact on the labor market, economists begin to broaden their research to include the implications of having socially and economically diverse labor forces and societies. For example, after the iconic work of Ottaviano and Peri (2005, 2006), researchers and economists became more interested in this topic. Some of them focused on diverse regions and their urban economic consequences (Lewis & Peri, 2015). On the other hand, others discussed it on the level of firms. In this regard, they provide insight into the connection between migration, diversity, innovation, level of productivity, trading, etc. (Mannix & Neale, 2005; Nathan, 2014).

From a microeconomic standpoint, the literature focuses on cultural diversity at the business level. To be more specific, it examines whether cultural diversity affects business performance. The following is a debate and inquiry from a different point of view.

The first perspective considers cultural diversity as a source for cognitive variety, including many different ideas and experiences (Page, 2007). According to this perspective, having diverse labour forces may help to promote the problem-solving process and produce new ideas and views (de Vaan et al., 2015). Therefore, it may also help to enhance productivity and firms' profits. In addition, it was found out that it is hard to communicate and trust in a diverse group of people, which may hinder the ability to produce (Alesina & La Ferrara, 2005; Mannix & Neale, 2005). At the same time, others discovered that ethnic homogeneity might be harmful, particularly if trust leads to a lack of check (Phillips & Apfelbaum, 2012).

On the other hand, another point of view which researchers found out is the fact that ethnic diversity helps to make international markets more accessible through the connections of people

as well as domestic knowledge (Docquier & Rapoport, 2012). On the contrary, firms with diverse workforce may experience discrimination from clients and suppliers and this may influence the profitability of the company (Akerlof & Kranton, 2010; Kahneman, 2012).

From the macroeconomic perspective, literature has a conflict on the influence of diversity on the economy. For example, Easterly & Levine (1997), examined several African economies and found that their economic performance is poor owing to the existence of high ethnic diversity. In other words, cultural diversity, which may include different origins, religions, and habits, has an economical cost. Furthermore, according to Alesina et al. (2003), ethnic and linguistic diversity have a detrimental impact on economic growth. Also, Gören (2014) reached the same conclusion.

Other researchers criticized the previous scientific works, and they argued that a negative connection between cultural diversity and economic growth exists due to the inclusion of all poorest African economies in the study (Patsiurko et al., 2012). Furthermore, Patsiurko et al. (2012) have included only OECD nations in their analysis and reached the same conclusion.

On the contrary, Other authors have discovered that there are benefits behind cultural diversity, such as Ottaviano & Peri (2006). Their study focused on main US cities, and they noticed that people who are originally citizens in the USA experience rise in their wages in line with the increase in the proportion of foreigners. Moreover, they found that cultural diversity positively influences the worker's productivity. In addition, Bove and Elia (2017) pointed out that cultural diversity is essential in boosting technology's innovation, providing new ideas and thoughts, and producing more diverse products and services. Furthermore, they demonstrated that cultural diversity increases the rate of GDP growth over time. Additionally, Ashraf and Galor (2011) found a positive connection between cultural variety and economic growth throughout the time of industrialization. Ager and Brückner (2013) also proved that cultural variety has a major influence on the overall output per capita in the USA between 1870-1920, especially at the time of immigration to the United States. Besides that, Lazear (1999) argued that productivity could be increased by having a diverse society with different knowledge and ideas and skills. Hong & Page (2001) also indicated that groups with diverse culture and limited capabilities perform better than homogeneous groups in solving problems.

To understand how cultural diversity may contribute to economic growth, the relationship can be shown in the following figure 4 shown below. This graph illustrates the literature viewpoint on the economic effect of cultural diversity (Yong, 2019).

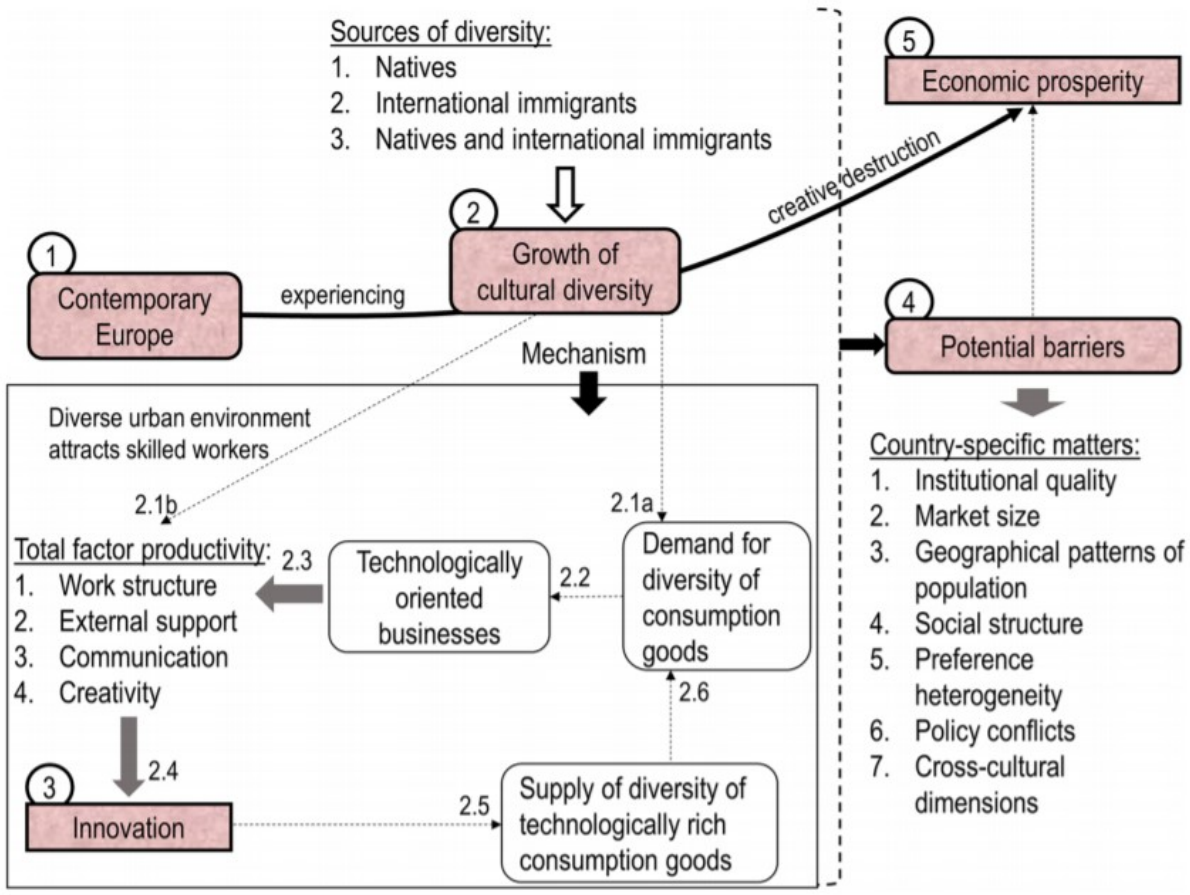

Figure 4. a culture-economy framework.

Source: compiled by Yong (2019).

As illustrated in the diagram above, the line from no. 1 to no. 2 represents the rise of cultural diversity in contemporary Europe. Based on the study of Alesina et al. (2016), it was found out that there was a growth of immigrant diversity as well as skilled immigrant diversity by 5.6% and 5.2%, respectively, during the period between 1990-2000. No. 3 and no. 4 imply processes that connect cultural diversity to economic growth, which is illustrated by the arrow from no. 2 to no. 5. Each of no. 2.1 and no. 2.6 represents the economic cycle that aims to achieve innovation (No. 3). In this cycle, innovation indicates creativeness which may include R&D, the development of new products, new companies, and the technology which can be transferred through the connection between universities and industries. These elements are crucial for economic growth (Grossman & Helpman, 1991; Link & Siegel, 2005).

As a theory, it is widely accepted that demand leads to innovation (Schumpeter, 1947). This theory explains why businesses often strive to gather all possible customer information and feedback to improve or invent their products (Jovanovic & Rob, 1987). Simultaneously, cultural differences leads to the diversity of preferences (Alesina et al., 2005). There may be demand

heterogeneity in consumption among culturally varied consumers if cultural diversity is related to demand heterogeneity (Bakens et al., 2013). This is clearly shown by the positive connection depicted in the figure between demand for diversity of consumption goods (No. 2.1a) and technologically oriented new companies (No. 2.2). Hereby, the arrow between no. 2.1a to no. 2.2 indicates that heterogeneous consumption for products drives the entrance of technology-oriented start-ups, but it also pushes existing companies to undertake innovative projects due to competition from new entrants (Aghion et al., 2009).

In addition, cultural diversity contributes to productivity by providing necessary skills (as shown in (No. 2.1b) (Alesina & La Ferrara, 2005). Following this notion, Yong (2019) attributes this effect to Solow's total factor productivity (1957). According to Solow's theory, total factor productivity means that there are non-observable changes in production technology (Snowdon & Vane, 2005). In addition, many researchers demonstrate that productivity can be influenced by knowledge (Grossman & Helpman, 1991), as in the case of Germany where knowledge influencing production through different channels such as the assistance of external parties, work framework as well as the ability to create (Bouncken, 2004).

Although the overall benefits of cultural diversity are well recognized, there are still many stumbling blocks that stand in the way of development. No matter the economy, there will be a variety of barriers, which may impede policies that seek to promote diversity. As shown in Figure 4., there are seven obstacles. The first one is the quality of institutions. For example, as in African economies, ethnic diversity may lead to conflict (Easterly & Levine, 1997). Therefore, having excellent institutions thus protects the economy from potential conflict. The second barrier is the market size. In other words, the bigger the market, the higher the degree of rivalry and the higher the likelihood of new technology adoption (Desmet & Parente, 2010). The third one is the populations' geography and their distribution. In fact, cultural diversity is an essential source for information and idea creation, which may help encourage innovation. Based on that, the geographic distribution of individuals with various skills and expertise is critical for economic growth (Audretsch & Feldman, 1996). The fourth barrier is social structure. For instance, Granovetter (1985) claims that the economy is dependent on non-economic activity. To be more specific, social embeddedness is critical for achieving economic growth. Because of this, politics, religion, and the like may negatively affect investment, government's budget allocation, or even raise the likelihood of civil war (Montalvo & Reynal-Querol, 2003). The fifth and sixth obstacles are preference heterogeneity and policy conflicts. In other words, there is a possibility of experiencing failure in fulfilling the demands of people

for public goods as well as policy's failure to take into account the preferences of everyone (natives and immigrants) (Alesina et al., 2005). The last barrier is the cross-cultural dimension (look at Hofstede's model). For example, the researchers discovered that there is a negative connection between development and power distance. In contrast, though, individualism has a beneficial effect on development (Yong, 2019). Societies, which are characterized by their being very individualistic, pursue social benefits through innovating (Williams & McGuire, 2010). Societies with minimal power distance are well-governed, therefore able to increase human development quality (Gaygısız, 2013).

As for the literature on cultural differences and their economic consequences, researchers have adopted two distinct kinds of analysis. The first group of academics utilized cross-sectional studies using time-invariant measures to investigate the effect of linguistic and ethnic diversity on the economy (Montalvo & Reynal-Querol, 2005). The second group investigated this relationship using the cross-sectional approach in which low- and high-income economies were included in the analysis. However, the first group's studies approach is not suitable due to the changes in the composition of communities in terms of ethnic factors. These changes happened because of mass immigration during the last decades. On the other hand, other studies analyzed the cultural diversity-economy relationship through the data of high- and low-income nations regardless of the likelihood that diversity's role could be different during every development stage (Bove & Elia, 2017).

2.3. Language proficiency, quality education, social tolerance, and economic growth

The topic in this subsection will be split into two parts. The first section will go over the economic implications of language and language policy. The second section will focus on the connection between English language proficiency and each of quality education and social tolerance toward diversity, and therefore economic growth.

2.3.1. Economics of language

First and foremost, it is critical to shed light on the so-called economics of language. This subfield of study emerged in 1965 by Jacob Marschak through his paper: *Economic of language in Behavioral Science* (Marschak, 1965). He described the language as costs, benefits, value, and utility. Despite that, according to the literature, the first researchers who wrote about this field are divided into three generations. The first generation was in 1960. Their study was empirical, and its roots are traced back to racial discrimination and the economic analysis by Becker (1957) and its analytic application to language by Raynauld and Marion (1972). Based

on that, it ascribes the ethnic element to the linguistic ones. In other words, the mother tongue helps to determine the identity which can be used to assign every individual to his/her group. Therefore, this kind of assignment may affect the social and economic position of the assigned person such as the case of the pay inequality between white and black people in the US, and between English and French speakers in Canada. The second generation, who emerged between the 1970s and 1980s, focused mainly on the human capital aspect of language. To be more specific, it gives attention to language and education economics.

Moreover, it illustrates the linguistic skills as a kind of capital through which people can invest and make gains, as in the case of immigrants' social and economic status (such as Spanish native speakers in the USA) after learning the English language. The third generation, such as Vaillancourt (1980), tried to measure and determine labour income through language functions. Accordingly, in this case, language is not deemed identity or skill. Instead, it is a group of linguistic features that may have an impact on individuals' social and economic standing (Grin, 2003).

Based on the literature, many researchers give special attention to the economics of languages, such as Grin, Sfreddo & Vaillancourt (2011), Vaillancourt (1983), and Grin (1996, 2003). Furthermore, others also involved game theory as a part of the study, such as Glazer & Rubinstein (2004; 2006) and Rubinstein (2000).

Economics helps to assist the development of language policy as well as language planning. First and foremost, economics simplifies decision-making, particularly in issues involving languages, such as the rise of income due to second language education or learning as well as the impact of international trade on the survival of specific languages and the extinction of others (Grin et al., 2011).

Secondly, economics contributes to language policy selection, formulation, implementation, and assessment. For instance, it helps to evaluate and differentiate between various linguistic policies through cost and benefit analysis (Zhang & Grenier, 2012). Additional to this, language policy can identify necessary resources allocation techniques by using specific economic methods, such as choice theory, that assist in offering a logical way to accomplish that. For instance, Grin & Vaillancourt (1999) proposed that language policy's fiscal obligations, like education, health, and other policies, can be funded by taxation. The language planners prefer to use the cheapest language and allocate it in line with the size of the language group's population, according to Pool (1991). However, language policy and planning continue to confront many issues and challenges, including return rate on the language (Gao & Smyth,

2011; Grin, 1995), the assessment of language policy's impact (Grin & Vaillancourt, 1999), and language policy's costs and benefits (Vaillancourt, 1996; Vaillancourt & Coche, 2009).

Identifying language policy is necessary in order to control the linguistic environment and improve wellbeing. Consider the potential, for example, that the language environment may change on its own, without the involvement of the state. According to economic theory, this may lead to market failure, which usually occurs as a consequence of insufficient information, and could affect economists' decision-making processes. In addition, it has been argued by some experts that social parties in countries where English is not widely spoken are unaware of the threat to the quality of their linguistic environment, they face because of this. Also, market failure could happen as a result of the high cost of the transaction. As an example, the European Union might perform effectively if there is one common language (such as Esperanto, without costs for translation and interpretation) (Pool, 1996). Non-existing markets are another reason that may cause a market failure. For instance, the market of endangered languages will be unavailable to the next generations. This is possible because the next generations will significantly give attention to linguistic diversity. In the end, having a large number of market participants with various power positions may result in a violation of the free entry requirement and an imperfect market. In light of these considerations, the government's involvement is critical and necessary under the economic theory of welfare (Grin, 2003).

2.3.2. English language proficiency, quality education and economic growth

In general, English-speaking economies are thought to be amongst the highest GDPs. However, this does not mean that learning English correlates directly with economic growth. There has recently been some hard evidence to back up this claim (Seargeant & Erling, 2011).

Only a few economies still reject the idea that English aids in both social and economic growth. When it comes to these economies, English is often a topic taught in schools or used as a tool for development, particularly in the private sector (Kennedy, 2011). Regarding education, it is important to note that language education with the goal of development should be included in two aspects. The first one is to become involved in critical pedagogy, which includes five key elements.: *change-aimed, empirical, pro-autonomy, cooperative, and communicational*. The second one is to include an open, critical, and dynamic approach to broader educational experiments and daily life (Savage, 1997). However, there is a risk that language educators and language policymakers will be limited to English language education (Bruthiaux, 2002).

On the other hand, the English language can be utilized to attract foreign capital and exports through education. To be more precise, economies may accomplish this by implementing a particular economic strategy that ensures consistency between language education policies and the economy's requirements. For example, due to the change in export-oriented industrialization, three countries have improved their language instruction: Singapore, Puerto Rico, and Ireland. These economies share the same economic strategy. Firstly, their industrialization aims to achieve their export strategy, which is dependent on attracting foreign direct investment (via tax reduction). Secondly, there was an economic change from import substitution to export strategy. Thirdly, their English proficiency is associated with the rise of wages, foreign capital, and economic growth. However, satisfying the needs of export-oriented industrialization differs from one economy to another. For example, the degree of consistency between economic policy and language education policy in Singapore was high. This is justified due to using English as a language of teaching. In Ireland, the degree of consistency was between medium to high (English has been gradually used over Gaelic). Teachers in Puerto Rico refused to accept English as a language of instruction, thus consistency was poor (Suárez, 2005).

Policies that promote English language education as a tools of improving education depend not only on the idea that English may improve people's lives but there is also concrete evidence linking the learning of the English language with quality education (Grin, 2001). Aside from that, many recent studies have shown the importance of high-quality education in spurring economic growth (Hanushek & Woessmann, 2008; Little & Green, 2009; Williams & Cooke, 2002).

The English language, on the other hand, has a beneficial effect on the overall level of schooling (i.e., quantity education). To illustrate this, look at figure 5. below. Based on the scatter plot line's direction, English proficiency index (EPI) has a positive effect on development, which is estimated here by the human development index (HDI). This index consists of *education, life expectancy, literacy, and standards of living* (McCormick, 2013). As a result, the economy's English proficiency index increases education quantity (measured by mean years of schooling) in these economies. In addition, this is one reason why the economies in northern Europe have always been at the front of the EPI. Given their modest size and export-driven economies, these countries' leaders recognize that excellent English is a key element of their ongoing economic growth (McCormick, 2013).

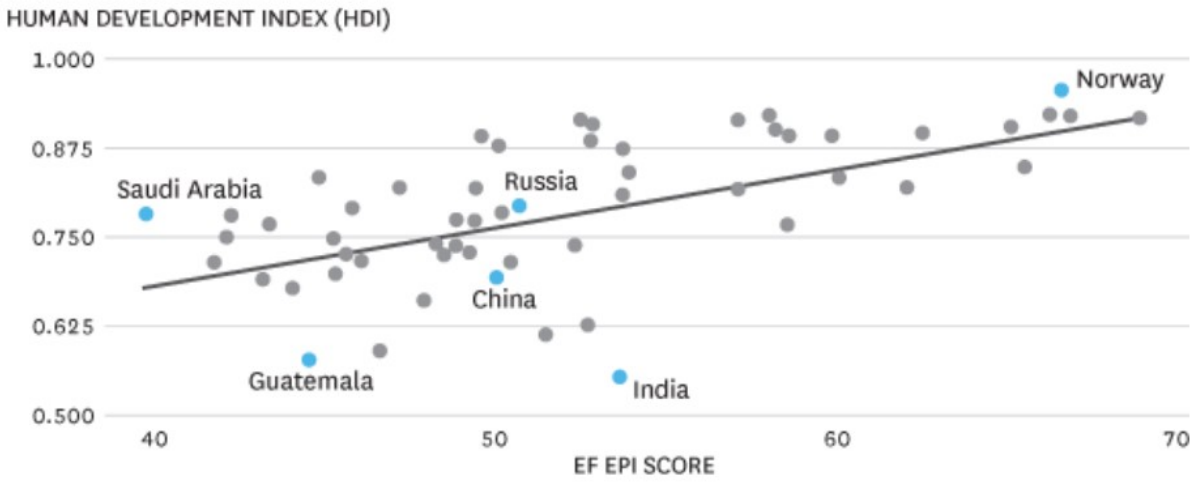

Figure 5. Better English, a better quality of life.

Source: compiled by Harvard Business Review (2013). Note: EF EPI data (Education First EPI, 2013), Human development index data (United Nations, 2012).

Multinational corporations' inward investment, people seeking to improve their labor market positions, and government expenditures to support English language education are only a few of the factors that drive economies to promote English language education (Pinon & Haydon, 2010). To highlight this, a five-economies study was performed by Euromonitor International (2010) (e.g., *Pakistan, Nigeria, Bangladesh, Cameron, and Rwanda*). The study shows how these nations' economies were boosted by their education systems, as observed in figure 6. According to this study, several indicators were identified to evaluate the effect of English language learning on the economy, including *the proportion of English speakers, an adequately educated workforce, an increase in the number of English speakers, government-education spending, consumer-education spending, the quality of the educational system, the tertiary education enrollment rate, and internet mobile users.* These metrics pertain to the education system. As for the economy, the study identified the following indicators, *ease of doing business, total foreign direct investment (FDI) inflow, percentage of FDI from English speaking economies, total employed population, proportion of salaried professionals of the total workforce, gross income per capita, annual gross income per capita, salary gap, percentage unemployment rate.* According to the figure, Nigeria is the best place to get a decent education. This is because to the educational system, which utilizes English as a teaching medium in many schools. On the other hand, the circumstances are different in countries such as Pakistan, Bangladesh, Cameroon, and Rwanda. The majority of urban schools and private institutions in countries like Pakistan, Bangladesh, and Cameron use English as their only language of

teaching. Rwandans speak a mix of French and Kiswahili. The government, on the other hand, has just made the decision to switch the whole educational system from French to English in an effort to promote economic growth (Pinon & Haydon, 2010).

Moreover, the figure depicts how the education system (illustrated by the orange colour), including education quantity and quality, does have a beneficial impact on the economy (grey colour). Though this evidence here is limited to just five developing countries, the results demonstrate the significance of English education in the economy.

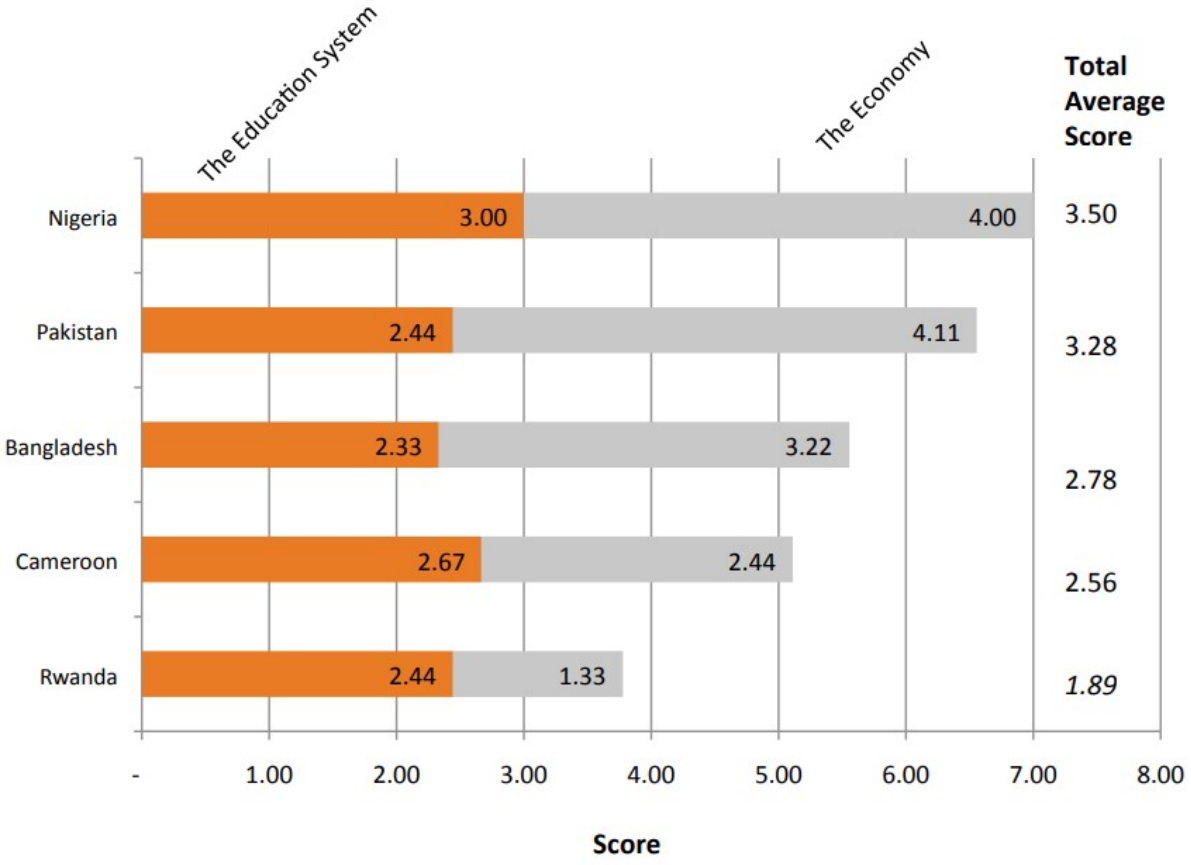

Figure 6. The Education System and the economy – Comparative Performance.

Source: compiled by Euromonitor International (2010).

Finally, English is often highlighted in terms of its function in gaining access to technology, which may be viewed as a facilitative tool for educational change and development, apart from its importance in increasing economic competitiveness and educational advancement. As a consequence, it contributes to the achievement of the United Nations Millennium Development Goals (MDGs) (UN 2000), particularly MDG. 2 ‘universal primary education and MDG. 8 ‘to Develop a Global Partnership for Development' (Seargeant & Erling, 2011).

2.3.3. English language proficiency, social tolerance, and economic growth

In the beginning,, it's important to point out that the terms tolerance and cultural diversity are often used synonymously, according to Florida (2002b), and Florida and Gates (2001). In this respect, the homosexual, the bohemian, and the melting pot indexes are the three major kinds of tolerance metrics used by Florida. These indices reflect the geographic concentration of gays, lesbians, bohemians, and immigrants. Besides that, the tolerance index, created by Florida et al. (2008), was a combination of the gay and the bohemian indexes. Others have questioned Florida's approach. For instance, Qian (2013) claimed that tolerance and diversity are not conceptually connected. Hereby, the measuring criteria should be different too. In addition, these indices are unsuitable for assessing cultural diversity since they do not account for the distribution of individuals across cultural groupings. Alternatively, the well-known Herfindahl–Hirschman Index (HHI) can be used to assess cultural diversity (Schaeffer, 2013).

Therefore, this research agrees with Qian's argument and distinguishes social tolerance from cultural diversity conceptually. In other words, the concept of tolerance differs from that of cultural diversity since tolerance reflects a good attitude that allows people to understand others. This mindset has the potential to contribute to societal harmony (Brewer & Pierce, 2005). Cultural diversity, on the other hand, indicates the existence of variety in terms of religions, languages, genders, ethnicities, countries, sexual orientation, and so on.

As previously explained, cultural diversity generates economic advantages (Ottaviano & Peri, 2006). Furthermore, the English language aids in attracting the economic advantages of cultural diversity to the economy. To illustrate that, look at figure 7. As observed in the figure below, learning the destination country's language facilitates migration and immigrant participation in the labor market. Also, it reduces the cost of relocation (Bleakley & Chin, 2004). For instance, the implied growth rate of emigration to economies with similar language differs, about 18.8%-20%. Besides that, English as a global language can be seen as a significant element driving worldwide migration (Adserà & Pytliková, 2015). Also, migration can be a source of linguistic and cultural diversity and regional innovation (Fassio et al., 2019). Based on these studies, it is possible to infer that languages play a hidden role in promoting human capital migration, diversity, and productivity.

However, this research is not intended to investigate whether English and cultural diversity have economic value or not. Instead, since cultural diversity incurs costs, the research argues that these costs can be avoided by enhancing social tolerance in the economy. Improving social tolerance could aid in managing cultural diversity in a manner that helps the economy.

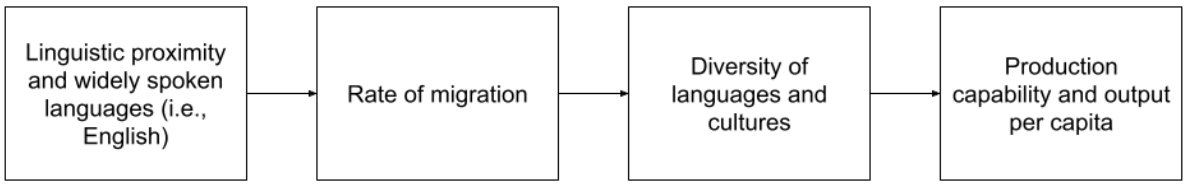

Figure 7. English language, Human capital migration, and Economic performance.

Source: Author's own compilation.

To be more specific, ethnic conflict arising from heterogeneity, manifested in policy and public goods, is one of the most important issues connected with cultural diversity. (Alesina et al., 2005). The presence of ethnic conflict comes with potential costs such as wasted time, resources that might be spent on economic growth instead (Yong, 2019). As a result of increased cultural variety, crimes of prejudice, racism, and ethnic discrimination, as well as xenophobia, are on the rise. The United Nations and the European Council, for example, both believe that tolerance is the best approach to dealing with these problems in the real world (Verkuyten et al., 2019). Therefore, fostering social tolerance is thus the most effective strategy for managing and benefiting from cultural differences on the economic level.

Linguistic diversity is another issue caused by cultural diversity. Speaking the same language is another kind of tolerance that aids in managing ethnic heterogeneity and helping immigrants integrate into the economy, according to this study. According to Ayrat et al. (2017), speaking a foreign language is the answer to the problems of comprehending specialized knowledge across the globe, adjusting to the cultures of other nations, and interacting with individuals from different cultures.

According to Richard Florida (2002b), a diverse and tolerant community is more likely to attract creative people and industries like high technology and research, which are reliant on new ideas and innovative thinking. According to this view, tolerance is a positive characteristic that stems from cultural, ethnic, and religious diversity. Tolerance is defined in this research as how effectively society respects and benefits from the diversity of people's religious views, races, origins, and sexualities. This phrase corresponds to Florida's (2003b) definition of tolerance, which is considered to imply "openness, inclusion, and diversity to all ethnicities, races, and ways of life."

Human capital is attracted to environments that promote social tolerance and cultural diversity. Alesina and La Ferrara (2005) argue that cultural differences foster and boost productivity via

skills. The reason behind considering cultural diversity as important an element of total factor productivity, developed by Solow (1957), is due to its ability to attract educated and skilled people to the economy. These skills are regarded as knowledge since they are important indicators of productivity. Accordingly, since tolerance and diversity both attract human capital, the aim of the research is to discover and evaluate the relationship between social tolerance and economic development. This is founded on the idea that tolerance and diversity promote a climate that makes it easier to accumulate human resources, which are critical to economic success (Chen, 2011). This is shown by the fact that highly educated human resources gravitate toward regions known for their diversity and inclusiveness (Florida, 2005). Florida coined the term '*creative capital theory'* in 2002. In two respects, it is distinct from human capital theory. First, it focuses on a subset of human capital known as the *creative class*, which is critical for economic growth. Second, it assists in determining the variables that influence the category's region selection. This is a creative class that includes people who work in knowledge-intensive sectors.

Additionally, tolerance promotes the dissemination of knowledge (Florida et al., 2008), which is necessary for economic success (Acs et al., 2002). As a consequence, tolerance, technology, and innovation all have a reasonable correlation. Additionally, tolerance fosters entrepreneurship by recognizing entrepreneurs as part of a talent pool. As a result, they may be drawn to areas known for their tolerance and diversity (Cheng & Li, 2012; Lee et al., 2004).

As a result, since English language and social tolerance are essential in attracting knowledge and human capital, this research hypothesizes that these two factors can be considered main determinants of economic performance and, therefore, be included in the augmented Solow model.

Moreover, cross-country research, according to Temple (1999), has brought economists' interest in the notion that physical capital and labour aren't the sole determinants of economic development, as shown by growth theory. Also, various variables should be taken into account, such as the quality of judicial systems (Knack & Keefer, 1995), government size (Bergh & Karlsson, 2010), etc. Aside from that, social variables can be components of economic performance, such as social capital (Zak & Knack, 2001) and income inequality (Aghion et al., 1999). In this regard, according to this study, social tolerance may serve as yet another important social indicator (Buchanan & Congleton, 1998; Buchanan & Tullock, 1962).

Finally, as illustrated in figure 8., it is possible to summarize the preceding literature review using VOS viewer. This figure visualizes a bibliometric network of 596 keywords that were

referenced in 1532 Scopus articles. This network connects language to economic development and other key items such as human capital, education, culture, cultural diversity, international migration, interpersonal communication, language policy, English-speaking Africa, and so on.

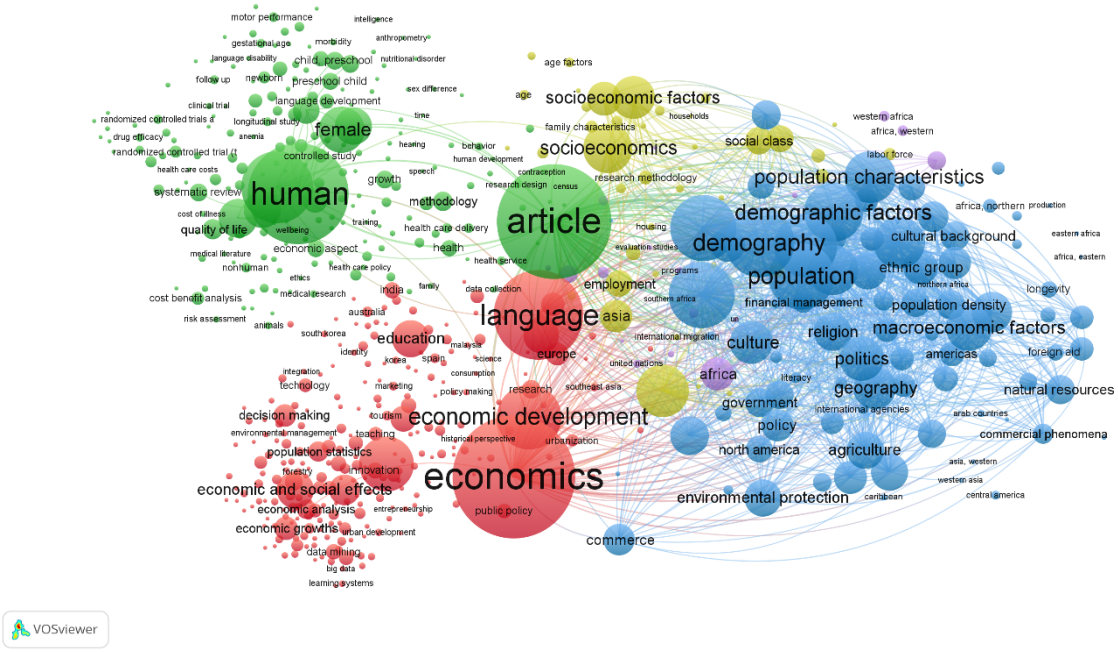

Figure 8. Bibliometric network of languages and economic growth.

Source: Author's own compilation.

2.4. Social tolerance and intercultural competence at the microeconomic level

2.4.1. Tolerance and intercultural competence

In the previous pages, the literature review highlights the necessity of diversity and social tolerance factors within economies due to their economic benefits. In this part of the research, the discussion aims to cover the importance of enhancing tolerance within higher education institutions since they usually include a mix of students with different languages and cultures, especially within internationalized universities. Students must possess a high level of tolerance and intercultural competency in order to interact successfully with people from other cultures. Therefore, the question here is, what is the difference between tolerance and intercultural competence?

As previously explained, tolerance is defined as "an attitude of being open-minded and respectful toward diversity, regardless of people's ethnic, social backgrounds, or lifestyle they have preferred" (Florida, 2003a). Furthermore, it can be estimated in terms of people's attitudes

toward gays, lesbians, artists, and immigrants. These categories can be indicated by the Gay, Bohemian, and Melting Pot indices respectively (Florida, 2003b). On the other hand, intercultural competence is " the ability to communicate effectively in cross-cultural situations and to relate appropriately in a variety of cultural contexts" (Bennett & Bennett, 2004). Also, according to Ruben (1976), intercultural competence is estimated through the following elements. First, *display of respect*, in which people should be able to express positive regard, such as voice tone, eye contact, and so on, for others. Second, *interaction posture* shows an individual's capacity to remain neutral while interacting with other cultures. Third, the *orientation to knowledge* indicates people's ability to recognize the type of knowledge held by others. Fourth dimension is *empathy* which demonstrates person's capacity to comprehend and appreciate the viewpoints of others. The fifth dimension, self-oriented role behavior, is relevant to a individual's ability to cope and engage in various functions within the groups to which they belong. The sixth one is *interaction management*. This dimension refers to the ability to join conversations, initiate and terminate contacts depending on the requirements and wants of others. Finally, the seventh element is *tolerance for ambiguity*, in which a person should be able to adjust and conform to unfamiliar and uncertain circumstances (Ruben, 1976). After demonstrating the distinction between these two concepts, the next question is how they are related to each other?

In the beginning, in the framework of intercultural communication, it has been suggested that tolerance and intercultural competency go hand in hand. Additionally, increasing intercultural competency encourages individuals to be more tolerant of others' differences. This can be clear based on the argument in which behavioral communication can be described within the framework of social capital, as outlined by sociology. For example, social capital may be found primarily in the structure of relationships among individuals. Additionally, mutual trust is seen as a critical element in facilitating social relations (Coleman, 1990). Besides that, Putnam and others (1994) emphasize the significance of civic community and its role in enhancing regional networks. Nonetheless, as compared to fields such as intercultural communication and sociology, tolerance has received little attention in the area of urban economics. For example, some studies investigated the relationship between tolerance and other variables such as communication's structure and social networks (Jackson & Wolinsky, 1996), knowledge's formation and transmission (Berliant & Fujita, 2008), and how communication contributes to the development of multicultural cities (Ottaviano & Prarolo, 2009).

On the other hand, it may be claimed that individuals have demonstrated intercultural competence if one of the communication partners decides to be very tolerant, even though the other side has a relatively low level of tolerance. Hereby, mutual openness will indeed be greater in this situation. Apart from that, based on the study of Ihara and Yamamoto (2016), tolerance may be understood in terms of intercultural sensitivity level, which is regarded to be one of the most significant theories in the field of intercultural competence. This implies that a lower degree of tolerance corresponds to a lower level of intercultural sensitivity. This level is known as *ethnocentrism*, and it consists of three stages, *denial, defense, and minimization*. In these stages, individuals evaluate other cultures in light of their own values and beliefs.

Furthermore, a greater degree of tolerance reflects a greater level of intercultural sensitivity. This level is often referred to as ethnorelativism, and it includes *acceptance, adaptation, and integration* phases in which people are able to consider others' beliefs and actions as cultural rather than universal ones. In sum, this proves that tolerance and intercultural sensitivity are analogous and beneficial in enabling individuals to demonstrate a high degree of intercultural competence (Ihara & Yamamoto, 2016).

This also can be demonstrated as shown in figure 9. This bibliometric network includes 67 scientific works on tolerance and intercultural competence. In addition, the map depicts the most important related keywords in the literature in which *intercultural competence* serves as a catch-all for other concepts such as *tolerance, intercultural communication, multiculturalism,* and so on.

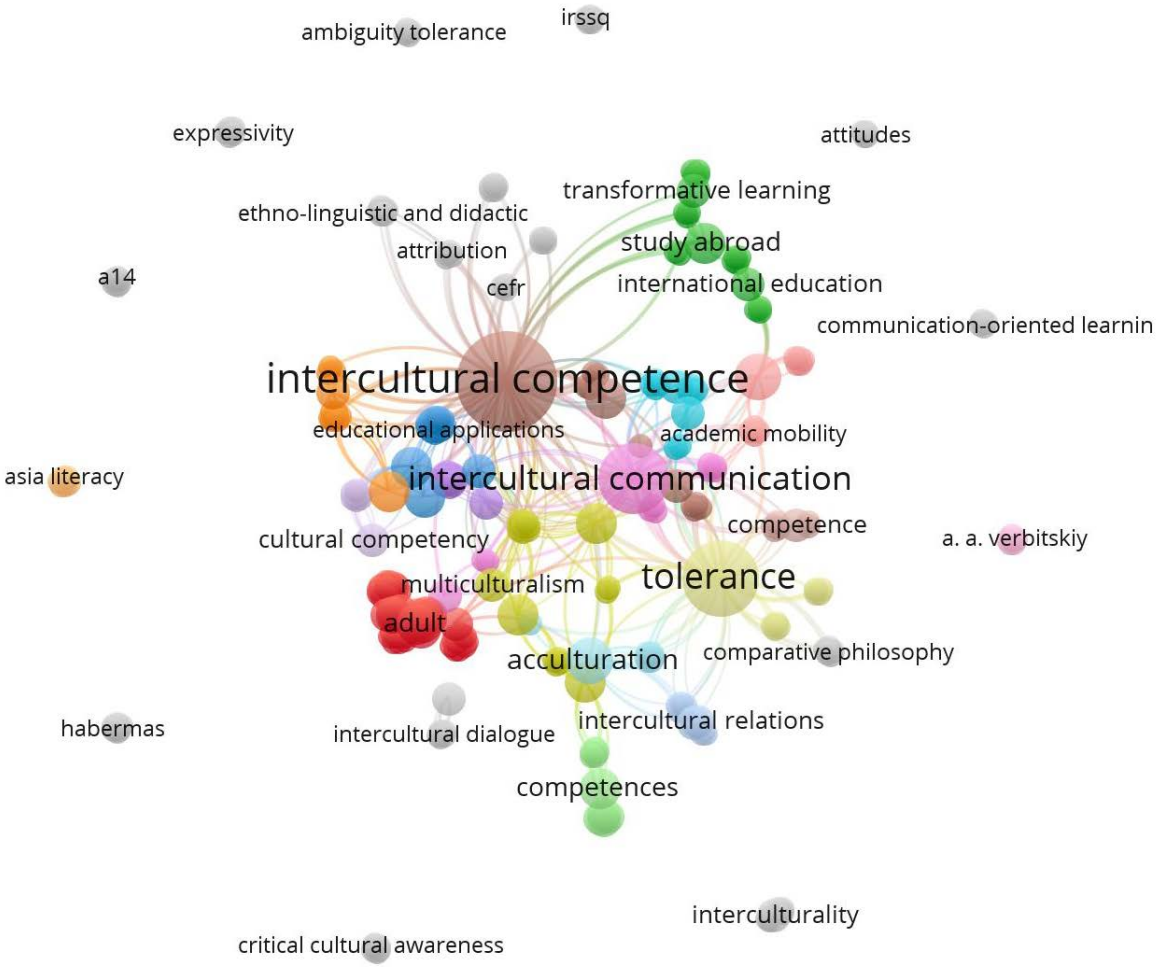

Figure 9. Intercultural competence and tolerance in the literature.

Source: Author's own compilation.

Finally, as observed in the literature, tolerance is primarily utilized in economies, while intercultural competence is typically used in the microeconomic context including institutions and entities. The next paragraphs aim to illustrate the importance of intercultural competence at the microeconomic level, as well as the education system.

2.4.2. The importance of intercultural competence

Depending on the academic literature, much of the research focuses on exploring the impacts of intercultural communication on corporate performance. For illustration, in order to guarantee business success. cultural diversity challenges must be turned into benefits. This may be accomplished via managing cultural diversity, in which diversity is seen as an asset that generates economic value and provides companies with a competitive position. The usefulness of cultural diversity management may be ascribed to its function in providing equitable

opportunity for individuals with cultural differences (Thomas & Ely, 1996). Furthermore, it also aids in fostering employees' tolerance for one other's differences while also providing them with status (Süß & Kleiner, 2005).

Given that, many businesses and organizations are classified depending on their organizational culture, which falls into two distinct categories. The first category thinks that to be competitive and thrive in the market, they must have homogenous workplaces, uniform regulations, and shared values. Nevertheless, owing to the insufficient toleration and capacity of its workers to adjust to changing conditions in the dynamic market, it's possible that the company may lose its competitive advantage as a result of this decision. On another side, the second one considers that having a significant degree of tolerance for diversity in the workplace may improve and accomplish staff creativity, innovations, effective problem solutions, and customer orientations. In this way, diversity is seen as a precious resource essential to its success (Köppel et al., 2007).

In addition, a company's success is largely dependent on its teams. Teams, also, are classified into various types inside corporations. For instance, a *real team* is usually described as a small group of people with complementary knowledge, such as technical, interpersonal, and problem-solving capabilities. The team members are all evenly obligated to work together to accomplish a common goal for which they are all jointly accountable. A *high-performance team* is another different type. Because high-performance team members are deeply dedicated to achievement, they outperform ordinary teams.

In comparison to the first type, the second has a stronger sense of purpose, a comprehensive approach to problem resolution, and complete mutual accountability amongst team members (Katzenbach & Smith, 1999). The last type is a *multicultural team* which includes people from different nations and cultures. They are also described as task-oriented groups. In this instance, *high-performance multicultural teams* are characterized as multicultural teams that have two essential components. First, in terms of the characteristics listed above, they are identical to high-performance teams. Second, these teams are made up of individuals from many countries and cultures.

As a consequence, employing a team of managers from various cultures results in a variety of different perspectives as well as a variety of innovative approaches that are required to address the associated problems (Marquard & Horvath, 2001). Moreover, multicultural teams play a crucial role in raising a business's production (Townsend et al., 1998). Furthermore, the ineffectiveness of a multicultural workforce may lead the business's resources to run out. This may occur due to the effect of cultural diversity, which could lead to conflict, misinterpretation,

and underperformance (Shenkar & Zeira, 1992). As a result, according to Matveev and Milter (2004)'s investigation, almost all managers (96%) agreed on the significance of intercultural competency and its role in enhancing the efficiency of multicultural teams within multinational corporations. Furthermore, the extent of cultural diversity that global partners have has a significant impact on the longevity of strategic alliances and international ventures (Rodríguez, 2005). Furthermore, intercultural competency is an essential element in today's global workplace since it affects global leadership performance (Bird et al., 2010).

Lastly, companies place a high value on intercultural competency for the following reasons. For example, the degree to which diversity occurs in a given company is related to its level of innovation (Yang & Konrad, 2011). This is understandable since heterogeneity in a set of individuals or teams is relative to the total of experience they have (Hoogendoorn & van Praag, 2012). As a result, *cross-cultural training* is essential for companies whose workers operate in a multicultural environment. This kind of training aids in the transformation of workers from ethnocentric to culturally relative. In other words, cross-cultural training makes individuals more flexible by teaching them global skills that are important in particular situations (Littrell & Salas, 2005).

Members of a multicultural team are regarded effective when they can successfully exchange verbal and nonverbal behavior with a foreign people and show intercultural competence (Spitzberg, 1983). Moreover, several qualities have already been identified that reflect intercultural competencies, such as the ability to create and sustain relations, the capacity to exchange knowledge, and curiosity (Mendenhall, 2001). In fact, it also includes behavioural abilities such as empathy, emotional warmth, charm, and the capacity to handle ambiguity (Gudykunst, 1998).

Another angle to consider is the connection between cross-cultural competency and the customer service industry. In reality, to provide clients with a good service experience, having cultural knowledge is essential, particularly in societies with cultural diversity (Ihtiyar et al., 2013). For example, it was proven that there is a connection between intercultural competence and customer satisfaction (Hopkins et al., 2009), the attention to buy (Teng & Laroche, 2007), etc.

On the other hand, an increasing number of Finnish companies use what is known as *International Business English* as their formal working language. Also, it is sometimes dubbed Euro English and Global English (Korhonen, 2004). Moreover, According to the Harvard Business school’s associate professor of organizational behaviour, Tsedal Neeley, the English

language is essential for companies that want to sell and buy to a wide range of customers and partners (Tran & Burman, 2016). In addition, the term “interactive translation” which was developed by Holden, is used to characterize work where multicultural team members develop shared meanings and understandings (Holden, 2002). In other words, interactive translation calls for participatory skills, that is, the desire to run discussion productively, and to communicate not just in one's own language but also in other ones.

Moreover, the development of intercultural competence is a long and continuous process of transformational learning (Taylor, 1994). It may include second language study, intercultural workshops, and practical experience with different cultures. Despite the positive role that intercultural competency may play at the entity level, many businesses do not invest in intercultural training. This can be justified due to the presumptions that international staff members are born rather than created. Also, the best performer in one culture can be best in another one. Other reasons are the lack of time as well as the ineffectiveness of training. Furthermore, temporary tasks do not justify training. Also, the previous experience of the trainee has a more influential role than the training itself (Kealey & Protheroe, 1996).

2.4.3. Intercultural competence and language’s importance in the higher education

As previously highlighted in the introduction, globalization, immigration, and diversity are all unquestionably significant phenomena that should be considered nowadays. To some extent, organizations fail because their workers' intercultural competence levels are too low to allow them to build solid commercial relationships. For instance, as reported by Psychology Today (2009), about 70 percent of German businesses stated that global cooperation was unsuccessful since partners could not communicate properly. According to the other German report, the percentage of international projects that are declining owing to the shortage of intercultural competency may vary between 40% and 70% (Kinast & Thomas, 2005). Aside from the financial expenses associated with poor intercultural relations, businesses that breach diversity and inclusiveness rules risk losing money as a consequence of litigation from both employees and consumers (Lantz-Deaton & Golubeva, 2020). On the other side, employers are increasingly looking for graduates with intercultural competency as a graduation attribute (Busch, 2009; Shiel et al., 2005). Engaging with cultural diversity, on the other hand, has benefits that extend far beyond employment. Being able to live together in different cultures is considered to be one of the most difficult problems confronting the globe today. Furthermore, educational entities can play a vital role in producing graduates who will make significant contributions to tolerant and peaceful communities in the future (Council of Europe, 2008).

Higher education institutions face a number of challenges, including the need for students to acquire transversal skills that will help them be more competitive in the global job market, as well as their capacity to live in a multicultural society. Higher education is putting forth a lot of effort to solve this problem (Deardorff, 2015). Furthermore, intercultural competence is regarded as a transversal learning outcome, for these institutions, whose significance includes the following. Firstly, it enables and prepares graduates to handle global problems, function in an integrated world system, and solve intercultural disputes. Secondly, the necessity for the globalization of higher education, which has become more a major worldwide issue (Deardorff & Arasaratnam-Smith, 2017)

The majority of universities and colleges provide a variety of chances for students to engage with other cultures and enhance their intercultural skills, such as study abroad programs and exchange programs (Salisbury et al., 2013). Moreover, this also enhances student's other related dimensions, such as expressing a good attitude towards the host country (Carlson & Widaman, 1988), global mindedness (Pedersen, 2009), and improvement in intercultural awareness (Williams, 2005). However, it is essential to stress that these programs are not adequate to boost the intercultural competence of students. Therefore, interactions should take place between students with different cultures and nationalities, according to the contact hypothesis. Achieving this could help to reduce bias and preconceptions and promote intercultural competency (Allport, 1954).

Based on that, it is necessary to highlight the study of Astin (1970a, 1970b), which focuses on the impact of college on the development of student's cognitive skills. Based on these two scientific works, Astin provides a detailed explanation of how does college, or universities, affect student's cognitive skills. This effect can be clarified through three different related elements. The first element is *student output*. This one reflects the growth of their skills, knowledge, attitudes, accomplishments, and so on. The second one is *student inputs* which include student's capabilities, ambitions, and other development possibilities. The third one is the *college environment* which consists of the administration's policies and procedures, resources, and other variables that may impact student's development. In this research, the concentration is on each student's outputs (i.e., intercultural competence) and college environment (university's policies and programs).

Though most college and university campuses nowadays are extremely diverse, outcomes differ to some degree with regard to how extensively studying on an ethnic/culturally diverse campus may reduce biases and promote intercultural competence. For example, Van Laar et al. (2008)

discovered that students associated with people of other races and ethnicities had reported lower bias levels and more understanding with individuals from diverse backgrounds. On the other hand, studies have shown that university students have reverted to a more early stage of development (look at DMIS model by Bennett (2011)) after around seven months of study (Lantz-Deaton, 2017).

Furthermore, based on the literature, students from other countries often find it challenging to connect with their local counterparts (Berg et al., 2012; Volet & Ang, 1998; Williams & Johnson, 2011). It has become a phenomenon in many different countries, where students and faculty from a host country may have partially limited receptivity to the students from other countries, which may contribute to an inability to adjust and grow intercultural competence. Therefore, a lack of interaction and receptiveness of the host culture may hinder the development of intercultural competence (Lantz-Deaton & Golubeva, 2020).

Students in colleges and universities now are getting more attention than they did before when it comes to promoting intercultural competence (Messelink et al., 2015; Schartner, 2016). The growth of intercultural competence lies partly within the scope of internationalization, but this may also be seen in the scope of equality, diversity and inclusion activities, and synergies between both (Lantz-Deaton & Golubeva, 2020). In reality, internationalization is often seen as the trend through which universities are global and engages "integrating an international, intercultural, or global dimension into the purpose, function or delivery of postsecondary education" (Knight, 2004). Furthermore, the internationalization process of universities can be categorized into two types of activities. The first type is *internationalization at home* which usually takes place at home campuses. This may include adding intercultural ideas into curricula, promoting language learning, and fostering the growth of students and faculty's intercultural competence on the campus. The second set of activities are conducted *abroad*, such as establishing remote campuses in other economies, the requirement of international students, offering programs for studying abroad, and enhancing the development of intercultural competence in students overseas (Koutsantoni, 2006). Therefore, internationalization is helpful in enabling universities and colleges to face and interact with the world more outside. They are also beneficial in that they encourage contact with individuals who differ culturally.

Nevertheless, the literature demonstrates that there are economic purposes that motivate entities to internationalize. This may include the institution's efforts to promote their reputations for revenue-raising and ranking improvement (Middlehurst & Woodfield, 2007; Toyoshima,

2007). Additionally, while organizations often employ words such as “diversity” and “cross-cultural capacity achievement” in their strategic declarations, they are not always converted into concrete strategies (Middlehurst & Woodfield, 2007). Consequently, this leads us to the conclusion that intercultural competency is being overlooked in favour of other goals. The reason behind this marginalization is partly attributed to the assumption that intercultural competence grows on its own when students present on campuses with a diverse range of cultures (Gregersen-Hermans, 2015; Hart et al., 2017). In addition, although campuses may offer a favourable setting for increasing student’s intercultural competence (Volet & Ang, 1998), this does not imply that students develop, based on the literature (Lantz-Deaton, 2017).

As a result, the research argues that these challenges and pitfalls can be addressed by improving second language acquisition, implementing appropriate intercultural competence models that can help to highlight the main problems and guide decision-makers for solutions, and developing effective policies and programs that improve the intercultural competence levels of foreign and domestic students.

Foreign language acquisition may be essential in the context of studying abroad. Students' academic and personal life are impacted significantly by language barriers. When a student moves to a new nation, he/she may face a variety of stresses such as new cultural norms, foreign surroundings, different transportation and infrastructure systems, new academic systems, loneliness, and homesickness, etc. However, *language obstacles* are often seen at the top of this list (Mori, 2000). Furthermore, Kramsch (1998) contends that language reflects and embodies not just culture, but also cultural reality. Moreover, it was proved that language acquisition results in different benefits such as success in other fields, ability to solve problems, and creativity (Stewart, 2005).

Most foreign students reported feelings of anxiety and lack of self-esteem while interacting with local students, which made establishing connections more challenging (Sovic, 2009). Hereby, the university’s intervention is highly required to handle this dilemma. There should be necessary procedures that help students to conquer ethnocentrism and certain behaviours, such as ignoring or criticizing people from different cultures (Bennett, 1986). As a result, to effectively enhance the integration among domestic and foreign students, the following procedures can be beneficial. The first procedure is to provide *orientation sessions*. In this respect, it may be beneficial if these sessions are longer and contain helpful information about cultural issues that students may encounter in the host country.

Additionally, these sessions should not just be open to foreign students but also include domestic students in order to encourage the improvement of intercultural competence among university students (Golubeva, 2017). The second procedure may include *student accommodation*. Some studies indicate that mixed accommodation is not always good for native and foreign students and must be treated carefully (Bochner et al., 1985). Alternatively, Wilcox et al. (2005) showed that living circumstances are the most significant method to build friendships and to build intercultural connections and communication with others. The third one is *classroom teaching*. In fact, many studies were conducted on internationalized classrooms and how to promote students' cooperation in diverse cultural groupings (mix of domestic and foreign students) (Harrison & Peacock, 2009; Jones & Killick, 2013; Seifert, 2009). Furthermore, contact theory suggests that communication is critical in assisting students in having positive experiences in mixed cultural groups (Allport, 1954). The fourth consideration is *language acquisition*. Based on the study of Caruana and Ploner (2010), according to several studies, language is often considered as an obstacle to students communicating in the host language. Therefore, affording programs to enhance language acquisition help to develop friendships and communication among students.

Finally, students' contact and intercultural competence can also be enhanced through different facilitative conditions such as ensuring equal status within culturally diverse campuses where foreign students are the minority. The lack of equal status could cause a negative impact on the interactions, particularly when stereotypes are reinforced rather than disproven (Pettigrew, 1969). Another condition is the support from authority figures such as the society and the government. Therefore, the lack of this kind of support could hinder the effectiveness of contact and increase tensions. Furthermore, having common goals and intergroup cooperation also enhances contact and reduces anxiety (Lantz-Deaton & Golubeva, 2020).

2.4.4. Intercultural competence models within the higher education context

ICC definition:

The notion of ICC has been defined many times in the literature over the last five decades, spanning a wide variety of disciplines, contexts, techniques, and paradigms. For example, ICC studies tried to develop models depending on people's specific characteristics that link their attitudes and skills to the measurement of interculturally effective behaviors. This includes the ability to adapt, appropriateness, and interaction effectiveness. For instance, each of Hammer et al. (1978), Gudykunst et al. (1977), and Wiseman and Abe (1984) mainly used the cultural attitude method to distinguish between intercultural competence's cognitive, effective and

conative dimensions. Therefore, it is possible to define ICC as people's ability to establish a favorable attitude toward foreign cultures.

On the other hand, other scholars, such as Ruben (1976), Ruben and Kealey (1979), Hawes and Kealey (1981), and Kealey (1989), used the behavioural skills method, which stresses people's behaviours and skills throughout the intercultural interaction process. In this regard, interculturally competent behaviour can be determined in terms of seven skills: the display of respect, interaction posture, orientation to knowledge, empathy, self-oriented role behavior, interaction management, and tolerance for ambiguity.

Besides that, there are other approaches used to identify the dimensions of ICC. For example, some authors claimed that ICC could be determined by the circumstance of interaction settings (Dinges & Lieberman, 1989; Hammer et al., 1996; Parker & McEvoy, 1993). Also, According to Spitzberg and Cupach (1989), and Imahori and Lanigan (1989), traits and behavioural skills of one's opponent are equally significant in measuring ICC.

Nevertheless, ICC experts agree that ICC is frequently referred to as a *combination of capabilities to engage in different cultures and situations effectively and appropriately* (Arasaratnam, 2015; Deardorff, 2015; Fantini, 2000, 2007; Hammer, 2015; Liu, 2012).

ICC models which are suitable for the higher education sector:

There are a variety of methods available for assessing university students' and academic staff's intercultural competency (Lombardi, 2010). These tools can be summarized in table 1. According to Hammer et al. (2003), IDI can be helpful for training requirements, guidance for people's improvement of intercultural competence, contribution to the selection of staff, and evaluation of programs. The development of this model depends on the theoretical framework of the Development Model of Intercultural Sensitivity (DMIS) (Bennett, 1986). Accordingly, people's sensitivity toward differences is divided into two main concepts. The first one is called *ethnocentrism,* in which people avoid cultural differences by denying their presence, creating defences against them, or underestimating their importance. The second one is *ethnorelativism,* in which people tend to explore cultural differences through acknowledging their significance, adaptation, or incorporating the entire conception into the identity definition (Hammer et al., 2003). As for IDI and DMIS, they have been utilized in a variety of educational settings, such as studying abroad, seminars related to intercultural communication as well as curriculum development (Bennett et al., 2003).

Table 1. Suitable ICC models for the higher education system

Authors	ICC Models	ICC dimensions
Hammer et al. (2003)	*Intercultural Development Inventory (IDI)*	Denial/Defense, Reversal, Minimization, Acceptance/Adaptation, and Encapsulated marginality.
Kelley and Meyers (1995)	*Cross-Cultural Adaptability Inventory (CCAI)*	Emotional Resilience, Flexibility and Openness, Perceptual Acuity, and Personal Autonomy
Der-Karabetian (1992)	*Cross-Cultural World-Mindedness Scale (CCWMS)*	It aims to assess people's attitudes toward race, religion, world government, war, patriotism, and global education.
Bhawuk & Brislin (1992)	*Intercultural Sensitivity Inventory (ISI)*	Individualism, collectivism, flexibility, and open-mindedness.
Fantini (2007)	*The Assessment of Intercultural Competence (AIC)*	Knowledge, Attitude, Skills, and Awareness (KASA).

Source: Lombardi (2010).

As for CCAI, it was created to evaluate the ability of students to interact with individuals from other cultures and adjust to a new culture. Hereby, this measurement is designed for any society with a diverse population (Smith, 2016). The model consists of the following factors. The first one is *emotional resilience* which indicates an individual's ability to deal with ambiguity, uncertainty, and negative feelings while being in a new culture. Second, *flexibility and openness* reflect people's intension to be open-minded and accepting of others. Third, *perceptual acuity* refers person's ability to recognize verbal and nonverbal signs from people of different cultures. Fourth, *personal autonomy* demonstrates how individuals may have and sustain personal identity in a new cultural context despite unfavorable views toward their distinct identity as well as if they are able to accept cultural differences (Davis & Finney, 2006).

Regarding CCWMS, it is vital to illustrate that this model aims to assess people's attitudes rather than competencies (Smith, 2016). Furthermore, based on the model, *world-mindedness* is defined as "positive attitudes towards issues such as immigration, world government, and world economic justice" (Paige, 2004).

The fourth model, ISI, was developed by Bhawuk & Brislin (1992). Their study focused on University of Hawaii students (from Asia and the Pacific area). In addition, their model includes the following elements. Whereas *individualism* includes "separation from ingroups" and "self-reliance with hedonism", *collectivism* is reflected by "family integration" and "interdependence with sociability". On the other hand, *flexibility and open-mindedness* indicate individuals' willingness to participate in various behaviours (flexibility) once discovered, through open-mindedness about one's observations of behaviour in other cultures (Bhawuk & Brislin, 1992).

As for Fantini's model, it consists of four inter-related important dimensions as the following. Concerning *intercultural knowledge*, it is seen as the ability of the person to acquire knowledge about his/her own culture or another culture, and the ability to get information to enable him/her personally to contact people from another culture (Byram, 2000). Furthermore, Fantini defines intercultural knowledge as the ability to get familiar with the culture of the host country (Fantini, 2000). As for *intercultural attitude*, this dimension involves openness and appreciation for cultural differences, as well as interest and curiosity (Deardorff, 2006). The third dimension is *intercultural skills*. The ability to listen, notice, understand, analyze and relate different cultures is referred to as intercultural skills (Deardorff, 2006). Furthermore, it was claimed that intercultural skills might include the capacity to acquire another language, the ability to overcome problems encountered when acquiring a foreign language, the ability to interrelate languages, as well as listening and problem-solving skills (Martin & Nakayama, 2004). The fourth dimension is *intercultural awareness*. Many intercultural specialists view awareness (of oneself and others) as the prerequisite for successful and suitable interactions. Awareness has long piqued the interest of authors from different fields. For example, according to Stevens (1971), Curle (1972), and Gattegno (1976), awareness is the most effective element of the A+ASK quartet. This explains why awareness (A+) is placed at the center of figure 10.

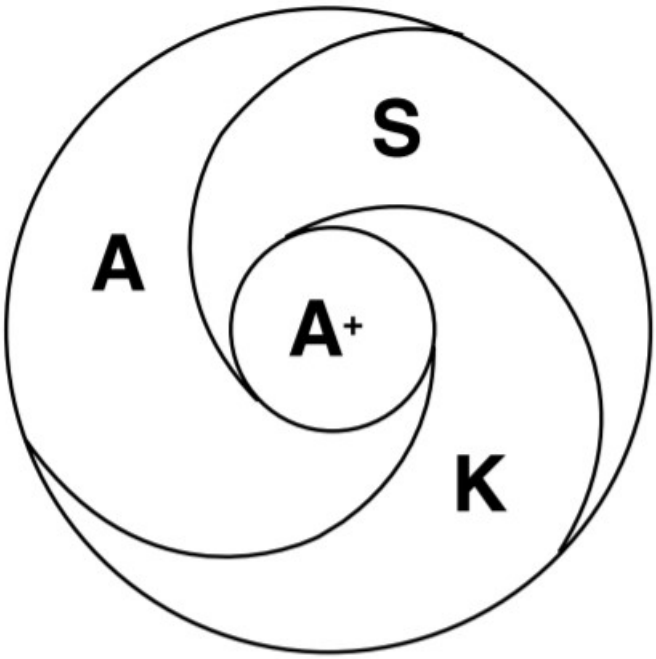

Figure 10. A+ASK quartet.

Source: Fantini (2000).

Generally, awareness is a state of being in and of oneself, and it is always about oneself in connection to someone or something else. Furthermore, exploration, experimentation, and experience are all part of being aware. On the other hand, it is hard to reverse awareness; that is, it is difficult to revert to a condition of unawareness after one has become aware (Fantini, 2000). In addition, there is an interrelationship between awareness and the rest of the dimensions. In other words, knowledge, skills, and attitude all play an essential part in raising the level of awareness. Simultaneously, enhanced awareness helps in the development of the rest of the dimensions (Fantini et al., 2001).

Besides these four dimensions, Fantini et al. (2001) argue that the ability to grapple with and acquire proficiency in foreign language improves ICC. Having the capability to understand and express oneself in other ways is a prerequisite for intercultural competence.

2.4.5. Foreign student's IC within the Hungarian higher education (Case study)

This research aims to emphasize the Hungarian literature on foreign students' experiences in Hungary, especially in the higher education system. In reality, the relevant literature is insufficient. Despite this, the study addresses the major problems and difficulties and the internationalization of Hungarian institutions.

The rise of cultural differences in Hungarian higher education is mainly attributed to the following. While in the half-eighties, only 2,485 foreign students studied in Hungarian institutions, their numbers rose ten times following the regime change (Berács et al., 2009). Before the economic and political transformation, international students came to Hungary via a range of bilateral exchange programs sponsored by the government. This kind of initiative often targeted nearby communist nations and several developing ones from Africa and Asia. Furthermore, the degree, foreign students can receive was held in English or German in different Hungarian universities (Pusztai et al., 2016). The proportion of foreign students has altered during the 1980s. Students from 118 countries studied in Hungary during the academic year between 2007 and 2008. In addition, about 24 countries with over 100 students studied at Hungarian universities in the same year.

On the other hand, during the academic year 2011/2012, international students arriving in Hungary were distributed by geographic areas: 3.6% from Africa, 20% from Asia, 3.4% from America, and 72.6% from Europe (Berács et al., 2009). In other words, in the last 10 years, there was a dramatic rise in the student ratio of foreign nationality. While 3.9% of all students in Hungary were foreigners in 2006, in 2011, the percentage of international students increased by 6.1%, and by 9.6% of all higher education students (Tempus Public Foundation, 2018). Additionally, in 2013, Stipendium Hungaricum was established by the government. The primary objective of this initiative is the internationalization and growth of Hungarian higher education (Stipendium Hungaricum., 2020). In addition to Erasmus+ and the Campus Mundi, this scholarship will lead to a high degree of cultural differences at the national and institutional levels. As a result of these efforts, higher education institutions have made substantial modifications to their tactics, teaching and learning methods, and student support services. Following these modifications, it's important to look at how these programs affect universities (Kasza, 2018).

Many Hungarian institutions, on the other hand, have a major responsibility to deal with cultural diversity, especially those that have a high proportion of international students. The University of Debrecen has the largest quota, with 6126 international students. It was followed up by University of Pécs (4170), University of Szeged (4087), Eötvös Loránd University (3606), and Semmelweis University (3200) in the period between 2019 and 2020 (HCSO, 2020). These statistics show how diverse these institutions' campuses are as a consequence of the internationalization effort.

These above-mentioned universities and others, including managers, academic staff, and international coordinators, differ in their viewpoints on the most important strategic goals behind internationalizing the Hungarian higher education sector. For example, based on the study of Lannert and Derényi (2021), mobility is seen as one of the most essential objectives of internationalization by about 38% of respondents. The second most frequently reported response was the engagement in joint work, international conferences, and research (about 26%). This answer was followed by global visibility, academic quality enhancement, and raising the number of foreign language programs by 15% and 13%, respectively. Respondents, on the other hand, vary in their views of the difficulties confronting the internationalization process. According to the responses, these obstacles are ranked in order of importance as follows. First, there is inadequate foreign language proficiency among students, lecturers, and administrative personnel. Second, another most common issue was the lack of funds. Third, respondents also highlighted the existence of structural as well as human resource issues. Fourth, poor regulations, a misguided management style, overly complex grant application procedures, and unnecessary bureaucracy (Lannert & Derényi, 2021).

It is important to illustrate here that other problems were overlooked, despite the significance of the information given by respondents. For example, higher education's internationalization is also hindered by *institutional culture* and *incorrect understanding of leadership*. As generally known, the student community, including domestic and foreign students, contributes to the institutional culture. Based on the Hungarian literature, the majority of studies concentrated on the barriers to foreign student mobility in the higher education system (Deákné Dusa, 2017; Hámori & Horváth, 2017; Kasza, 2011; Kiss, 2014). However, there are few studies on the integration of foreign students into the academic and student life learning environment (Kovacs & Kasza, 2018).

In fact, students cannot provide long-term benefits completely if there is a lack of a suitable administrative infrastructure or integration plan for foreign students (Bodolai, 2013). Furthermore, the internationalization of higher education is dependent in part on how effectively foreign students can be integrated into the professional and unofficial networks of Hungarian universities and how much they engage with local students. For example, it was found out that a large percentage of foreign students are receptive to interact with domestic students and they are also ready to take action. On the other hand, local students are less likely than other foreign students to get to know one another. Both groups believe that the institution

should arrange more social activities, such as joint courses, sports, and events, for students of both categories to help them interact casually.

Additionally, both local and international students believe that the shortage of integration and engagement is due to a lack of opportunity rather than a lack of motivation. This problem is observed by universities' decision-makers. Szeged University, on the other hand, may be an exception since students interact more easily (Lannert & Derényi, 2021). Another study conducted a number of interviews and discovered that social activities are scheduled separately. Therefore, neither group interacts. For example, domestic students do not attend programs designed for international students and vice versa. Based on the interviews, this occurs as a result of a scarcity of English language information or invitations. As a result, foreign students seldom attend social activities organized for domestic ones and are often unaware of such activities (Tempus Public Foundation, 2018).

Also, according to the findings of Kovacs & Kasza (2018), both domestic and foreign students argue that linguistic obstacle is one of the most challenging issues. Additionally, several activities are held in Hungarian such as shows, presentations, and courses. Hereby, universities must adopt an inclusive strategy and establish effective student communities. In reality, both groups would also want to participate in combined courses or collaborative projects (e.g., research). Events particularly planned for foreign students tend to contribute to the mixing of students with very little success, while integrated sports, parties, and learning programs are more appropriate for linking the two groups.

Alternatively, the study of Pál et al (2017) argues that different competencies are needed by multinational workplaces. Their study performed a survey targeting two different categories to determine these competencies, which was held in Hungary. The first category is ICC's educators. Their responses indicate that multinational workplaces need the following competencies. The first one is *skills* which consist of the ability to manage conflicts, prioritize, communicate in an effective way, and use information technology tools. Secondly, individuals (e.g., students) should be familiar with the *knowledge* related to culture, religions, social psychology as well as history. The third one is *awareness*. Individuals should be aware of intercultural competence sensibility, values, beliefs, and differences. Fourth competence is *personal factors* such as self-esteem. The second category is corporate managers. This category believes that the following competencies are beneficial in this type of workplace, including *foreign language proficiency, openness, readiness to learn other cultures, and the ability to adapt and tolerate* (Pál et al., 2017).

Based on the previous studies and findings, it seems that there is a lack of intercultural communication and integration between foreign and local students. This lack of interaction hinders the acquisition of intercultural competence for all students. In addition, this does not meet the requirements of multinational companies as well as the labour market. To establish an economically necessary higher education system, Hungarian higher education must adapt to global requirements by renewing the criteria on content and structure for training output needs. In other words, universities should play their role if their expertise relates to the labour market (Kovacs & Tweneboah, 2020).

2.5. Theoretical framework

According to the previous discussion, the common element between languages, education, and social tolerance toward diversity is human capital. Individuals' knowledge and skills are referred to as human capital. This knowledge is thought to be a significant element in total factor productivity. Furthermore, the literature indicates that proficiency in English is seen as an indicator of human capital in the labor market (Chiswick & Miller, 1995).

Therefore, this research focuses on two important related theories. The first theory is known as the *human capital theory*. Based on the literature, there are many studies focusing on this theory. For example, since the 1990s, literature has given considerable attention on studying the determinants of economic growth. Scholars, such as Barro (1991), Mankiw, et al (1992), and Mauro (1995), used cross-sectional analysis to assess the influence of various factors on economic growth. According to their studies, it was found that human capital is considered an essential component of economic growth. Additionally, the human capital theory argues that education can enhance economic development through the knowledge, skills, and productivity of people. In addition, human capital can result from the investment in education (besides physical capital) (Lucas Jr, 1988; Romer, 1986). On the other hand, technological adoption can be enhanced through the role of human capital in absorbing ideas and importing equipment from neighboring economies (Nelson & Phelps, 1966). The second theory is called *creative capital theory* which was developed by Richard Florida (2002a). Also, it is important to highlight here the fact that Florida established his own theory, the Creative Capital theory, based on the human capital theory. However, unlike human capital theory, the creative capital theory focuses on particular categories of human capital (i.e., creative class) as an essential factor in enhancing economic growth. Furthermore, Florida (2003b) argues that creativity's economic geography can be determined through three different important factors: *technology, talent, and tolerance.* In other words, these three factors play important role in attracting creative class,

innovation, and enhancing economic growth. According to Florida's theory, *tolerance* indicates the level of openness and inclusiveness to all people of different backgrounds, colors, ethnicities, etc. *Talent* is about those who have a bachelor's degree and above. Finally, *technology* is influenced by innovation and the concentration of high technology within a specific area. As a result, regions with a high tolerant environment could help to attract talented people (Florida, 2003b). Additionally, the economic distribution of talent is linked with the placement of high technology industries which are necessary for the region's income (Florida, 2002c). By looking at the literature, there are many different studies focusing on the effect of human capital on economic growth (as observed in table 2). In addition, these studies analyzed the economic growth of different samples of economies over specific time period (i.e., cross sectional time series data analysis). Furthermore, they focused on different themes such as human capital (quantity education), quality education, social tolerance, culture diversity and language.

Table 2. Relevant studies on the economic growth

Author name	**Study's method**	**Dependent variable**	**Most relevant independent variables**
Mankiw et al (1992)	Cross sectional analysis	Logarithm of GDP per working age population	*Human capital (secondary school) and physical capital*
Mauro (1995)	Cross sectional analysis	GDP per capita growth	*Human capital (primary and secondary enrollment), physical capital, corruption index, political instability index.*
Easterly and Levinev (1997)	Cross sectional analysis	Real per capital GDP growth	*Human capital (log of schooling), political instability, and ethnic diversity*
Berggren and Elinder (2012)	Cross sectional analysis	Average annual growth in real GDP per capita	*Human capital (average years of total schooling), Tolerance homosexuals, Tolerance race*

Author name	Study's method	Dependent variable	Most relevant independent variables
Bomhoff and Lee (2012)	Cross sectional analysis	Average annual growth in real GDP per capita	*Tolerance homosexuals, Gini coefficient*
Gani (2016)	Cross sectional analysis	Real growth of gross domestic product	*Human capital (Secondary school enrolment), Social measures of tolerance (e.g., international migrant stock, Proportion of seats held by women in national parliaments)*
Cooray (2009)	Cross sectional analysis	GDP Per Capita	*Human capital (primary, secondary and tertiary enrolment ratios), Quality education (survival rates, repetitions rates, student/teacher ratios, schooling life expectancy, trained teachers in primary education and math's test scores)*
Hanushek and Wößmann (2007)	Cross sectional analysis	Average annual growth rate in GDP per capita	*Human capital (), Quality education (years of schooling), Quality education (test score - mean)*
Castelló-Climent and Hidalgo-Cabrillana (2012)	Cross sectional analysis	average growth rate of real per capita GDP	*Human capital (secondary schooling), Quality education (scores in international comparable test).*
Lee (2011)	Cross sectional	Average annual growth rate of real GDP per worker from 1960-2000	*Human capital (Average schooling years), English language skills (TOEFL total score mean)*

Source: Author's own compilation

In fact, human capital and creative capital theories are relevant to this study due to the following reasons. Firstly, based on the theory of Florida, the research hypothesizes that having high tolerant economy could help to attract the creative human capital which is necessary for economic growth. Secondly, human capital, which is represented by quantity and quality education, plays important role in enhancing productivity and knowledge absorption in the economy. Hereby, this could raise the level of innovation and economic growth. However, by looking at the literature and previous studies summarized in table 2, the majority of the studies did not take the linguistic factor in the consideration while investigating the effect of quality education as well as social tolerance on the economic growth over specific time period. On the other hand, there are few studies which discussed the economic importance of language and its relation to each of quality education as well as social tolerance. However, these studies did not use same estimation method which was used in the literature shown in table 2. For example, Suárez's study (2005) argues that having high compatibility between language education policies and economic strategy of the country could help to enhance the economic performance. Also, learning foreign language helps individuals from different cultures to communicate and adapt to each other's (Ayrat et al., 2017). Hereby, language is an integral part of social tolerance as well as education in the economy. Therefore, it was necessary to include it into the economic model as an essential component of the human capital besides social tolerance.

On the level of individuals, based on the study of Ihara and Yamamoto (2016), it was found out that tolerance can be deemed as important factor by which intercultural competence theories can be clearly explained. In other words, having high level of tolerance means that the individual has high level of intercultural sensitivity. Hereby, this stage of personal development is called *ethnorelativism* where individual is able to see the attitudes and actions of others as cultural rather than universal. Therefore, this could enhance and boost the intercultural competence of people in the society (Ihara & Yamamoto, 2016). Furthermore, this evidence shows the connection or the link between social tolerance and intercultural competence of people. Based on the literature, there are a lot of relevant studies which focus on the intercultural competence theory (*look at table 1 in the previous section*). Based on this theory, the literature defined intercultural competence as combination of capabilities to engage in different cultures and situations effectively and appropriately (Arasaratnam, 2015; Deardorff, 2015; Fantini, 2000, 2007; Hammer, 2015; Liu, 2012). In this research, the focus will be on the study of Fantini in which intercultural competence is defined as "*a complex of abilities needed to perform*

effectively and appropriately when interacting with others who are linguistically and culturally different from one's self" (Fantini, 2007).

Fantini (2000) argues that it is essential to differentiate between organizations' aims and people's competencies to guarantee their contribution to the declared mission. Furthermore, intercultural specialists frequently ignore, or delegate to language teachers, the mission of improving language competence, just as language teachers frequently ignore, or delegate to intercultural specialists, the mission of developing intercultural capability; this, despite widespread recognition that language and culture are dimensions of each other, interconnected and indistinguishable. Based on that, Fantini's model consists of awareness, attitude, skills, knowledge (A+ASK), and proficiency in the host language. In conventional learning environments, both knowledge and skills are typically discussed. They may also be readily evaluated (and represented in terms of grades or numbers) since they are measurable. As someone in an intercultural setting, on the other hand, understands that good attitudes and awareness are just as essential to intercultural effectiveness. Finally, the reasons behind choosing this model can be identified as the following. First, as compared to the other models previously stated, Fantini has ensured that each dimension has many components that are essential for intercultural communication's effectiveness. Second, the dimensions are interconnected and integrated, resulting in the formation of complex competence. Third, Fantini's model has been utilized in many scientific works on student mobility and skilled immigration. As a result, this demonstrates the model's operationalization in this area (Almeida et al., 2016).

In fact, the main research problem is about the lack of intercultural communication between international students and Hungarian students. In order to determine the reasons behind this problem, the research used mixed methods approach by which the problem can be justified and explained from different aspects. The first one is about the economic benefits behind having economy with high level of foreign language proficiency, social tolerance (toward foreigners and other minorities) and quality education as well. By looking at the literature, it was found out that language factor is neglected in the majority of economic models. However, language plays important role in enhancing the level of toleration, intercultural communication and economic growth through education system's quality and its policies. In order to investigate that, the research used the economic growth equation of Mankiw et al (1992) as baseline model. By following the approach of Mankiw et al (1992), it is possible to augment or extend the model of Solow (1956) in order to include other variables besides each of knowledge level, labor and

physical capital (using cross sectional time series data analysis). Using this approach, the research could fill this literature gap and emphasize the economic importance of the foreign language education among different economies.

In addition, this approach can help to provide insights on the economic performance of Hungary (second aspect). Using time series analysis, it is possible to understand the economic performance of Hungary in terms of its language proficiency, social tolerance, and quality education. Discussing these insights and variables fluctuation over the time could help to understand the reasons behind linguistic anxiety and introvert attitude of Hungarian students toward foreign students (Dombi, 2013; Kéri & Révész, 2019; Kovacs & Kasza, 2018). On the other hand, the research also tries to understand the attitude of international students as a result of these circumstances. Therefore, the research considers Fantini's model as useful tool which can help to analyze international student's intercultural competence in terms of their intercultural awareness, attitude, knowledge, and skills. By looking at these two aspects, the research can fill the *literature gap* (by including language proficiency factor beside social tolerance and quality education in the economic growth equation) and suggest policies, on the level of Hungary's economy and its educational institutions, in order to address *the problem of lack of intercultural communication between the two parties.*

2.6. Hypothesis development

The model of this study can be conceptualized as illustrated in figure 11:

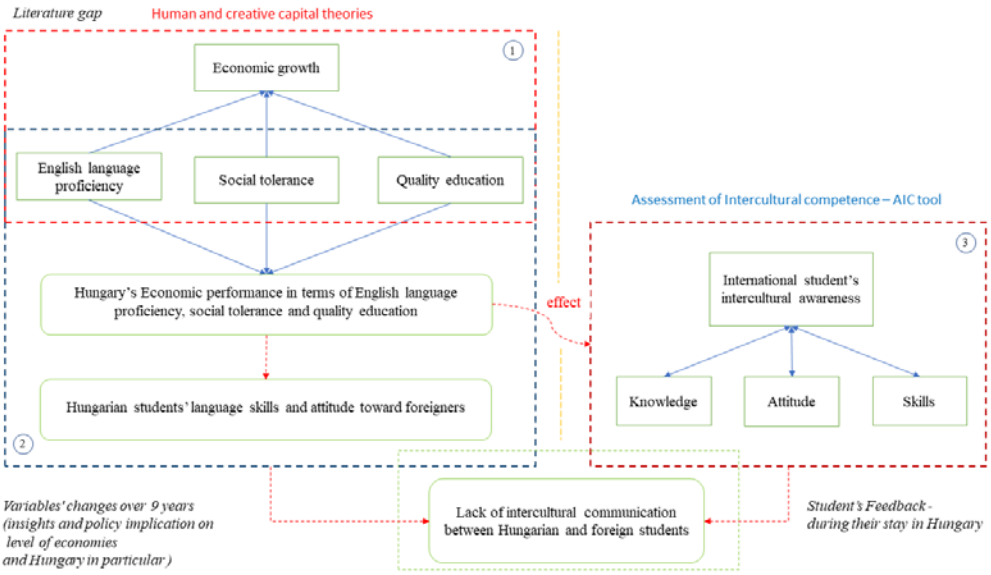

Figure 11. Research's conceptual model

Source: Author's own compilation.

As observed in figure 11, rectangle No.1, in this stage, the research includes two important theories: Human and creative capital theories. As for human capital theory, based on the literature, Chiswick and Miller (1995) argue that that English language proficiency is seen as an indicator of human capital in the labor market (Chiswick & Miller, 1995). Furthermore, learning or speaking common language (such as English) may help to ease the movement of human capital and reduces the cost of relocation (Adserà & Pytliková, 2015; Bleakley & Chin, 2004). As a result, human capital's migration results in linguistic and cultural diversity within the economy. Based on that, diversity could help to enhance innovation (Fassio et al., 2019). Therefore, English language influences the economy in indirect way since it is the hidden source of international migration, diversity and hence innovation within the economy. Furthermore, it was found out that the GDPs of English-speaking economies are regarded to be among the highest in the world. However, the evidence on the economic importance of English language is still insufficient (Seargeant & Erling, 2011). Based on this, the research hypothesizes the following:

Hypothesis 1: *English language proficiency is positively related to the economic growth in non-English speaking economies.*

On the other hand, linguistic diversity within the economy represents economic obstacles and costs (such as transaction costs). However, enhancing the quality of second language education within the economy could help to overcome this issue (following the economic model adopted in Singapore). In addition, it helps to raise the level of tolerance and understanding toward different cultures (Ayrat et al., 2017). Based on Florida's study (2002a), tolerant environment plays important role in attracting human capital (especially, creative class), which is considered an important factor in enhancing economic growth (look at the study of Mankiw et al (1992)). Therefore, the research hypothesizes that both social tolerance and English language proficiency can help to attract creative class as well as human capital (i.e., knowledge and skills). As a result, it is possible to consider English and social tolerance as important elements of the total factor productivity.

Hypothesis 2: *Social tolerance and English language proficiency have a positive effect on the economic growth in non-English speaking economies.*

Since English is necessary to overcome linguistic diversity and attract human capital (e.g., foreign capital and exports) to the economy, governments should focus on enhancing the quality of English language education within the education system. Based on the study of Suárez (2005), it is necessary to increase the level of compatibility between the policies of language

education and the economic strategy of the country. By achieving that, the economy will boost the level of foreign direct investment, industrialization, and exports (as in the case of Singapore and Ireland). Apart from its importance in boosting economic competitiveness and educational progress, English is often emphasized for its role in getting access to technology, which may be considered as a facilitative tool for educational transformation and growth. Hereby, to enhance economic growth, English, and Quality education (as well as quantity education) should be considered together within the economic models. However, based on the literature, there is no evidence which take into the account the economic importance of English language as a necessary element of the total factor productivity. Therefore, the study assumes the following:

Hypothesis 3: *Quality education and English language proficiency have a positive effect on the economic growth in non-English speaking economies.*

Based on the literature, the majority of human capital studies used cross sectional data analysis approach. Following the approach of Mankiw et al (1992), it is possible to augment the economic growth equation of Solow (1956) and include each of these three related variables: *English language, social tolerance and quality education* (using cross sectional time series analysis).

As shown in rectangle No. 2, figure 11, Hungary's economic performance is analyzed in terms of three different related indicators: social tolerance, quality education and English language proficiency over specific time period (using time series analysis). This analysis provides useful information and feedback on the reasons behind the hesitation of Hungarians to communicate with international students. Based on the literature, this can be justified due to Hungarian students' linguistic anxiety (Dombi, 2013; Kovacs & Kasza, 2018), language education's policy and practice in the classrooms (Hajdú, personal communication, 2018), and government's attitude toward foreigners (Legatum Institute, 2016). Furthermore, Lannert and Derényi (2021) argues that the internationalization of Hungarian higher education faces different obstacles related to institutional culture and an insufficient understanding of leadership. As a result, these obstacles could hinder the intercultural communication between Hungarian and international students.

On the other hand, the research assumes that these problems could also have a negative effect on the intercultural competence of foreign students within the education system. Based on the literature, few research have been conducted on the integration of international students into the academic and student life learning environments (Kovacs & Kasza, 2018). However, in

order to investigate the reasons behind the lack of intercultural communication between Hungarian and international students, the research used the theory of Fantini (2007) to estimate the intercultural competence of international students and their experience during their stay in Hungary. In fact, by looking at the previous studies, it is necessary to highlight here that Fantini's AIC tool is used and validated in new environment (i.e., Hungary). According to the theory of Fantini (2000), language is an integral part of culture. In other words, language and culture are connected and shall be taught together. In addition, Fantini et al (2001) consider it as important requirement of the intercultural competence. Furthermore, the research hypothesizes that international students differ in terms of their level of intercultural competence. For example, based on the study of Günçavdı and Polat (2016), international students do not have same level of intercultural competence when it comes to their gender and continents during their stay in Turkey. Accordingly, this research also assumes the following comparisons (in terms of continent, educational level, time, gender, their intention to learn Hungarian language, and whether they face linguistic difficulty or not):

Hypothesis 4: *Foreign students do not have the same level of intercultural competence in the university environment*

Therefore, the sub-hypotheses are:

H4.a: *Students per continent do not have the same levels of intercultural knowledge, skills, attitude, and awareness.*

H4.b: *Students, for each educational level, are not equal in terms of their intercultural knowledge, skills, attitude, and awareness.*

H4.c: *Students do not share the same intercultural knowledge, attitude, skills, awareness regardless of their different periods spent in Hungary.*

H4.d*: Males and Females are not equal in terms of their intercultural knowledge, attitude, skills, and awareness.*

H4.e: *The two groups (based on their intention to learn the Hungarian language) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*

H4.f: *The two groups (whether they faced linguistic difficulty to deal with locals or not) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*

Furthermore, Fantini's AIC model consists of four inter-related dimensions (intercultural awareness, knowledge, skills, and attitude) (as observed in rectangle No.3). Based on the theory

of Fantini et al (2001), the research hypothesizes that international students' intercultural awareness can be enhanced through the development of their knowledge, skills and attitude toward other cultures. For example, foreign students' intercultural knowledge indicates their ability to know about culture of Hungary as well as other cultures (Byram, 2000). Hereby, enhancing their knowledge about other culture plays important role in raising their intercultural awareness (Corbett, 2010; Hazaea, 2020; Tural & Cubukcu, 2021).

Hypothesis 5: *Intercultural knowledge of foreign students has a positive effect on their intercultural awareness.*

On the other hand, student's appreciation and openness toward other cultures is considered intercultural attitude (Deardorff, 2006). In addition, the intercultural awareness can be enhanced also by people's intercultural attitude toward other cultures (Fantini et al., 2001; Smith, 1998).

Hypothesis 6: *Intercultural attitude of foreign students has a positive effect on their intercultural awareness.*

Furthermore, in this study, intercultural skills reflects the ability of student to listen, understand other cultures as well as capacity to learn another languages (Deardorff, 2006). Also, based on the study of Fantini et al (2001) as well as Mak and Kennedy (2012), intercultural skills development is necessary for people's intercultural awareness. Based on that, the research also hypothesizes the following:

Hypothesis 7: *Intercultural skills of foreign students has a positive effect on their intercultural awareness.*

Finally, Fantini et al (2001) argue that the enhanced intercultural awareness also has positive impact on people's intercultural knowledge, skills and attitude and that it is outcome of person's experimentation, and experience which result in being aware. Based on study of Cakir (2006), the inclusion of cultural awareness into a specific course could help to increase people's language skills, and attitude as well. Intercultural awareness also reflects people's ability to know and tolerate other cultures (Byram, 1997; Chen & Starosta, 1998).

Hypothesis 8: *Intercultural awareness of foreign students has a positive effect on their intercultural knowledge, skills and attitude.*

These inter-relationships between these dimensions are shown in figure 11 (Rectangle No.3). Based on these dimensions as well as open ended question, Fantini's AIC tool could help to

provide useful feedback on the status of foreign students' intercultural competence as well as reasons behind the lack of their interaction with Hungarian students as well.

3. MATERIAL AND METHODS

3.1. Panel Data Analysis

The main goal of the research is to investigate the relationship between economic growth and each of English language proficiency, quality education, and social tolerance toward other cultural diversity. Based on that, the study tried to examine this effect during a specific time using a panel data analysis approach. It consists of two elements. The first element encompasses a range of different cases (economies or countries). In this dimension, the study focused only on the non-English speaking economies (attached in the Annexes). Besides this, *to get strongly balanced data*, it was necessary to eliminate several economies whose data is missing. As a result, the number of cases was declined from 141 to 99 non-English speaking economies (i.e., N=99). The second element is time. In other words, the research aims to study the effect of these variables during the period between 2009 to 2017 (i.e., T=9). Therefore, for this kind of data, the two-step GMM system test was chosen since it was thought to be more suitable, where the time is smaller than the number of listed economies (i.e., T<N). Also, this analysis was conducted using STATA software (*version 16*).

3.1.1. Augmented-Solow Model

In the beginning, the initial step was to highlight the key economic development drivers and to define the model. To achieve this, the study used Solow theory (1956) as the starting point for this analysis. Therefore, according to Solow, the main predictors of economic growth can be shown through the following equation:

$$Y_t = AK_t^{\alpha} L_t^{1-\alpha} \qquad \textit{where, } (0 < \alpha < 1), \qquad (1)$$

Where (Y) indicates the level of output, which is estimated through knowledge (A), capital (K), and labour (L). As for (α) and (t), both reflect the elasticity of output in the context of capital and time, respectively.

Based on the scientific study of Mankiw et al. (1992), the equation of Solow can be augmented by the inclusion of Human capital (H) as observed in equation (2):

$$Y_t = AK_t^{\alpha} L_t^{1-\alpha-\beta} H_t^{\beta} \qquad \textit{where, } (0 < \alpha + \beta < 1), \qquad (2)$$

Where (β) represents the change in output as a consequence of each unit change in the factors. Furthermore, this research considered formula (2) (i.e., *augmented Solow equation*) the baseline model on which the analysis was based.

Hereby, to assess the effect of human capital on output, output per labour must be calculated (i.e., Y/L). Also, the steady-state of income per labour can be reached by taking the logarithm of both sides of the formula, as illustrated in the following equations:

$$ln(\frac{Y}{L})_t = ln\,A(0) + \frac{\alpha}{1-\alpha} ln(S_k)_t - \frac{\alpha}{1-\alpha} ln(n + \mathrm{g} + \delta)_t + \frac{\beta}{1-\alpha} ln(h)_t \quad (3)$$

where, $lnA(0) = a + \varepsilon$

$$\ln(\frac{Y}{L})_t = a + \frac{\alpha}{1-\alpha}\ln(S_k)_t - \frac{\alpha}{1-\alpha}\ln(n + \mathrm{g} + \delta)_t + \frac{\beta}{1-\alpha}\ln(h)_t + \varepsilon_t \quad (4)$$

As shown in equations (3) and (4), (S_k) indicates physical capital investment per labor, (n) the growth rate of employment, and (h) human capital per labor. Regarding the advancement of knowledge (g) as well as the rate of depreciation (δ), their values in the panel data are taken as constant. The justification for this is that the advancement of knowledge can't be obviously identified throughout several economies since it is universal and accessible. Furthermore, owing to a lack of data, it is impossible to calculate the rate of depreciation. As for $A(0)$, it represents each of technology, natural resources, institutions, and so on. This also varies from one economy to another. Finally, $A(0)$ can be computed as the sum of the constant value (a) plus the economy's shocks (ε).

Furthermore, in order to detect whether there is panel unit root problem or not (i.e., random walk with drift), the research used different tests including Levin-Lin-Chu (2002), Im-Pesaran-Shin (2003), and Fisher type (2001). According to these methods, the following hypotheses should be checked:

H_0: *All panels contain unit root problem*

H_1: *At least one panel is stationary*

In order to reject the null hypothesis, the p-value for each test should be less than 0.05. Rejecting the null hypothesis means that the panel data does not contain panel root problem. In another words, the panels are stationary where statistical properties (e.g., mean, autocorrelation, etc.) does not change over time. Usually, panel unit root exits when there are specific shocks (factors

which are impossible to be controlled) due to seasonality and randomness (i.e., random walk with a drift). Besides this, unit roots could cause serious problems such as spurious regressions (where there is higher R^2) in which data is unrelated to each other. Therefore, it is important to be sure that the panels does not have any unit root problem.

3.1.2. Two-Step System GMM Estimation

According to the features of the panel data of this study, the two-step system GMM approach is much more appropriate for evaluating the economic effects of the English language, quality education, and social tolerance. At first, difference GMM (Arellano & Bond, 1991) is generally preferred for the purpose of dealing with the issue of endogeneity. It improves estimation's consistency since it is helpful in eliminating unseen country-specific fixed effects. However, in certain instances, these impacts could be necessary. Hereby, this estimation method may result in an incorrectly specified model and weak instruments. To avoid these problems, it was preferable to use a two-step system GMM (Arellano & Bover, 1995; Blundell & Bond, 1998). This method is useful since it aids in the elimination of weak instruments through the usage of two systems of equations (differenced equations as well as an equation in levels). Following this method, the economic development formula can be written as shown in equation (5):

$$Y_{it} = \beta_1 Y_{it-1} + \beta_2 x_{it} + \beta_3 x_{it-1} + u_{it} \quad (5)$$

$$where, u_{it} = v_i + e_{it}$$

This equation consists of the number of included economies and time, indicated by (i) and (t) respectively.

On the other hand, (Y) is a dependent variable which is represented by real GDP (Y_{it}) and its value lagged by one year (Y_{it-1}). Based on the literature, real GDP is often employed as a measure of economic progress. As for other variables, (x_{it}) and (x_{it-1}) indicate explanatory variables and their lagged values, respectively. Regarding the error (u_{it}), it can be computed by adding unobserved economy fixed effects (v_i) to idiosyncratic disturbance (e_{it}).

3.1.3. Endogeneity and Multicollinearity

As generally known, GMM dynamic approach helps to address the issues of multicollinearity (i.e., correlation exits between independent variables) as well as endogeneity (i.e., correlation exits between specific independent variable and the error term). As for endogeneity problem, the inclusion of lagged value of endogenous variable (i.e., GDP per capita) into the equation helps to control and address dynamic endogeneity (Ullah et al., 2018). On the other hand, the

usage of instrumental analysis can help to address the problem of multicollinearity since it isolates the influence of the independent variables from group effect as well as other variable effects. To check instrument validity, GMM dynamic approach includes what is called Hansen test in which the following hypotheses should be checked:

H_0: *All instruments are valid.*

H_1: *All instruments are not valid.*

The aim of using Hansen test is to avoid instrument proliferation. Otherwise, the failure of instrument validity test could lead into misleading findings (where there is correlation between the instruments and the errors). In order to limit or control that, the p-value of Hansen test should be between 0.1 and 0.25 (Roodman, 2009).

In order to check autocorrelation (i.e., the existence of correlation between independent variable's values) in the mode, the GMM dynamic approach also consists of first order (AR1) as well as second order (AR2) autocorrelation tests (Arellano & Bond, 1991). These two methods are well known as Arellano–Bond tests, where the following hypotheses should be checked:

$H_{0:}$ *There is no autocorrelation.*

$H_{1:}$ *There is autocorrelation.*

For example, if the p-value of AR1 and AR2 is higher than 0.05, this means that there is no autocorrelation problem. Furthermore, autocorrelation problem could exist due to model misspecification and the effect of disturbances (e.g., earthquake, war, etc.) which could influence the economy during specific time. Hereby, this could lead to misleading findings.

3.1.4. Data and Model Specification

Given that the research examines the economic impact of language on economic growth from two perspectives, two distinct economic development equations were formed:

English language proficiency and Quality education (Model 1) (6)

$$ln\ (GDP\ per\ capita)_{it} = \beta_0 + \beta_1\ ln(GDP\ per\ capita)_{it-1} + \beta_2\ ln(S_k)_{\ it} + \beta_3\ ln(n+g+\delta)_{\ it} + \beta_4\ ln(h)_{it} + \beta_5\ ln(Secondary\ quality\ education)_{it} + \beta_6\ ln(Primary\ quality\ education)_{it} + \beta_7\ ln(TOEFL\ score)_{it} + \beta_8\ ln(general\ government\ consumption)_{it} + \mu_t + u_{it}$$

Using the augmented Solow equation, the research can determine the direction and significance of the relationship between English language proficiency, quality education, and economic growth.

English language proficiency and social tolerance toward diversity (Model 2) (7)

$$ln\ (GDP\ per\ capita)_{it} = \beta_0 + \beta_1\ ln(GDP\ per\ capita)_{it-1} + \beta_2\ ln(S_k)_{\ it} + \beta_3\ ln(n+g+\delta)_{\ it} + \beta_4\ ln(h)_{it} + \beta_5\ ln(TOEFL\ score)_{it} + \beta_6\ ln(Social\ tolerance)_{it} + \beta_7\ ln(Openness)_{it} + \mu_t + u_{it}$$

On the other hand, this equation helps to estimate and determine the direction and significance of the connection between English language proficiency, social tolerance, and economic growth. Furthermore, these two equations could help to highlight the link between English language proficiency and economic growth, since most of literature does not provide enough evidence proving that.

As observed in the two equations above, (ln), or logarithm, was taken for both sides of the two formulas. Furthermore, the sets of economy dummies and time effects are indicated by the sign (μ_t), while the error terms are represented by (u_{it}), where $E(u_{it}) = 0$ for (i) and (t). The variables used in the two equations and their sources are summarized in table 3. Also, the table provides a brief definition regarding every indicator.

It is essential to highlight here that GDP per capita was computed by dividing output-side real GDP by the number of individuals engaged in the labor market. As for $(GDP\ per\ capita)_{it-1}$, it is defined as the lagged value of the endogenous variable. In these equations, lagged dependent variables were used as an explanatory one to increase the consistency of evaluation. Additionally, $(g + \delta)$ is typically set to 0.05.

Lastly, year dummies in the model aid in describing variations in GDP between included economies and time throughout the panel data. The following formula helps to estimate the change of GDP annually:

$$\left(e^{\beta} - 1\right) \times 100 \quad (8)$$

Where (e) is the exponent and β the coefficients for each year. By calculating the values of GDP per year, it is possible to depict its change from year to another and clarify the shocks experienced by the economy.

The variables of these equations and their data sources are illustrated and clarified in table 3. These variables can be defined as the following:

Dependent variable:

In this study, the *economic growth* is the dependent variable. This concept is represented by GDP per capita which can be calculated by dividing output-side real GDP (at chained PPP) by the number of individuals engaged in the labor market. Using this measurement, it is possible to highlight the economic growth of every country in comparison to others.

Independent variables:

Following the approach of Mankiw et al (1992), the augmented Solow model consists of the following main economic predictors:

1- *Employment growth*: this concept indicates the number of individuals engaged in the labor market within a particular time. Employment growth is calculated using the following formula: $(n+g+\delta)$, where (n) indicates the average rate of growth of the working-age population, (g) represents knowledge advancement, and (δ) indicates the depreciation rate. In addition, each of g and δ should be constant across different economies since it is not possible to estimate them.

2- *Physical investment*: the physical investment is estimated by the share of gross capital formation. This concept represents the proxy of investment in physical capital. It is considered one of the main factors of production and consists of different items such as equipment, inventory, real estate, etc.

3- *Human capital*: human capital includes labor's knowledge, skills, education, etc. This concept can be estimated through what is called the Human Capital Index (i.e., years of schooling and returns to education). Based on the study of Mankiw et al (1992), physical capital is not enough to predict the economic growth. As a result, human capital was added as complementary component besides physical capital (i.e., augmented Solow model).

The rest of the variables is added to the augmented Solow model. These variables are the following:

1- *English language proficiency*: It indicates the linguistic skills of the human capital. These skills include the ability of the individual to speak, listen, read, and write English language in proficient way. In order to estimate the linguistic skills of specific economy, TOEFL iBT Tests is the only source which can provide this type of information. It can be estimated by TOEFL score means per economy, where the

scores represent the language abilities of test-takers from every country. Since the studied economies are non-English speaking countries (where English language is not spoken by most of the economy's population), the usage of this score can be justifiable (look at the study of Lee (2011)).

2- *Quality education*: In this research, the quality education is represented by secondary and primary quality education. In these two indicators, quality education is estimated by students' achievement tests, which may include their achievement in each of math, reading, science. As previously mentioned in the literature, each of **PISA** (Programme for International Student Assessment), **ISATs** (International Student Achievement Tests), and **TIMSS (**Trends in Mathematics and Science Study) are considered different types of student's achievement test. However, the indicator used in this research is estimated using the mean as well as linking methodologies of these different assessments. The majority of previous studies clarified that students achievement tests are proxy of the quality education, as in the case of the study of Hanushek and Kimko (2000) and Altinok et al (2018).

3- *Social tolerance:* Social tolerance illustrates how effectively society accepts and benefits from a variety of people's religious views, races, origins, and sexualities. The indicator was estimated using questionnaire which aims to investigate the attitude of people living in specific region where there is cultural diversity (including their attitude toward ethnic minorities, migrants, LGBT, and others). Based on that, this indicator consists of different scores: people's perceived tolerance of ethnic minorities, LGBTs, and migrants. These indicators matches the definition of social tolerance developed by Florida (2002b).

4- *General government consumption*: It represents all current expenditures of the government such as purchases of goods, services, and employee compensation. Furthermore, it is part of gross domestic product from the expenditure side. In addition, it is measured by computing the aggregated government expenditures (World Bank, 2020b).

5- *Openness*: It indicates liberalization of trading between different economies. In other words, it means that barriers to trading are removed. Furthermore, it can be estimated through the total of exports and imports of goods and services measured as a share of gross domestic product.

Table 3. Variables and their sources

Source	Variables	Sign
Penn world table (PWT 9.1)	Economic growth	*GDP per capita*
	Employment growth	$(n+g+\delta)$
	Physical Investment	(S_k)
	Human Capital	*(h)*
TOEFL iBT Tests (2020)	English language proficiency	*TOEFL score*
Legatum Prosperity Index (2019a, 2019b)	Secondary Quality Education	*Secondary Quality Education*
	Primary Quality Education	*Primary Quality Education*
	Social Tolerance	*Social Tolerance*
World Bank (2020b, 2020a)	General Government Consumption	*General Government Consumption*
	Openness	*Openness*

Note: as for the Penn World Table (PWT 9.1), it is usually referenced by Feenstra et al. (2015).

3.2. Survey Analysis

Among the previously analyzed economies, Hungary was selected as the case study of the research. In this section, the research attempts to offer explanations, using secondary data, demonstrating the causes for Hungary's current English proficiency score, social tolerance, and quality education via various sources, such as international publications and Hungarian literature. Based on that, it can be possible to understand and identify the reasons behind a couple of related problems mentioned in the literature such as Hungarian students' linguistic anxiety and their hesitation to communicate with international students (Hungarian students' perspective). To support this evidence, the research also used primary data, from a survey as well as HCSO (2020) statistics to investigate the multicultural experience of international students during their stay in Hungary (foreign student's perspective). Using the survey, it is possible to highlight their attitude and to collect the feedback provided by foreign students and

compare it with the Hungarian students' perspective. In comparison to other institutions, the study concentrated on the University of Debrecen since it has the largest international student population (about 6126 students). As a result, the university has significant responsibility for addressing problems of cultural diversity and integration within the college environment. This approach should be adopted by other universities too.

3.2.1. Sociodemographic data of the University of Debrecen

As shown in table 4, there are two types of data. The first one shows the University of Debrecen's population statistics, based on the data of HCSO (2020) in the period between 2019 to 2020. The second one represents the survey's respondents' statistics or the sample size for the same institution.

Table 4. Sociodemographic data of the international students for the time period 2019-2020 – at the University of Debrecen

Item	Category	Population size	In percent	Sample size	In percent
Gender	*Male*	3409	55.6%	221	57.4%
	Female	2717	44.4%	163	42.3%
Education	*Secondary school*	N/A	N/A	38	9.9%
	Bachelor	2755	72.0%	145	37.7%
	Master	782	20.4%	146	37.9%
	PHD	279	7.3%	49	12.7%
Continent	*Asia*	3077	50.2%	213	55.3%
	Europe	1519	24.8%	60	15.6%
	Africa	1279	20.9%	79	20.5%
	America	246	4.0%	32	8.3%

Source: Author's own compilation.

The number of survey respondents is 384 foreign students. The data was collected and entered into the SPSS software by which different statistical analyses were conducted in order to answer the research questions. The aim is to illustrate the differences between international students' intercultural competence based on their gender, educational level, time spent in Hungary, etc. The research also aims to validate the theory of Fantini on the studied sample and investigate

to which extent students' intercultural awareness can be influenced by their intercultural knowledge, attitude, and skills.

Sampling

As generally known, there are usually two types of sampling, probability, and non-probability sampling approaches. In this research, non-probability sampling techniques is chosen using convenience sampling method.

As previously mentioned, the target population of this research is the foreign students at the university of Debrecen. Based on the statistics of HCSO (2020), the total number of international students at the university of Debrecen (i.e., sampling frame) is about 6126 students (which is indicated by *N*). In order to decide the sample size (n) of this population, convenience sampling technique is suitable for that. Using the equation of Yamane (1967), the sample size can be estimated through the following formula:

$$n = \frac{N}{1 + N(e)^2} \tag{9}$$

Where (n) indicates the calculated sample size of the target population (N), and (e) is the precision (which equals 0.05). Based on this formula, the sample size of this study equals 375 students. As shown in table 4, the collected sample size (n) is 384 foreign students. Based on that, the sample represents the target population.

After determining the sample size of the population, it was possible to collect the data from the respondents using convenience sampling approach. Convenience sampling means that the research can collect the sample from target population which easy or convenience to reach or access. Based on that, the process of data collection relies on the possibility and chance through online groups, social media platforms and private messages.

The advantage of convenience sampling technique is that it is easy to be conducted with few limitations. Therefore, it saves a lot of time and avoids extra costs. In addition, it does not require formal permission to get a list of participants as in the case of simple random sampling. On the other hand, the disadvantages of this technique may include biases which could lead to misleading information which can be justified due to the availability of the respondents and other factors such as the existence of different sites within the entity. Also, if the sample frame is not defined, this could also lead to bias and lack of sample representativeness of the population.

In this research, the sample size is also representative in terms of gender and continent. For example, as observed in table 4, the percent of males and females are close in each of population and sample sizes. Furthermore, the continents (Asia, Europe, Africa, and America) have nearly equivalent percentages (in each of sample as well as population sizes). As a result, based on these observations as well as the calculated sample size (using Yamane's equation), it is possible to conclude that the sample size of this study represents the target population. Hereby, it is possible to generalize the findings of the analysis on the target population.

As for survey reliability, the survey was developed by Fantini (2007). The items of the survey were developed to give varying levels of usage of each dimension. This approach helps to provide reliable measures. Besides that, items analysis was conducted in order to determine specific items with high reliability. Therefore, the survey has reliable items per scale.

Furthermore, the research estimates the internal reliability of the survey. Based on Cronbach alpha criteria, scales whose values are higher than 0.8 indicates that they have high internal reliability. Based on SPSS output, survey's dimensions are reliable for this study, where intercultural awareness equals 0.968, knowledge 0.934, attitude 0.961, and skills 0.939. In addition, the research used CR as indicator of the composite reliability or construct reliability (where CR value should be higher than 0.7). Based on Amos SPSS output, all scales have high reliability (intercultural awareness 0.960, knowledge 0.934, attitude 0.960, and skills 0.936). As a result, based on these values, survey items are reliable to be used in this study.

3.2.2. Participants

The study's target population was the foreign students at Debrecen University in Hungary. To guarantee representativeness, the sample size was 384 international students. In addition, table 5 gives useful information regarding participants in terms of their time spent in Hungary, intention to learn the Hungarian language as well as intercultural experience. According to the table, the majority of responders have consumed in Hungary for more than two years. As a result, they could provide sufficient information regarding their experience within the Hungarian higher education system.

Table 5. Participants and related statistical information

Item	Category	Respondents' statistics	
		Total	*Percentage*
Time spent in Hungary	*One year or less*	114	29.6%
	More than one year	102	26.5%
	More than two years	167	43.3%
Intention to learn Hungarian language	*Yes*	230	59.7%
	No	154	40.0%
Difficulty to communicate with Hungarians	*Yes*	335	87.0%
	No	49	12.0%

Source: Author's own compilation.

3.2.3. Instruments

The instrument used in this study was a survey in which three types of questions were included. As for the first part of the survey, the questions aimed to provide sociodemographic information regarding the respondents, such as their nationality, mother tongue, linguistic skills, gender, education, time spent in the host country. Additionally, it was essential to determine language difficulties that international students may encounter while in Hungary. As a result, particular item assertions (e.g., Did you go on to study/learn the Hungarian language? Did you face linguistic difficulties to communicate with Hungarians?) were included in the survey.

The second part of the survey included Fantini's model (2007). The model (AIC) consists of four dimensions (i.e., knowledge, attitude, skills, and awareness). The total number of items is 53, where intercultural knowledge includes items from 1 to 11, intercultural attitude (12-24), intercultural skills (25-35), and intercultural awareness (36-53). Regarding the scale, it is a 6-point Likert-type, from 0= not at all to 5= extremely high.

As for the survey's third part, the final item was an open-ended question that let international students express their views and ideas about their intercultural experience at the University of Debrecen in Hungary.

3.2.4. Procedures

Because of the COVID-19 epidemic and the scheduled lockdown on November 14th, 2020, the Hungarian education system was converted to online instruction. In this context, the survey among international students was not immediately circulated. However, the survey distribution was performed through the university's online platforms, teachers' support, as well as social media. The process of circulation began between December 2020 and mid-April 2021.

3.2.5. Data analysis

The software used in this part of the research was SPSS 24. The program was used to conduct different analytical processes, including descriptive statistics and means and EFA. In addition, to run each of ANOVA and independent-samples t-test, it was first important to check the normality of the four dimensions in line with each continent, education, time spent in Hungary, gender, intension to learn Hungarian language, and difficulty to deal with locals. Based on the normality tests, the null hypothesis is that variables are normally distributed. If the p-value of *Shapiro-Wilk, as well as Kolmogorov-Smirnov,* is less than 0.05, therefore, the null hypothesis should not be accepted. It means that variables are not normally distributed. Therefore, *Kruskal Wallis* (instead of ANOVA) is preferable for non-normal distributed data, where the null hypothesis states that there is no difference in means (H_0 can be rejected when the p-value is less than 0.05). In addition, this test is used for ordinal variables, which consist of more than two groups such as continent, education, and time spent in Hungary. Similarly, the alternative method of independent-samples t-test is called the Mann-Whitney U test, which is usually used with variables including two groups, such as gender, intension to learn the Hungarian language, and difficulties to deal with locals.

To perform factor analysis, the research run the analysis through different related stages starting from EFA (Exploratory factor analysis), CFA (Confirmatory factor analysis), and finally SEM (Structural equation model). The reason behind using each method is presented and justified in the following paragraphs.

The first step of factor analysis is EFA. This type of analysis belongs to the family of multivariate statistical method. In addition, it helps to determine a minimum number of factors which aims to clarify the covariation between observed variables (i.e., survey's questions). Furthermore, it aids to determine the number of measured variables which should represent the main factor. In order to decide which measured variables could load on which factor, EFA includes different methods. The first method is called orthogonal rotation where the factors of

the study are assumed to be uncorrelated. On the other hand, the second method is oblique rotation where factors are assumed to be correlated (Gorsuch, 2014). To decide which rotation method is suitable for this data, the study first used principal component analysis (PCA) with oblique rotation. Based on the output, the values of component correlation matrix were higher than +-0.32. Therefore, according to Tabachnick et al. (2007), the research should use oblique rotation method in order to decide the number measured variables (survey questions). After deciding the rotation method, EFA analysis can be conducted using the extraction method called maximum likelihood as well as oblique rotation method (direct oblimin). Using these two methods, it is possible to decide which item load on which factor. To decide the number of factors, according to Kaiser criterion, their eigenvalues (i.e., variance amount which can be explained by a specific factor) should be higher than 1. In addition, items or measured variables should load on each factor with absolute value higher than 0.5. As part of this step, it is important to check whether sampling is adequate or not. To do so, EFA includes what is called Kaiser-Meyer Olkin (KMO). Based on the study of Pallant (2020), to ensure that there is sampling adequacy for each factor and overall model, KMO values should be higher than 0.6. In this case, it is possible to conclude that the data is suitable for the factor analysis. On the other hand, Bartlett's Test of Sphericity aims to test the null hypothesis in which variables are orthogonal (i.e., uncorrelated). To test that, the p-value of Bartlett's Test of Sphericity should be less than 0.05 (Pallant, 2020). Based on the above, EFA helps to determine the number of measured variables and factors of the model. In addition, it helps to ensure that the data is suitable for the factor analysis. If the factor analysis matches the criteria and cut off-values, it is possible to run CFA (confirmatory factor analysis).

After that, the CFA (confirmatory factor analysis) approach with maximum likelihood (ML) was used. This method can be conducted only using SPSS Amos 24. Confirmatory factor analysis is considered one of the structural equation modeling methods. However, CFA differs from EFA. In other words, whereas EFA gives the freedom for each item to load on each factor, CFA allows only the loading of those items which can explain each factor. Hereby, CFA helps to confirm or reject the theory or the hypothesized model of the study. On the other hand, EFA provides information which is irrelevant with the theory. This explains why the research first starts with EFA and then CFA. Therefore, in this stage, the aim is to ensure the fit of the research’s data to the theory of Fantini (2007). To check that, CFA consists of different goodness of fit indices as clarified in table 6.

Table 6. The goodness of fit indices – CFA.

The goodness of fit indices	Shortcut	Cut off value
Root Mean Square Error of Approximation	*RMSEA*	< 0.06
Comparative Fix Index	*CFI*	> 0.95
Standardized root mean squared residual	*SRMR*	≤ 0.08
Minimum discrepancy per degree of freedom	*CMIN/DF*	between 1 and 3

Source: Hu and Bentler (1999).

As for the reliability of the factors, CFA's output includes *Cronbach's alpha*, where α of 0.7 is considered good indicator (Tavakol & Dennick, 2011). Reaching this cut-off value means that survey's questions (multiple Likert questions) are adequate or reliable in estimating the constructs in the model.

On the other hand, CFA can be used also to estimate construct validity. Construct validity indicates the extent to which a test can measure and estimate the concept or construct. Construct validity consists of two types of validity. The first one is *convergent validity* in which the items converge to the estimation and evaluation of their construct. Convergent validity can be estimated using composite reliability (CR) as well as average variance extracted (AVE) (Hair et al., 2011). In other words, if AVE is higher than 0.5, this means that the construct has acceptable convergent validity. In addition, if CR is higher than 0.7, this indicates that the construct has good reliability too. The second type is called discriminant validity. This type can be verified through AVE and maximum shared squared variance (MSV)) (Maerlender et al., 2013). For example, if MSV is lower than AVE, this indicates that discriminant validity exists between the constructs and their items. This means that the measures of constructs, which are theoretically supposed to be unrelated to each other's, are unrelated to each other's in reality. In this case, having good indicators of convergent and discriminant validity indicates acceptable construct validity too. On the other hand, according to Bollen (1989), it is possible to add a second-order factor to the first-order CFA model, where a second-order factor can be set to account for the covariances between first-order factors. In this case, intercultural competence was considered a second-order factor, while knowledge, attitude, skills, and awareness were first-order factors (which matches the theory).

After ensuring that the model (i.e., theory) is validated, in new environment (university of Debrecen), the next step is to run SEM (structural equation model). In fact, it is also known as path analysis. It is also considered multivariate method which can be used to determine and estimate the direction and significance of the relationship between different variables. Based on the study of Fantini (2007), people intercultural awareness can be enhanced through the development of each of their intercultural knowledge, skills and attitude toward others culture. On the other hand, enhanced intercultural awareness helps to develop each of people's intercultural knowledge, skills and attitude. Using SEM, it is possible to investigate this theory and the relationship between these dimensions.

Hereby, SEM can be conducted by restructuring the CFA model. The restructuring of the CFA model can be done according to the hypotheses of this study and by following the theory of Fantini (2007). After that, SEM can be used to investigate the relationship between these factors at different significance levels, where * $p < 0.050$, ** $p < 0.010$, and *** $p < 0.001$. In this stage of investigation, the research tried to illustrate the direct effects between the variables, where each of intercultural knowledge, skills and attitude are exogenous factors, and intercultural awareness is the endogenous variable.

On the other hand, to estimate the impact of intercultural awareness on each of intercultural knowledge, skills and attitude, the research tried to estimate the indirect effects within SEM. This type of effects can be calculated by estimating the average of observed variables effects of the awareness factor on each of intercultural knowledge, skills and attitude individually.

4. RESULTS AND DISCUSSION

4.1. Results of panel data analysis

4.1.1. Descriptive statistics of the panel data

The research provided a comprehensive explanation of the steps for building the model for this study in the preceding chapter, starting with Solow theory, augmented Solow model, and finally defining the model.

In the beginning, the descriptive statistics of variables, such as mean, standard deviation, minimum, and maximum, included in the panel data are presented in table 7. This table provides statistical information of all variables used in equations (6) and (7).

Table 7. Panel data's descriptive statistics

Variables	**Mean**	**Standard deviation**	**Minimum**	**Maximum**
$Ln(GDP\ per\ capita)_{it-1}$	10.271	1.026	7.386	12.318
$Ln(n+g+\delta)_{it}$	0.0676	0.025	-0.054	0.229
$Ln(S_k)_{it}$	-1.498	0.358	-2.911	-0.421
$Ln(h)_{it}$	0.945	0.256	0.145	1.380
$Ln(Secondary\ quality\ education)_{it}$	-0.827	0.501	-2.467	-0.052
$Ln(Primary\ quality\ education)_{it}$	-.883	00.836	-5.597	-0.112
$Ln(TOEFL\ score)_{it}$	4.411	0.117	4.060	4.605
$Ln(General\ government\ consumption)_{it}$	2.694	0.361	1.482	4.298
$Ln(Social\ tolerance\ )_{it}$	1.629	0.610	-0.610	2.591
$Ln(openness)_{it}$	4.366	0.519	3.031	6.093

Source: Author's own calculation

4.1.2. Panel data's unit root test

It is necessary to check the stationarity of the time series within the panel data. Stationarity indicates that time series statistics, such as mean, variance, are constant during the time. On the other hand, having a unit root in the model indicates the existence of shocks which are out of control (it is also called random walk with drift). In order to detect whether there is unit root within the data or not, the research used each of Levin-Lin-Chu, Im-Pesaran-Shin, and Fisher-type methods, where their null hypothesis assumes that all panels contain unit roots (Choi, 2001; Im et al., 2003; Levin et al., 2002). As observed in table 8, the p-value is less than 0.05 for each method. Therefore, the null hypothesis should be rejected. This means that the panel data (for log of GDP and its lagged values) does not contain unit root problem. In other words, this data is stationary.

Table 8. Panel data's Unit Root tests

Variables	Levin-Lin-Chu	Im-Pesaran-Shin	Fisher-type
ln (GDP per capita)$_{it}$	-9.6656****	-3.9070****	28.2357****
Ln(GDP per capita)$_{it-1}$	-19.1437****	-4.8165****	36.6678****

*Notes: ****, *** , **, * are statistical significance at 0.1%, 1%, , 5% and 10% levels respectively*

Source: Author's own calculation

Because this section examines the economic importance of the English language from two distinct viewpoints, the following paragraphs begin the debate with language and Quality education.

4.1.3. Results of the two-step system GMM – Model (1)

Based on the results presented in table 9, Hansen and AR2 values prove that the two-step system GMM estimation method is valid and suitable for this data. For example, as shown in model (1), the Hansen test shows good instrument validity, where the p-value equals 0.139. On the other hand, AR2 is used to check the autocorrelation/serial correlation of the error term. In this case, the p-value of AR2 is higher than 0.05. This means that the two-step system GMM is useful and suitable to estimate equation No. 6.

Table 9. Two-step System GMM Results - Dependent variable: ln (GDP per capita)$_{it}$

Models	**Model (1)**		**Model (2)**	
Variables	**Coef.**	**Corrected Std. Err.**	**Coef.**	**Corrected Std. Err.**
Ln(GDP per capita)$_{it-1}$	0.731****	(0.102)	0.698 ****	(0.140)
Ln(n+g+δ)$_{it}$	–0.0997	(0.534)	−0.223	(0.432)
Ln(S$_k$)$_{it}$	0.119*	(0.0618)	0.129 *	(0.071)
Ln(h)$_{it}$	0.517**	(0.248)	0.845 **	(0.421)
Ln(Secondary quality education)$_{it}$	0.0672	(0.0704)		
Ln(Primary quality education)$_{it}$	0.0503*	(0.0293)		
Ln(TOEFL score)$_{it}$	0.0621	(0.188)	0.123	(0.184)
Ln(General government consumption)$_{it}$	0.0619	(0.0617)		
Ln(Social tolerance)$_{it}$			0.018	(0.025)
Ln(Openness)$_{it}$			0.003	(0.027)
Year Dummies	Yes		Yes	
No. of observations	693		693	
F statistic	57036.28****		58,876.35****	
Groups/Instruments	99/22		99/21	
AR (1)	0.001		0.003	
AR (2)	0.056		0.052	
Hansen Statistics	0.139		0.320	

*Notes: ****, *** , **, * are statistical significance at 0.1%, 1%, , 5% and 10% levels respectively; t statistics (in parentheses) are based on white heteroscedasticity-consistent std. errors; p-values reported for AR (1), (2) and Hansen statistic. Source: Author's own calculations*

The model's findings are estimated using system GMM, as shown in table 9. According to the findings, Quality education within primary and secondary schools, as well as proficiency in the English language (as assessed by TOEFL score per economy), have a positive effect on economic growth.

Based on the quality education output, a 0.0672 percent increase in short-run economic growth is associated with a percentage change in the quality of secondary education. This finding, nevertheless, is insignificant. On the other hand, at the ten percent significance level, the effect of primary quality education is significant. In other words, a percent increase in primary quality education contributing to a 0.0503 percent rise in economic growth. Based on this, quality education plays a crucial role in enhancing the economic performance of these countries. These results are in line with those of Barro (2001), Lee and Lee (1995), Hanushek and Kimko (2000), and Hanushek and Kim (1995).

Furthermore, human capital (h) has a substantial beneficial effect on economic growth (at a 5 percent significance level). Moreover, when quality education is taken into account, regional disparities in economic growth owing to worldwide variations in human capital may rise (Wossmann, 2003). As demonstrated in table 9, each one-unit increase in human capital enhances economic growth by 0.517 percent. Furthermore, physical investment has a substantial beneficial effect on economic growth as well, where each one-unit increase in investment boosts the economic growth by 0.119 percent.

In terms of the effect of language on the economy, having excellent English skills within the economy has a beneficial effect on a country's economic growth. As for English language skills, estimated by TOEFL score means, it was found out that they have no statistically significant effect on economic growth. Nevertheless, there is a positive connection between both. Therefore, based on the findings, enhancing English proficiency by one unit could promote the economy growth by 0.0621 percent. These results are in line with those obtained by Seargeant and Erling (2011) as well as Suárez (2005).

In fact, economies with the highest GDP ratings are those in which English is spoken as a second language, after the main native language. This conclusion is supported by the statistics provided by the United Nations (Kapur & Chakraborty, 2008; McCormick, 2013). According to the panel data of this study, for instance, Sweden, Finland, Denmark, Singapore, Austria, Norway, Luxembourg, Germany, and Belgium are the economies with the highest TOEFL score means. These economies are experiencing a good economic performance at the same time. To a certain degree, this order corresponds to the rankings published by Education First

company. The English proficiency index (EPI) is used by this institution to determine the degree to which the English language is used in a certain economy. For example, based on the report of Education First (2017), the top five English-speaking countries are the Netherlands, Sweden, Denmark, Norway, and Singapore.

In addition, the research looked at whether or not English proficiency and high-quality education are correlated. As shown in figure 12, the line, marked with red color, in the two scatterplots indicates a positive correlation between English language and education in primary and secondary schools' education for various economies. This observation and finding are consistent with the study of Grin (2001).

Consequently, English language and quality education are an integral part of the economic growth process. Both help to prepare human capital for the labor market. Furthermore, they are necessary for knowledge spread which is considered an important component of the total factor productivity. These results, using the augmented Solow model, emphasizes the necessity and economic value of English and education together in satisfying the needs of the economy.

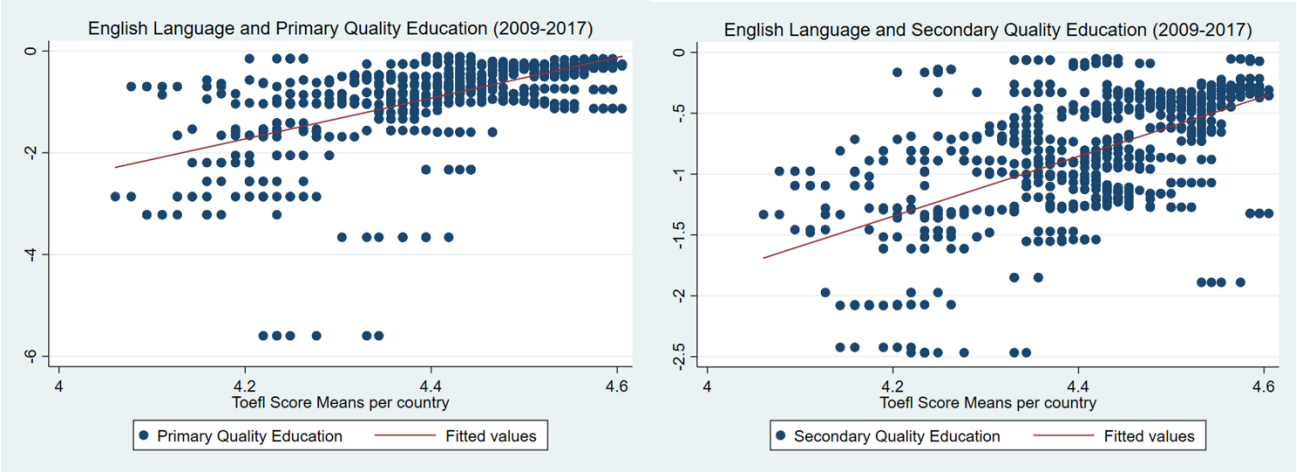

Figure 12. The relationship between English language and quality education – 99 economies for nine years.

Source: Author's own calculations.

4.1.4. Results of the two-step system GMM –Model (2)

As observed in table 9, model (2), each of the Hansen tests and AR2 match the criteria, where the Hansen test's p-value is in the range between 0.1 and 0.25, and AR2's p-value is more than 0.05. As a result, system GMM is valid and efficient to estimate the model.

Also, the statistics show that social tolerance has a beneficial effect on the economy (with a positive value, where a 0.018 percent rise in economic growth is linked with a percentage

increase in social tolerance in the short term). However, this effect is insignificant. This finding is compatible with the scientific studies of Florida et al. (2008), Ottaviano and Peri (2006), and Lopes et al. (2011).

By looking at the panel data, the economies of Norway, Switzerland, Luxembourg, Sweden, Finland, Denmark, Belgium, Austria, Germany, etc., are classified as very tolerant of cultural diversity. In reality, the literature is full of real-world instances from many economies where cultural diversity plays a significant role. For example, the study of Lauring (2009) showed how knowledge in Danish businesses could be exchanged across diversity in the workplace. Hereby, one of the most essential methods is to prevent power imbalances or inequalities, which may lead to political connections and therefore undermine the beneficial function of cultural diversity.

As for Sweden, the goal was to promote intercultural interaction amongst individuals. To achieve this, it was necessary to develop different objectives related to a new national cultural policy in 2009. Furthermore, the council and municipalities of the country invested roughly SEK 26 billion on culture in 2015 (UNESCO, 2020).

A policy's implementation may be found at the city level as well. In Oslo (Norway), for instance, the majority of the minorities are Pakistan, Turkey, Somalia, Vietnam, Iran, Iraq, and India. The city, therefore, has established strategies for promoting intercultural competency and social tolerance (known as OXLO, Oslo extra-large). OXLO seeks above all to raise awareness of the diversity of culture by avoiding prejudice and providing equitable access to municipal services. In addition, a number of policies for civic, public, and private society were established by Stuttgart (Germany). These policies are aimed towards equal rights and social cohesion. The rationale behind these policies is that they may help attract foreigners, FDI, and economic growth by promoting successful integration. In return, Stuttgart reported the lowest crime and unemployment rates on the basis of the data (Council of Europe, 2009).

Regarding language, the mean TOEFL scores reflect the language skills of test-takers by country. On the basis of the TOEFL dataset, values vary across countries. This may be explained by quality education, cultural differences, language proximity, and openness. The findings reported in table 9 indicate a positive association between English proficiency and economic growth. However, this value is not significant. In other words, one unit rise in the economy's English proficiency boosts its economic development by 0.123 percent. The findings are consistent with each of Seargeant and Erling (2011), Suárez (2005), and Lee

(2011). On the other hand, openness is positive, although the impact is small (Rivera-Batiz & Romer, 1991).

According to the data of this study, the top economies in terms of their TOEFL score means are Switzerland, Luxembourg, Germany, Iceland, Finland, Denmark, Belgium, etc,. As a result, the following conclusions can be drawn. First, these economies are classified as very competent in English as reported in the Education first's report (2017). Second, certain economies, such as Germany, Finland, and Belgium, use various social integration methods, policies, and programs to demonstrate tolerance toward cultural diversity, such as ethnic minorities and migrants (European Commission, 2020a). Third, like in Singapore and Luxembourg, one of the reasons the economy's human capital speaks English so well is because of the openness and international commerce it has experienced (Ku & Zussman, 2010; Levinsohn, 2007).

Using panel data statistics, the study sought to determine whether or not there is a positive connection between the English language and societal tolerance toward diversity. As shown in figure 13, the scatterplot line shows the link between these two variables, indicating a positive association in which every rise in the English language leads to an increase in social tolerance in the economy.

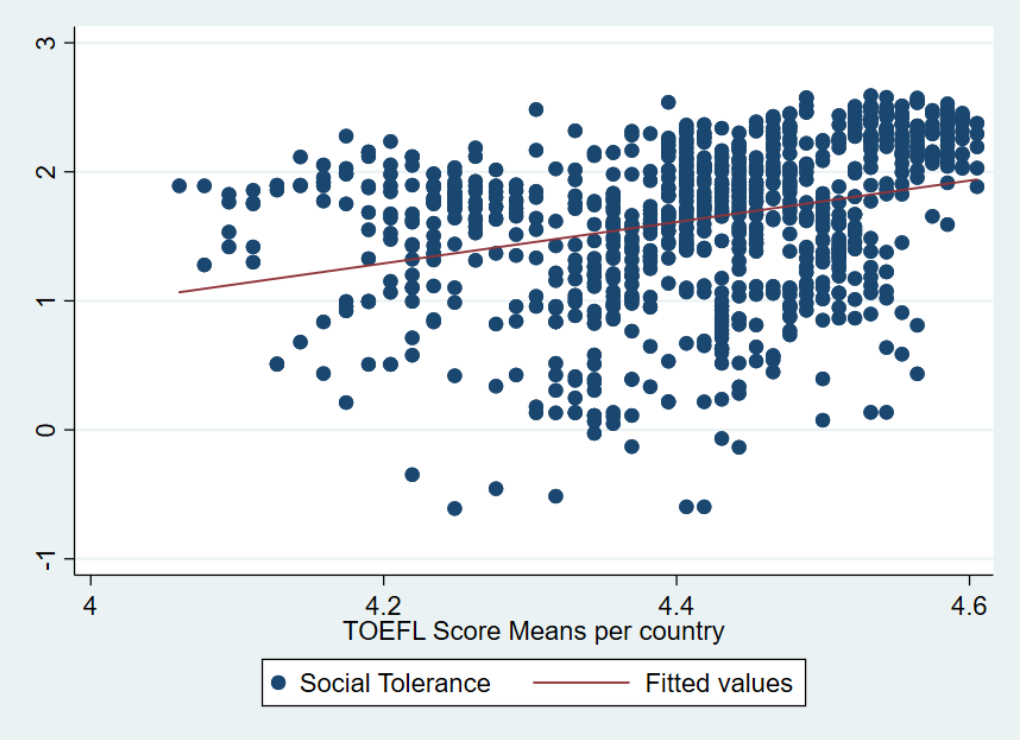

Figure 13. English language and social tolerance – 99 economies, nine years.

Source: Author's own calculations

Consequently, English, quality education, and social tolerance may be seen as a feasible reaction to the difficulties posed by globalization and other trends such as the growth of diversity and migration, which have altered the characteristics of today's world.

Finally, regarding the year dummies, the panel data encompasses the years 2009 to 2017 (i.e., nine years). Year dummies may therefore aid in estimating the change in GDP over time. As mentioned earlier, formula No. 8 can be used to calculate the change in GDP per year. The change in GDP for each year can be graphed after calculating all change, as illustrated in Figure 14.

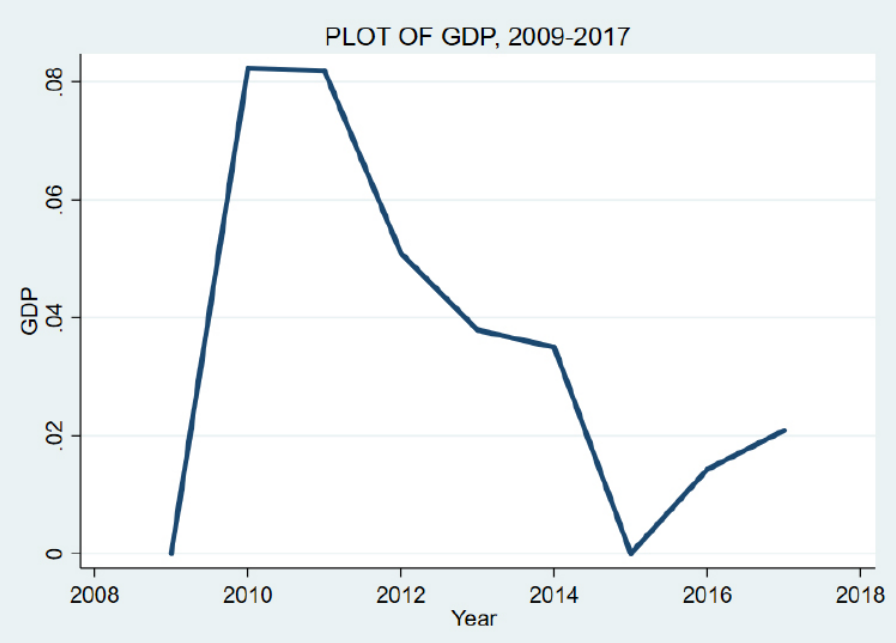

Figure 14. Plotting year dummies - 99 economies for 9 years.

Source: Author's own calculations.

Based on this graph, these economies faced various economic challenges (*disturbances*) in different periods. For instance, GDP in 2010 was, on average and ceteris paribus, 8.578 percent greater than in 2009 (i.e., post-global financial crisis). After that, GDP fell significantly between 2010 and 2015. (i.e., due to the European Debt crisis and tsunami in 2011). From 2016 to 2017, it gradually began to increase.

4.2. Case study: Hungary

4.2.1. Time Series Analysis

Among 99 economies, the study chose Hungary as part of this study. The reasons behind choosing Hungary are justified as the following. Firstly, only the Hungarian residents of Hungary (99% of the population) speak Hungarian, making it difficult for foreigners to communicate. Secondly, about 65% of Hungarians are less likely to have the ability to converse a foreign language. Thirdly, 21% of Hungarians rated their English abilities as very good (Eurobarometer, 2012). Fourthly, geographical location plays a significant role since Hungary is both Western and Eastern Europe's linking point. Fifthly, Budapest has a world-famous reputation as a must-see attraction for visitors from all over the globe.

However, since 2012, Hungary's English proficiency index has altered. As shown in figure 15, Despite a drop in Hungary's TOEFL score means from 2012 to 2014, the score has begun to climb again since 2016 and has continued to improve. The reason may be attributed to the internationalization process of Hungarian higher education, as well as the growing number of international students in the country.

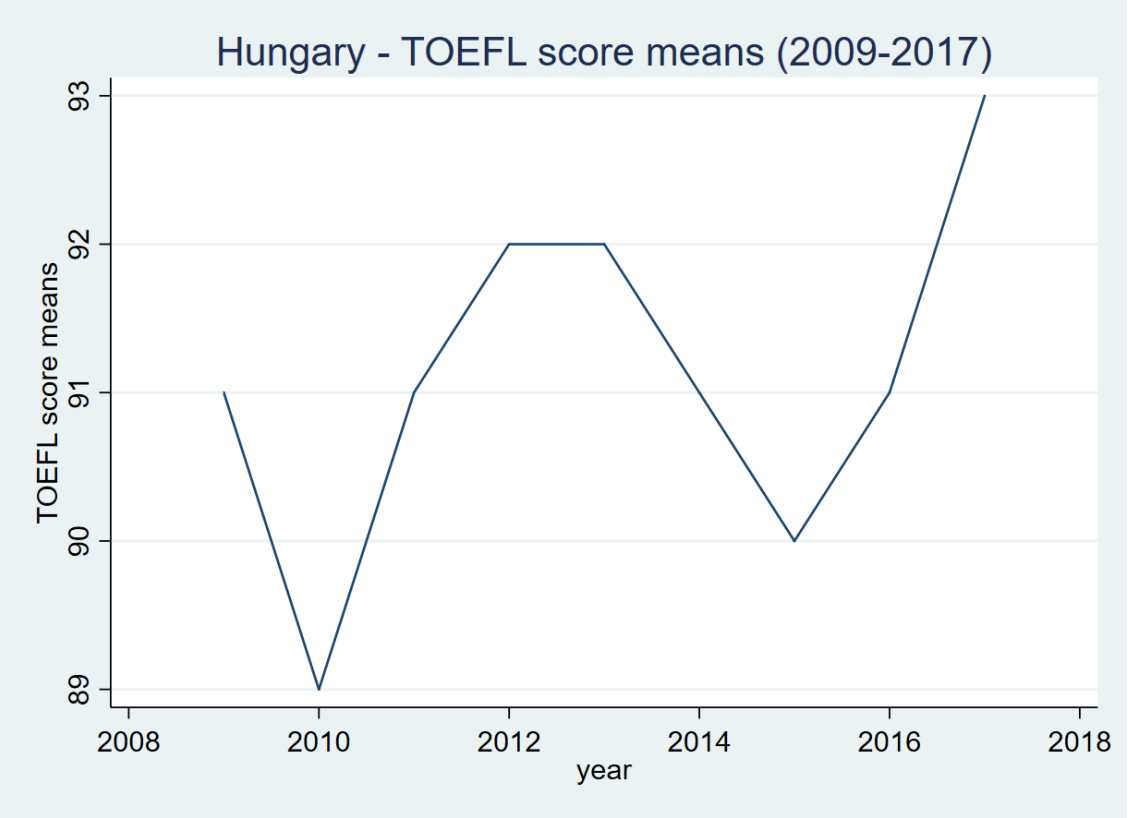

Figure 15. Hungary's TOEFL score means in the period between 2009-2017.

Source: Author's own calculations.

In addition, the study used another indicator other than TOEFL score means to support this evidence. This measure is known as EPI (English Proficiency Index), and it was developed by the Education First company, where scores were calculated based on the EF test for each country. The data of this index covers Hungary's English language proficiency in the period between 2011 until 2019, as observed in figure 16.

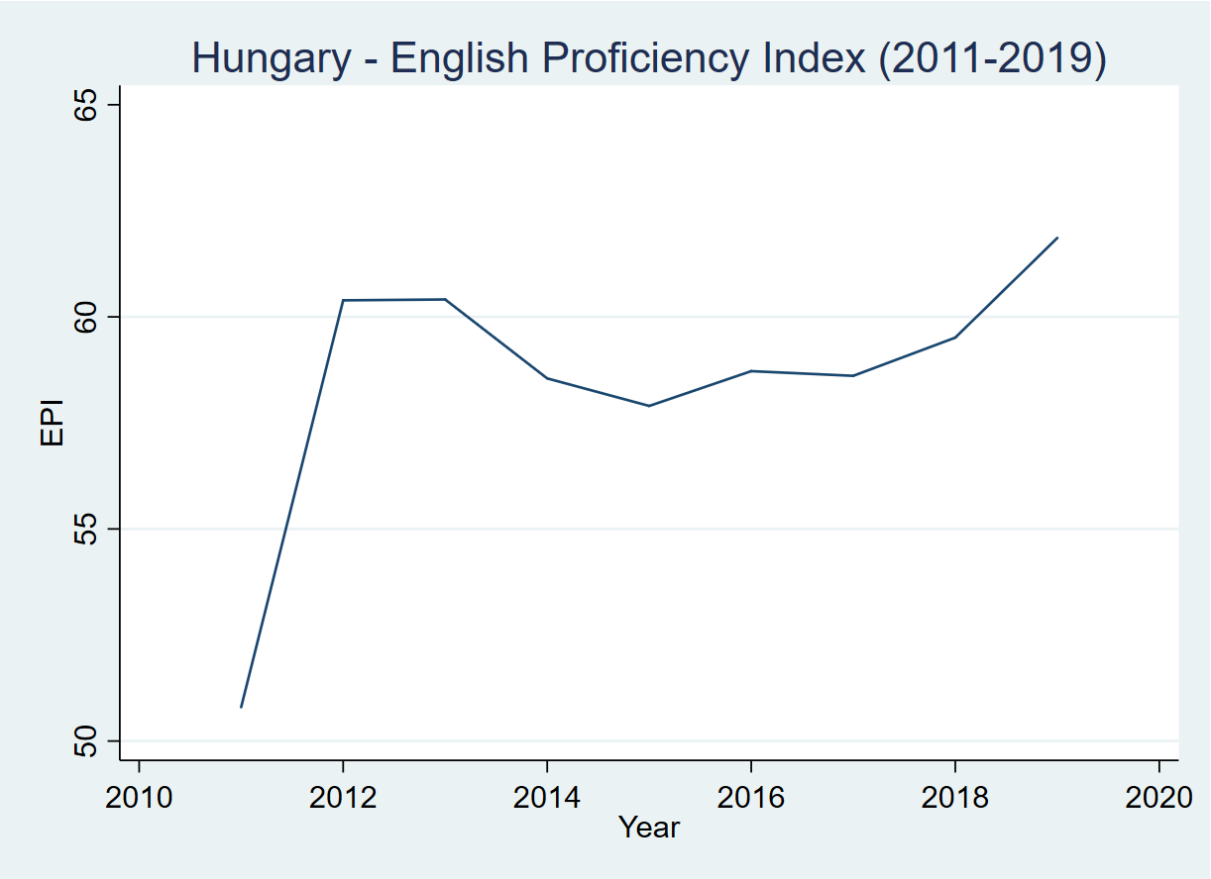

Figure 16. Hungary's EPI in the period between 2011-2019.

Source: Author's own calculations.

In fact, the two diagrams in figures 15 and 16 are almost identical. The reasons for this are related to the data that is being utilized and the tests that were completed by participants. As reported in figure 16, Hungary EPI's diagram has started to increase since 2011. For instance, in 2011, Hungary's EPI was rated as a moderate proficiency with a global rating of 20. In 2012, Hungary's EPI improved from moderate to high, where males outperform women in English by a significant margin: 3 points (EF, 2012). In the period between 2011 until 2014, adult Hungarians have also increased their English proficiency more than the majority of Europeans. Huge education changes in Hungary, which aimed to match the country's university system with European criteria, demanded the inclusion of foreign languages at the lower and higher

secondary levels in all courses. Before obtaining their degrees, students in Hungary are now required to show acceptable foreign language abilities. Despite the fact that Hungary currently confronts educational difficulties, including foreign languages into the curriculum at all levels is already having an effect on adult English abilities (EF, 2014).

In addition, the diagrams in figures 16 and 17 indicate a slight decrease in Hungary's EPI, with EPI dropping by -0.66. However, Hungary's EPI started to raise again from 57.90 to 58.72 (by +0.82). On the other hand, while the Czech Republic, Hungary, and Serbia are still low in public spending on education, all three nations have a remarkable level of English skills compared to other EU members.

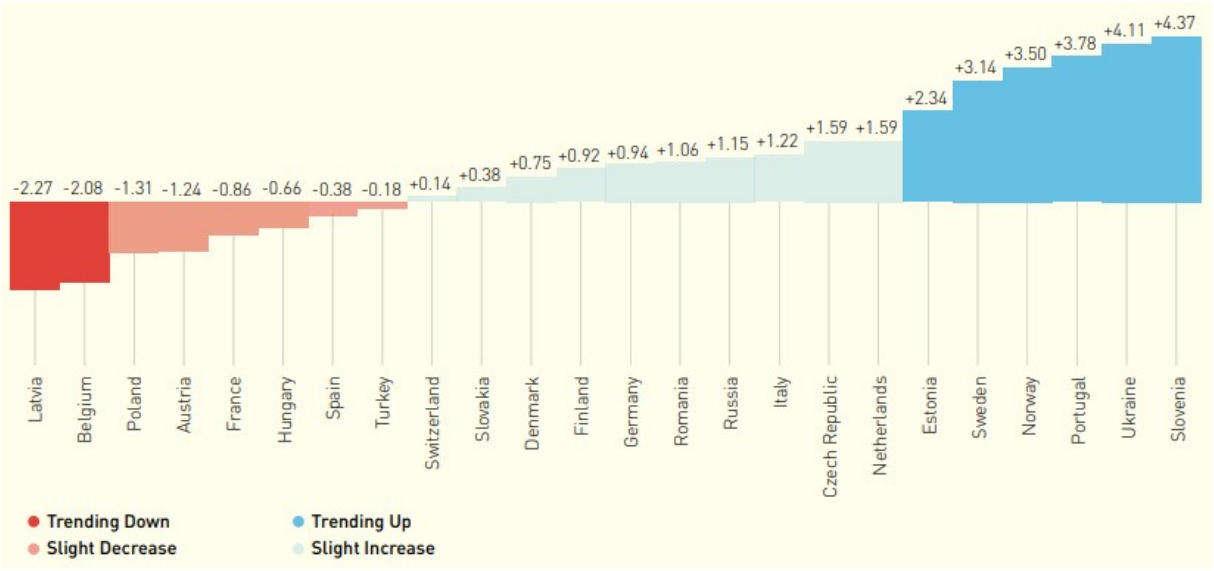

Figure 17. Hungary's EPI change in the period between 2014-2015.

Source: EF's report (2015)

In these nations, it is widely accepted, in combination with education systems that highlight the significance of English and other foreign languages in the knowledge-based economy, that foreign language skills are vital to international integration (EF, 2016). Despite this decrease, Hungary's EPI ranking has improved from 20th to 14th in the world within the period between 2017 to 2019. According to EF, Hungarians' English proficiency rank enables them to perform presentations at the workplace, comprehend television programs as well as newspapers (EF, 2020).

Regarding Hungary's quality education and social tolerance, figure 18 depicts the most important changes in the period between 2009-2019. As for social tolerance toward diversity, according to the report of Legatum Institute (2016), Eastern Europeans fall behind their Western

counterparts in terms of personal freedom: tolerance of immigrants and minorities is already low, rendering the area vulnerable to right-wing populism. Although Eastern Europe has not yet seen the same level of broad diversity as Western Europe, politicians in Hungary and Poland have already capitalized on concerns about future changes and won on populist platforms. This explains why, as seen in the graph, social tolerance fell significantly after 2014.

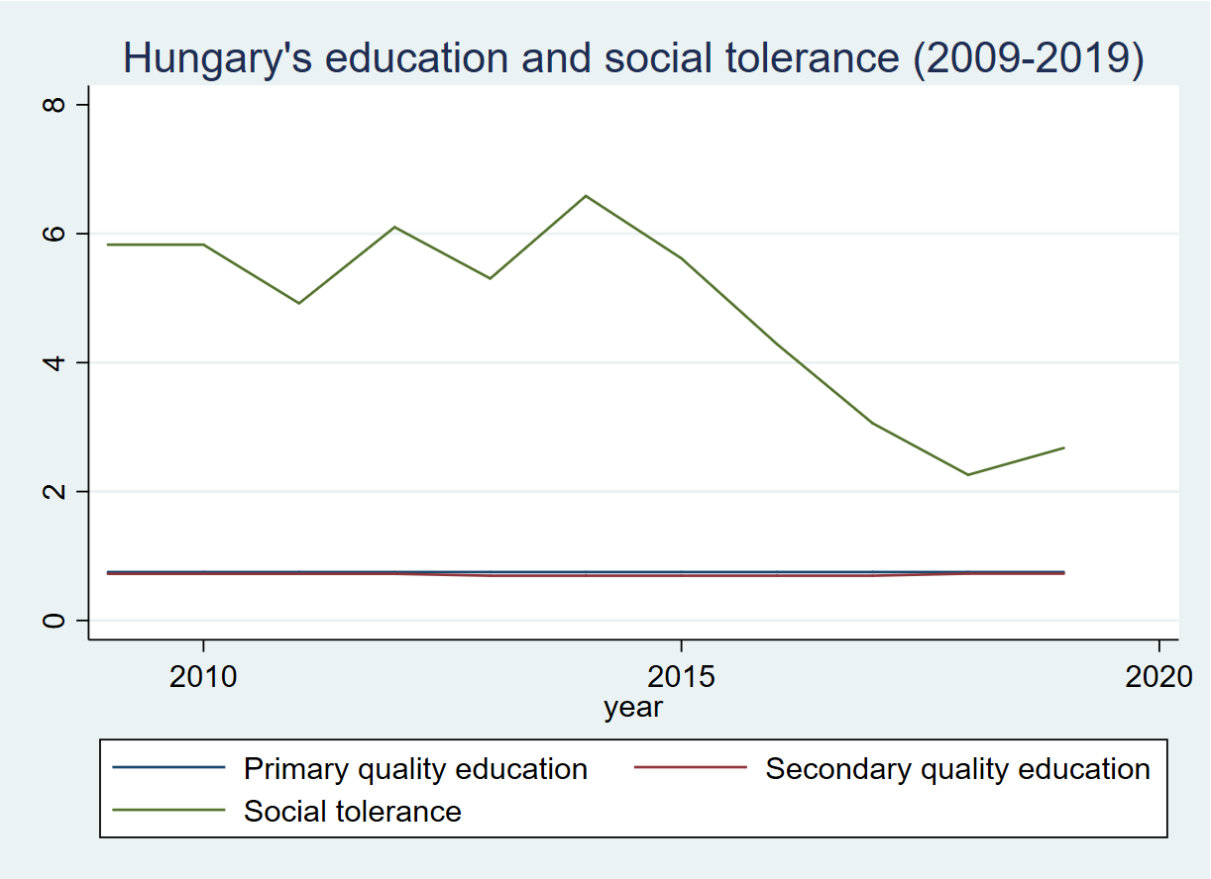

Figure 18. Hungary's quality education and social tolerance in the period between 2009-2019

Source: Author's own calculations.

In terms of Hungary's quality education, the graph indicates little change since the scores for primary and secondary school quality education do not rise much, in the period between 2009 to 2019. Hereby, Hungary's education system requires more attention. For example, recruiting and training quality teachers is critical to improving quality in educational institutions in Hungary. In primary and lower secondary schools, about 30% of instructors are under the age of 40 in Hungary (compared to the OECD average of 40 percent). Instructor deficits may result from an ageing teacher population, and Hungary anticipates an increase in demand for competent instructors, especially in mathematics and science. Another issue is related to salaries

and wages. For instance, in 2013, the salaries of educators in Hungary were among the lowest throughout the OECD and were much lower than those of other tertiary trained occupations.

Furthermore, primary teachers earned 62 percent of the average actual salary of a 25–64-year-old similarly educated graduate, while upper secondary teachers earned 48 percent (compared to the OECD average of 78 percent for primary teachers and 82 percent for upper secondary teachers). Also, among OECD economies, Hungary invests very little in educational institutions (OECD, 2015). As a result, these issues may hinder Hungary's educational progress.

As for quality education assessment, there are several well-known assessment tools that can be used to estimate the quality of education for countries such as PISA, ISAT, TIMMS, etc. For example, regarding quality education in the period between 1980 to 2015, a few nations, particularly France, Hungary, Chile, and Thailand, have seen a decrease in performance (Altinok et al., 2018). Furthermore, based on PISA results, Hungary's average reading score in 2018 was similar to its performance in 2000. On the other hand, as in science and, to a lesser degree, mathematics, the more recent trend, after 2009, has been negative. In addition, there was an eight percentage points rise in low-level students (students below Level 2) in reading (2009-18) and about nine percentage points in science (2006-18). These trends are depicted in figure 19.

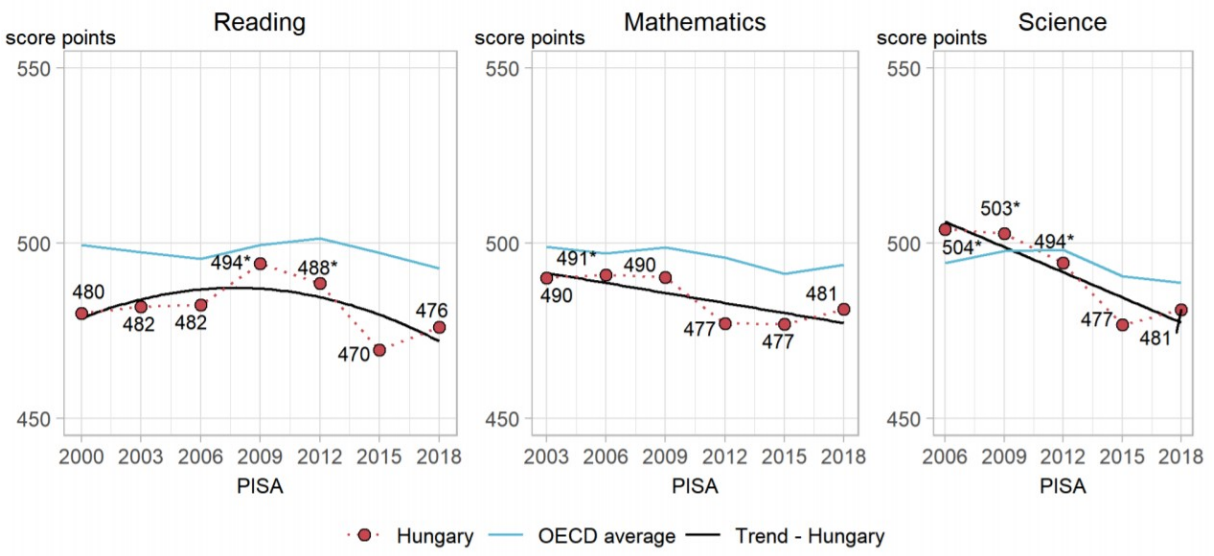

Figure 19. Hungary's trends in performance in reading, mathematics, and science.

Source: OECD (2019).

On the other hand, there are many problems that should be considered when it comes to the quality of English language education in Hungary. Hungarian students, for example, cannot

select which language to study. This occurs because students have the option of learning either German or English. Simultaneously, their selections are affected by the availability of language instructors as well as the number of students in the class. For instance, 65 percent of students who choose German are originally interested in English rather than German (Szabó, 2008). In addition, there is a misalignment between policy and practice in the classroom. For example, a teacher's practice in class may involve using his or her mother tongue rather than the necessary policy, which mandates instructors to speak the intended foreign language, as shown in figure 20.

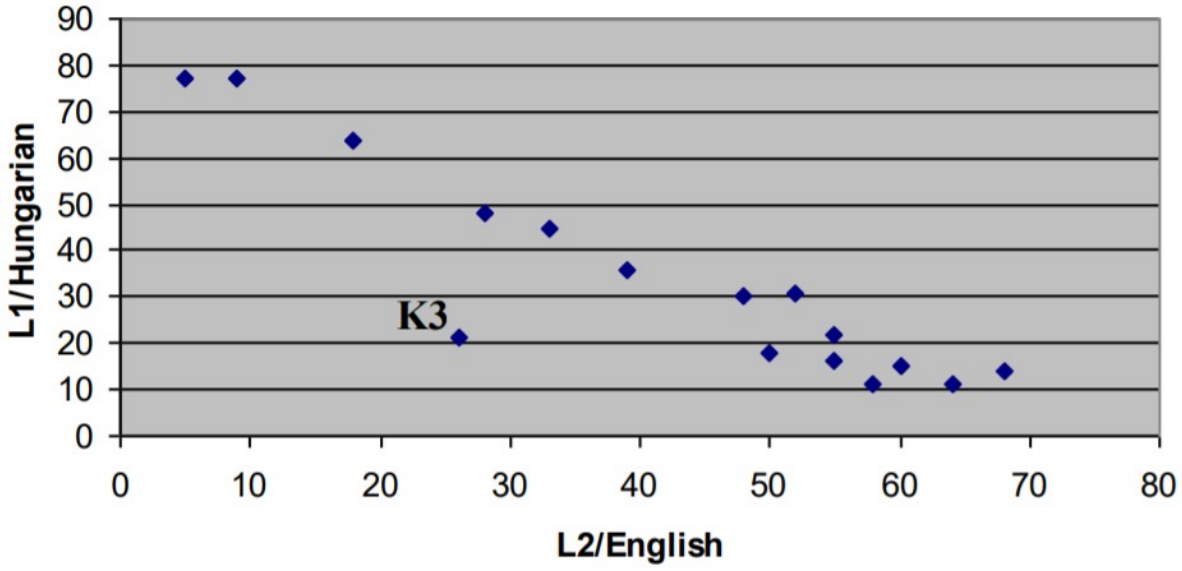

Figure 20. The use of English to Hungarian in the classroom.

Source: Nagy (2009).

As for intercultural communication issues, according to Hajdú (personal communication, 2018), Hungarian students usually hesitate to talk English because of their language anxiety since they prefer to speak English correctly; otherwise, they may be hesitant to communicate. However, this problem can be solved by enhancing communication skills among students in the class. For instance, Hajdú argued that decreasing the number of students in the classroom from 20 to 10 or 6 could promote and enhance communication skills among Hungarian students. Furthermore, reasonable salaries should be offered to recruit native speakers to improve English language education in Hungarian schools (Hajdú, personal communication, 2018).

On the other hand, the research argues that these problems and challenges could also negatively affect the intercultural competence of foreign students during their stay in Hungary. In order to investigate that, the study used the model of Fantini in order to estimate foreign students'

intercultural knowledge, skills, attitude, and awareness toward Hungarian culture. The next section of this study aims to highlight the issue of Hungarian-foreign students' interaction from the perspective of foreign students, including their intercultural competence as well as their intercultural experience within college or university environment. This could help to provide useful information which could be essential in enhancing the effectiveness of the Hungarian higher education internationalization process.

4.2.2. Foreign students population within the Hungarian education system

As previously noted, studying a second language is viewed as a kind of tolerance shown by people for other cultures. This is acceptable since speaking common languages facilitates intercultural dialogue and economic interactions between individuals from various cultures. Furthermore, successful economies spend much on education systems since it is critical to achieving other development objectives. The research utilized three interconnected themes, including the economics of language, culture, and education, and how speaking common languages helps to improve education, knowledge spread, and creativity via tolerance of diversity. As a consequence, it was possible and effective to regard the English language as a necessary determinant of economic theory, as evidenced by the findings as well as literature in the previous chapters.

On the microeconomic level, the study narrows the investigation to be on the level of educational institutions. The study mainly concentrates on the intercultural competence and social tolerance of foreign students in the college environment. Following the approach of Parasuraman et al. (1988), it was necessary to evaluate institutional performance by determining the gap between students' expectations and perceptions. On the other hand, depending on the study of Astin (1970a, 1970b), the college environment plays an essential role in enhancing the improvement of students' cognitive skills. In this study, student outputs consist of their intercultural competence and intercultural experience, and attitude toward university services and programs. Furthermore, according to the literature, enhancing diversity and intercultural communication among university students can help to minimize student's anxiety (Cao & Meng, 2020) and promote creativity (Bultseva & Lebedeva, 2021).

The research mainly focuses on foreign students at the University of Debrecen. As previously clarified, it has the highest foreign student quota when compared to other institutions. As a result, the institution has a major responsibility to handle and manage cultural diversity on campus.

As shown in figure 21, during the period from 2014 to 2019, the number of foreign students at the University of Debrecen grew steadily. This increase is justified due to the significant role of Stipendium Hungaricum to internationalize the Hungarian higher education sector.

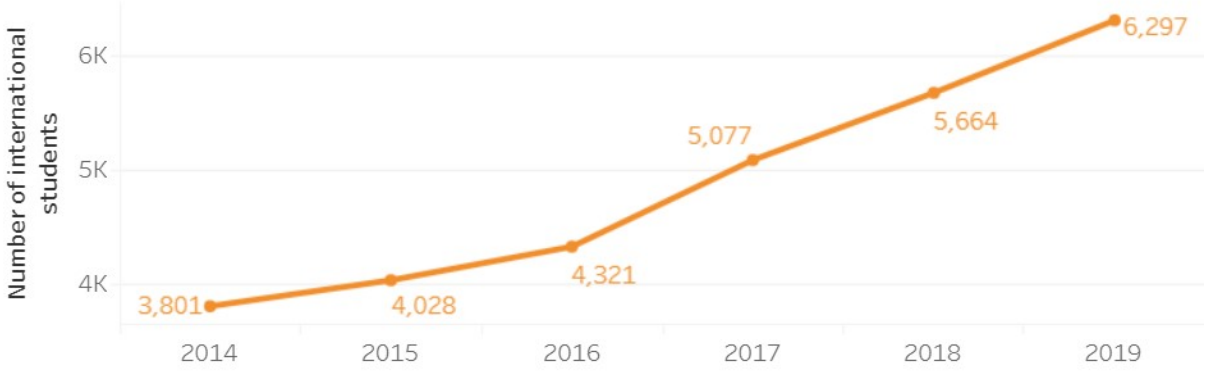

Figure 21. The University of Debrecen's foreign student population (2014-2019).

Source: University of Debrecen (2021).

On the other hand, there is a diverse variety of nations, cultures, and languages, as shown in figure 22., The graph indicates that students come from several continents, and the quota varies by nation. As a consequence, the degree of diversity within the academic environment is great, necessitating careful attention.

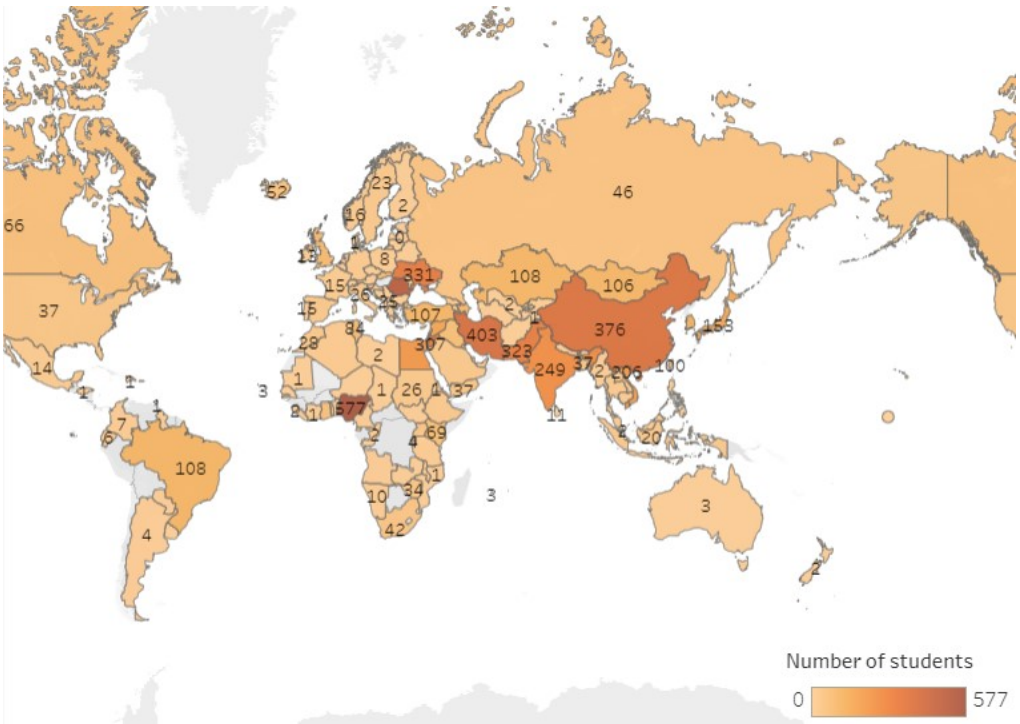

Figure 22. The number of foreign students per country (2019).

Source: University of Debrecen (2021).

4.2.3. Dimensions' descriptive statistics

Table 10 lists Fantini's four dimensions (knowledge, attitude, skills, and awareness, KAS+A), with scales ranging from 0 to 5. Furthermore, the table provides detailed information about each dimension. This information includes each dimension's descriptive statistics such as the number of respondents (N), the minimum and maximum score for each factor, the mean of total scores per dimension, and the standard deviation (i.e., amount of deviation of the data from the mean).

Table 10. KAS+A's descriptive statistics

Dimensions	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
	Statistics	Statistics	Statistics	Statistics	Statistics
Knowledge	384	0.00	5	2.86	1.02
Attitude	384	0.00	5	3.16	1.13
Skills	384	0.00	5	3.11	1.12
Awareness	384	0.00	5	3.22	1.08

Source: Author's own calculations.

In terms of means, the mean of awareness is the greatest when compared to the other dimensions. In addition, items associated with each dimension all possess a mean, indicating their relative significance or importance, as detailed in table 11. The item which has the highest mean is considered very important in comparison to other items, and vice versa. For example, regarding knowledge dimension, the item (also called measurement) which has highest mean is related to the behavior of foreign students in comparison to Hungarians in terms of social life and routines. Based on the responses of the survey participants, this item is considered the most important one within Knowledge dimension. On the other hand, the least important measurement of knowledge dimension is the one which is about the participant's ability to describe the model of cross-cultural adjustments stages. Based on that, mean of this measurement is very low (2.5365). This means that participants are not familiar with this model.

Table 11. The highest and lowest means of each dimension

Dimensions	Item's statement	Mean
Knowledge	I could contrast my own behaviours with those of my hosts in important areas (e.g., social interactions, basic routines, time orientation, etc.)	3.15
	I could describe a model of cross-cultural adjustment Stages	2.53
Attitude	While in Hungary, I demonstrated a willingness to [try to understand differences in the behaviours, values, attitudes, and styles of host members	3.46
	While in Hungary, I demonstrated a willingness to [take on various roles appropriate to different situations (e.g., in the family, as a volunteer, etc.)	2.73
Skills	I demonstrated flexibility when interacting with persons from the host culture	3.61
	I used models, strategies, and techniques that aided my learning of the host language and culture	2.77
Awareness	While in Hungary, I realized the importance of … [differences and similarities across my own and the host language and culture	3.60
	While in Hungary, I realized the importance of … [my negative reactions to these differences (e.g., fear, ridicule, disgust, superiority, etc.)	2.79

Source: Author's own calculation

Similarly, in the case of attitude dimension, the item which has highest mean illustrates whether the international student has the willingness to understand the behavior, values and attitude of Hungarians. Based on that, foreign students are interested in understating the cultural differences. On the other hand, the least important item of this dimension reflect that the respondents did not participate in any role during their stay in Hungary. Hereby, this question receives less attention and importance in terms of the mean scores.

As for skills dimension, foreign students demonstrate their ability to be flexible while communicating with Hungarians. Therefore, mean of this question is higher comparing to other items. On the other hand, foreign students reported that they did not follow any kind of model, strategy or technique in order to learn about the cultural as well as Hungarian language (mean =2.27).

Regarding awareness dimension, the Likert scale question which has highest mean indicates that foreign students are aware of the differences and similarities between their own culture and Hungarian one. However, the least important item (with mean equals 2.79) indicates that foreign students did not realize the important of having negative emotions toward differences.

Since the Fantini model was used to evaluate foreign students' intercultural competence, it was useful to report these dimensions in terms of different categorical variables such as student's continent. education, time spent in Hungary, gender, intension to learn Hungarian language, and their intercultural experience.

Firstly, to test whether these dimensions are normally distributed or not, it was necessary to use the Shapiro-Wilk test. Based on the results, the data was not normally distributed for these dimensions along with all different categorical variables. Therefore, it was preferable to use the Kruskal-Walli's test (as illustrated in tables 12, 13, and 14). Moreover, the hypothesis and the results of the test are summarized as the following:

Hypothesis 4: *Foreign students do not have the same level of intercultural competence in the university environment*

As mentioned earlier, hypothesis 4 consists of the following sub-hypotheses:

H4.a: *Students per continent do not have the same levels of intercultural knowledge, skills, attitude, and awareness.*

As shown in table 12, the p-value of intercultural knowledge is <0.001. Besides this, the p-values of intercultural attitude and skills are less than 0.05. Hereby, the null hypothesis should be rejected. This means that students from different continents do not have the same level of intercultural knowledge, attitude, and skills. However, on the other hand, the p-value of intercultural awareness is higher than 0.001. As a result, the null hypothesis should be accepted. In other words, foreign students (from different continents) have the same level of intercultural awareness.

Table 12. KAS+A's dimensions and continent variable

Statistics	Knowledge	Attitude	Skills	Awareness
Chi-Square	19.224	7.994	9.703	13.645
Df	3	3	3	3
Asymp. Sig.	<0.001	0.046	0.021	0.003

Note: Kruskal-Wallis test was used. The grouping variable is continent. Source: Author's own calculations.

H4.b: *Students, for each educational level, are not equal in terms of their intercultural knowledge, skills, attitude, and awareness.*

On the other hand, the results shown in table 13 are different, where all p-values are higher than 0.1 significance level. Therefore, the alternative hypothesis shall be rejected. Hereby, foreign students have the same level of intercultural competencies, regardless of their educational level.

Table 13. KAS+A's dimensions and educational level

Statistics	Knowledge	Attitude	Skills	Awareness
Chi-Square	0.841	4.031	4.582	2.493
Df	3	3	3	3
Asymp. Sig.	0.840	0.258	0.205	0.477

Note: Kruskal-Wallis test was used. The grouping variable is educational level. Source: Author's own calculations.

H4.c: *Students do not share the same level of intercultural knowledge, attitude, skills, awareness regardless of their different time periods spent in Hungary.*

Furthermore, as observed in table 14, the p-values are higher than the significance level of 0.1. Hereby, regardless of the period spent in Hungary, foreign students share the same level of knowledge, skills, attitude, and awareness.

Table 14. KAS+A's dimensions and time spent in Hungary.

Statistics	Knowledge	Attitude	Skills	Awareness
Chi-Square	0.926	0.990	0.436	0.621
Df	2	2	2	2
Asymp. Sig.	0.629	0.610	0.804	0.733

Note: Kruskal-Wallis test was used. The grouping variable is time spent in Hungary. Source: Author's own calculations.

The next categorical variables consist of two groups, such as gender and Yes/No questions. Therefore, since the normality test revealed that the data is not normally distributed, it is preferable to use the Mann-Whitney U test (as shown in table 15, 16, and 17). The hypotheses statements and test results are reported as the following:

H4.d: *Males and Females are not equal in terms of their intercultural knowledge, attitude, skills, and awareness.*

As for gender, the p-values are higher than 0.1 significance level, as in the case of intercultural knowledge, attitude, and skills. As a result, the two groups (male and females) are similar in terms of their intercultural knowledge, attitude and skills, as illustrated in table 15. Similarly, p-value of intercultural awareness is higher than 0.05. Therefore, males and females are the same in terms of their intercultural awareness too.

Table 15. KAS+A's dimensions and Gender

Statistics	Knowledge	Attitude	Skills	Awareness
Mann-Whitney U	17881.500	16646.000	16595.000	160640.500
Wilcoxon W	31247.500	41177.000	41126.000	40595.500
Z	-.121	-1.271	-1.318	-1.812
Asymp. Sig. (2-tailed)	0.904	0.204	0.187	0.070

Note: Mann-Whitney U test was used. The grouping variable is gender. Source: Author's own calculations.

H4.e: *The two groups (based on their intention to learn the Hungarian language) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*

In terms of knowledge, attitude and skills, the p-values are higher than 0.05 as well as 0.000 significance levels, as observed in table 16. Therefore, H_0 should be accepted. Therefore, the two groups share the same level of intercultural knowledge, attitude and skills. On the other hand, intercultural awareness's p-value equal 0.000. Hereby, the two groups do not have the same level of intercultural awareness when it comes to their intension to learn Hungarian language.

Table 16. KAS+A's dimensions and intension to learn Hungarian language

Statistics	**Knowledge**	**Attitude**	**Skills**	**Awareness**
Mann-Whitney U	15692.000	14354.000	14075.500	13794.500
Wilcoxon W	27627.000	26289.000	26010.500	25729.500
Z	-1.894	-3.149	-3.411	-3.674
Asymp. Sig. (2-tailed)	0.058	0.002	0.001	<0.001

Note: Mann-Whitney U test was used. The grouping variable is the intension to learn the Hungarian language. Source: Author's own calculations.

H4.f: *The two groups (whether they faced linguistic difficulty to deal with locals or not) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*

As observed in table 17, the two groups (whether they face linguistic difficulty to communicate with Hungarians or not) do not share the same level of knowledge, attitude, and skills (since their p-values are higher than 0.1 significance level). Similarly, they do not share the same level of intercultural awareness, where p-value is greater than 0.000 significance level.

Table 17. KAS+A's dimensions and linguistic difficulty to communicate with locals

Statistics	Knowledge	Attitude	Skills	Awareness
Mann-Whitney U	7707.000	7464.500	7256.500	6319.000
Wilcoxon W	8932.000	8689.500	8481.500	7544.000
Z	-0.690	-1.024	-1.311	-2.603
Asymp. Sig. (2-tailed)	0.490	0.306	0.190	0.009

Note: Mann-Whitney U test was used. The grouping variable is the linguistic barrier. Source: Author's own calculations.

Finally, the descriptive statistics of the first section of the survey are summarized in Figures 23 and 24. Regarding figure 23, the question aims to investigate whether foreign students join Hungarian language courses or not. Based on the part chart, about 50.90 percent of the total respondents participated and joined these courses. On the other hand, about 40.10 percent of total students did not try to learn the Hungarian language.

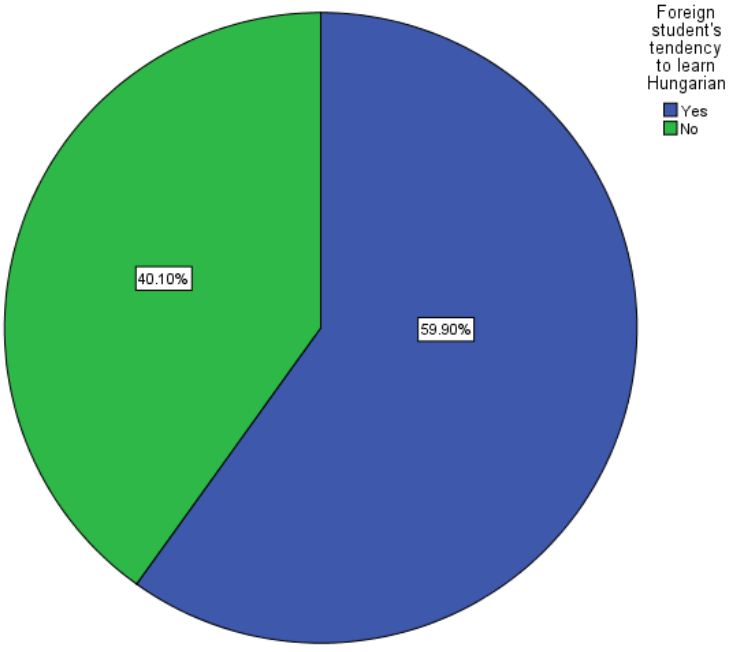

Figure 23. Foreign students' intension to learn the Hungarian language.

Source: Author's own calculations.

As for figure 24 below, the question aims to illustrate whether foreign students faced linguistic difficulty to contact with Hungarian or not. Based on the results, about 87.24 percent of respondents reported that they have had language difficulty while communicating with Hungarians. The rest of the respondents confirmed that they did not face any difficulty (about 12.76%).

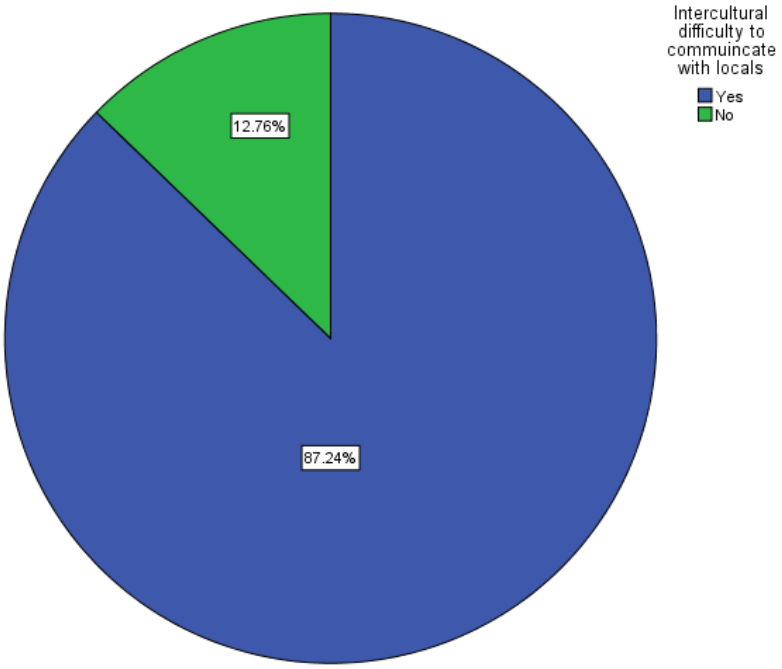

Figure 24. Intercultural difficulty to communicate with locals.

Source: Author's own calculations.

4.2.4. Exploratory Factor Analysis (EFA)

In this step, each of Kaiser-Meyer-Olkin (KMO) and Bartlett's tests should be checked. As shown in table 18, KMO's value is higher than 0.60. Also, the p-value of Bartlett's test is significant. Hereby, the data is appropriate for the analysis.

Table 18. KMO and Bartlett's test

Measurements		**Statistics**
KMO		0.968
Bartlett' tests of sphericity	Approx. Chi-Square	19082.359
	df	1378
	Sig.	<0.001

Source: Author's own calculations.

To decide the type of data rotation, it is recommended to use the principal component analysis (PCA) method at the beginning. According to the output of the component correlation matrix, the values are higher than ±0.32. Furthermore, based on the literature, the dimension of this model is supposed to be correlated. Based on this, it is preferable to use oblique rotation (e.g., direct oblimin rotation).

In the next step, EFA was performed, where the extraction method was a maximum likelihood, and the rotation type was direct oblimin. In this case, four dimensions were determined, as reported in table 19.

Table 19. Factor's eigenvalues

Factors	**Initial Eigenvalues**	
	Total	*Variance%*
1	25.899	48.866
2	4.295	8.103
3	2.634	4.969
4	1.939	3.659

Source: Author's own calculations

For instance, as observed in table 19, the four factors have eigenvalues that are higher than 1. Furthermore, these factors explain about 48.866%, 8.103%, 4.969%, and 3.659 of the variances, where they explain 65.598% of the cumulative variance (which is acceptable).

Additionally, factors extraction and rotation were conducted with an absolute value of 0.5. Based on that, the pattern matrix output is presented in table 20, where knowledge is indicated by sign (K), attitude (T), skills (S), and awareness (A).

Table 20. Pattern Matrix

Items	**Factors**			
	1	**2**	**3**	**4**
T10	0.911			
T9	0.872			
T7	0.865			

Items	Factors			
	1	**2**	**3**	**4**
T8	0.860			
T11	0.832			
T13	0.801			
T6	0.761			
T12	0.745			
T4	0.627			
T1	0.589			
T3	0.581			
T2	0.571			
T5				
A13		0.876		
A8		0.871		
A11		0.843		
A7		0.843		
A10		0.834		
A9		0.828		
A12		0.799		
A16		0.780		
A6		0.761		
A5		0.756		
A14		0.729		
A15		0.728		
A4		0.721		

Items	Factors			
	1	**2**	**3**	**4**
A3		0.677		
A17		0.662		
A1		0.654		
A18		0.634		
A2		0.631		
K3			0.839	
K9			0.755	
K11			0.748	
K10			0.747	
K6			0.711	
K2			0.710	
K8			0.694	
K5			0.691	
K4			0.680	
K7			0.679	
K1			0.636	
S7				0.824
S4				0.720
S9				0.676
S6				0.650
S11				0.616
S10				0.614
S8				0.611

Items	Factors			
	1	2	3	4
S5				0.538
S2				
S3				
S1				

Source: Author's own calculations.

The cells colored by black mean that items were removed or deleted from the analysis. In this case, each of T5, S1, S2, and S3 were removed. Removing these items could help to enhance the validity of the model in the next steps. As for the rest of the items, each item loads on its factor strongly (with a value above 0.5). According to the loaded items, there are four single factors called: *knowledge, attitude, skills, and awareness*.

After that, it is important to verify the internal consistency for the resulted factors. As reported in table 21, the Cronbach's alpha for each factor is higher than the cut-off value (i.e., 0.8) (Lance et al., 2006). Therefore, internal consistency is good for all factors.

Table 21. Reliability statistics

Factors	Cronbach's alpha	Cronbach's alpha based on standardized items	No. of items
Knowledge	0.934	0.934	11
Attitude	0.961	0.961	12
Skills	0.938	0.939	8
Awareness	0.968	0.968	18

Source: Author's own calculations.

4.2.5. Confirmatory factor analysis (CFA)

In this stage, to improve the model's goodness of fit ratios, a modification indices approach was used. About nine modifications were made to improve the goodness-of-fit. The indices of the goodness of fit are illustrated in table 22.

Table 22. The goodness of fit indices – First order confirmatory factor Analysis

Indices	Statistics	Interpretation
Chi-square/p-value	2567.394/ P-value< 0.001	
DF	1112.000	
CMIN/DF	2.309	Excellent
RMSEA	0.058	Excellent
CFI	0.916	Acceptable
SRMR	0.042	Excellent

Note: where RMSEA should be less than 0.06, CFA > 0.95, CMIN/DF should be between 1 and 3, SRMR ≤ 0.08 (Hu & Bentler, 1999). Source: Author's own calculations.

As a result, the first-order CFA has good indices of the goodness of fit. It means that the data is well-fitting to the model. Also, first-order CFA and its modifications can be depicted as shown in figure 25 in the next page. Additionally, the constructs validity of this model should be checked. This can be performed using convergent and discriminant validity. Table 23 highlight the statistics for each convergent and discriminant validity. As for convergent validity, the AVE of each dimension is higher than the cut-off value of 0.5. Therefore, this indicates a good convergent validity, where each item converges to the estimation of its construct.

Table 23. Model validity statistics – First order CFA

Factors	CR	AVE	MSV	MaxR(H)	Attitude	Knowledge	Awareness	Skills
Attitude	0.960	0.670	0.575	0.966	**0.818**			
Knowledge	0.934	0.563	0.498	0.936	0.705***	**0.750**		
Awareness	0.968	0.631	0.526	0.971	0.666***	0.584***	**0.794**	
Skills	0.936	0.649	0.575	0.940	0.759***	0.631***	0.725***	**0.806**

*Note: there is no validity concerns. Significance of correlations: * P<0.05, ** P<0.010, *** P<0.001. (Hu & Bentler, 1999). Source: Author's own calculations.*

On the other hand, CR values are greater than 0.7. Hereby, the scale has good reliability. In addition, the model has acceptable discriminant validity, where MSV values are lower than AVE. As a result, the model has good construct validity. In other words, the results prove that the model has adequate validity in measuring the intercultural competence of foreign students at the University of Debrecen.

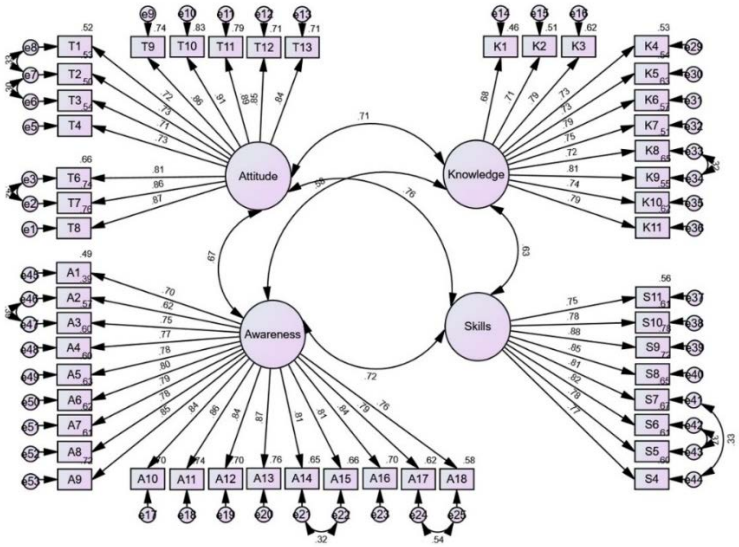

Figure 25. First-order CFA model and its standardized estimates.

Source: Author's own calculations.

Another approach that can be used to estimate discriminant validity is called heterotrait-monotrait (HTMT). Based on the study of Hu and Bentler (1999), the cut-off value of 0.85 indicates strict validity. Hereby, based on the findings reported in table 24, since the statistics are lower than 0.85, it is reasonable to infer that discriminant validity emerges between the constructs and their items.

Table 24. HTMT analysis – First order CFA

	Attitude	**Knowledge**	**Awareness**	**Skills**
Attitude				
Knowledge	0.714			
Awareness	0.674	0.585		
Skills	0.763	0.637	0.726	

Note: There are no warnings for this HTMT analysis. Source: Author's own calculations.

Also, it is possible to build second-order CFA from first-order CFA. To be more precise, second-order CFA can be made by including general factor to the first-order CFA, where the covariances between first-order CFA factors can be removed and then draw paths connecting the general factor to the other factors. In this case, the general factor is intercultural competence, as depicted in figure 26.

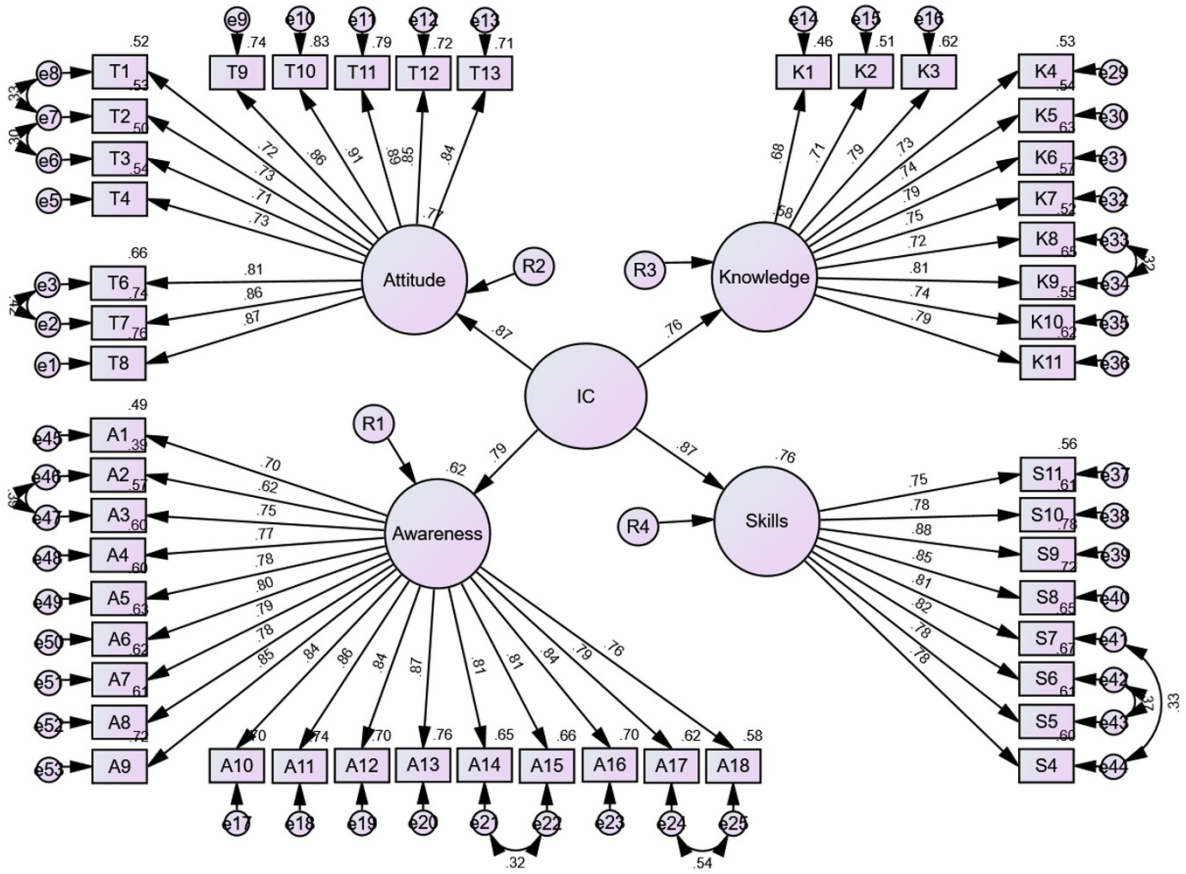

Figure 26. Second-order CFA with its standardized statistics.

Source: Author's own calculations. Note: IC indicates intercultural competence (i.e., the general factor)

As for goodness of fit indices, the scores are reported in table 25. According to the findings, the second-order CFA model has satisfactory goodness of fit indices. Furthermore, figure 26 shows that IC loads on knowledge with a highly significant value of 0.76***, skills with 0.87***, and attitude with 0.87*** *(at a significance level of 0.001). On the other hand, IC loading on awareness is not significant, with a value of 0.79. Also, the values of R^2 are satisfactory, where knowledge, skills, attitude, and awareness's R^2 are 0.58, 0.76, 0.77, and 0.62, respectively.

Table 25. The goodness of fit indices – Second-order CFA

Fit indices	Value	Interpretation
Chi-square/p-value	2580.660/ P < 0.001	
DF	1114.000	
CMIN/DF	2.317	Excellent
RMSEA	0.059	Excellent
CFI	0.915	Acceptable
SRMR	0.044	Excellent

Note: where RMSEA should be less than 0.06, CFA > 0.95, CMIN/DF should be between 1 and 3, SRMR ≤ 0.08 (Hu & Bentler, 1999). Source: Author's own calculations.

To check whether this model is valid or not, the validity statistics are observed in table 26. Based on the output, the model has acceptable convergent validity, where the AVE statistic is higher than 0.5. On the other hand, the model also has satisfactory reliability, where the CR is higher than 0.7. Furthermore, MSV<AVE means that there is good discriminant validity. As a result, the second-order CFA has good reliability as well as validity. Therefore, each first and second-order CFA confirms and matches the theory of Fantini.

Table 26. Model validity measures – Second-order CFA

General factor	CR	AVE	MSV	MaxR(H)	IC
IC	0.895	0.682	0.000	0.905	0.826

*Note: there is no validity concerns here. Significance of correlations: * P<0.05, ** P<0.010, *** P<0.001 (Hu & Bentler, 1999). Source: Author's own calculations.*

4.2.6. Structural Equation Model- KAS+A

After ensuring that first-order CFA is valid and reliable, the next step is to build SEM. SEM is usually depicted by restructuring the factors of first-order CFA. Model's re-structuring should be conducted according to the theory. Based on Fantini (2000) and Fantini et al. (2001), the growth of knowledge, attitude, and skills of people have a beneficial effect on their awareness. Furthermore, increased awareness aids in the improvement of these variables. As a result,

awareness is regarded an endogenous variable in this instance, while knowledge, attitude, and skills are exogenous factors (look at figure 27).

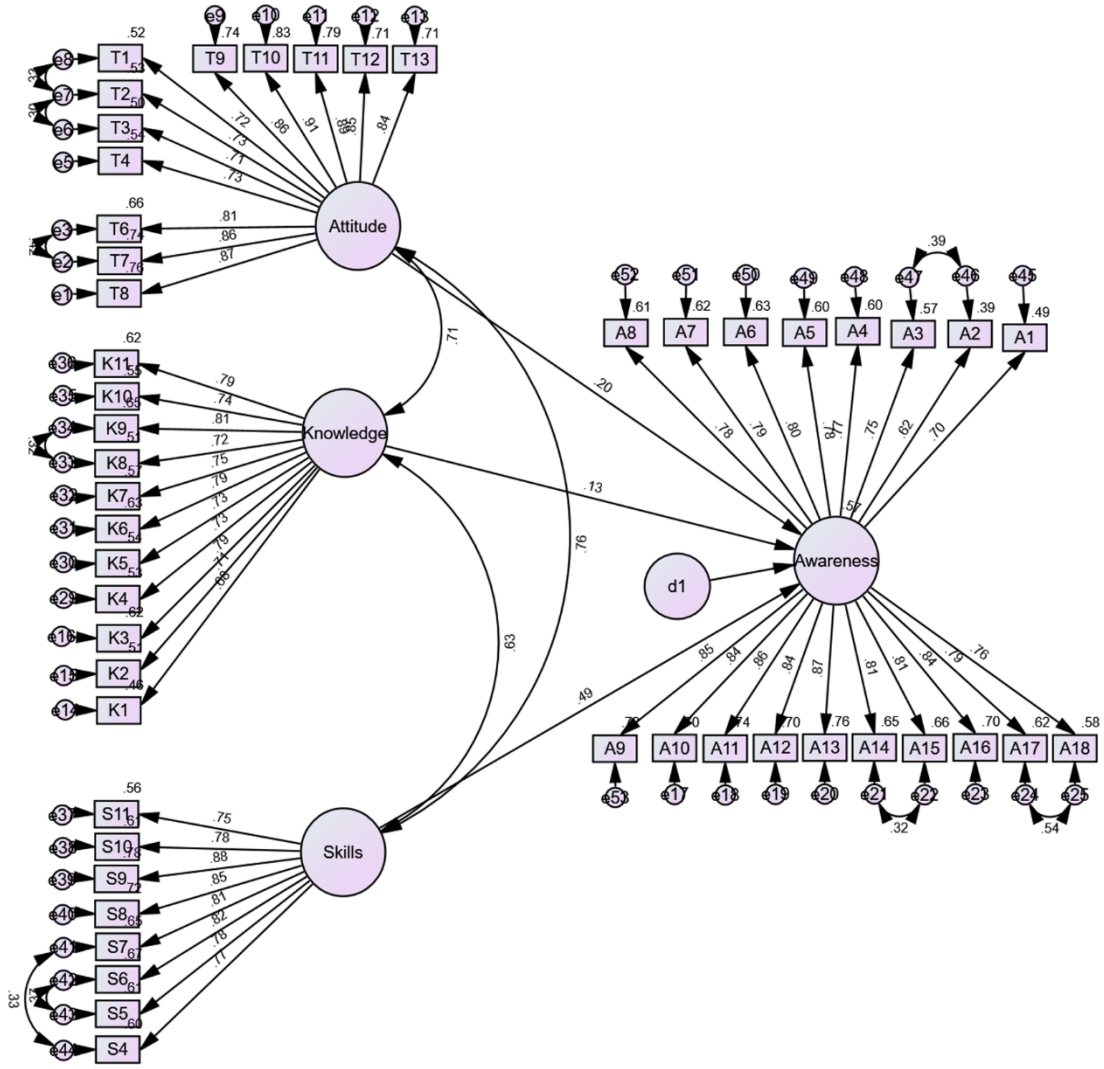

Figure 27. SEM – Fantini's theory.

Source: Author's own calculation.

Direct Effects

The direct effects of these variables are reported in table 27. According to the findings, students' skills positively influence their awareness. This effect is highly significant (at a significance level of 0.001). The next significant effect on the awareness of students is held by their attitude with a beta value of 0.204. Also, the effect of attitude is positive and substantial, at a

significance level of 0.05. The third variable, knowledge, also has a positive effect on the awareness of the University of Debrecen's foreign students, at a significance level of 0.05. When comparing the significance levels of these factors, knowledge has the least significant impact on awareness. In contrast, the skills variable has the highest significant effect on awareness.

Table 27. Standardized direct effects – SEM

Exogenous variables	Endogenous variable	Std Beta
Attitude	*Awareness*	0.204**
Knowledge	*Awareness*	0.133*
Skills	*Awareness*	0.487***

*Note: where * p < 0.050, ** p < 0.010, and *** p < 0.001 Source: Author's own calculations.*

Indirect Effects

Based on the theory, awareness plays an essential role in enhancing the development of the rest of the variables in the model. The indirect effect of awareness can be found by estimating the average of the effects of the observed variables of awareness (as shown in table 28). Based on beta values, awareness has an indirect and significant effect on knowledge by 0.105, where every one-unit change in awareness enhances student's knowledge by 0.105. Furthermore, intercultural awareness of foreign students has very high significant impact on their skills (where p-value is less than 0.001 significance level). On the other hand, awareness has positive but insignificant influence on their attitude. Therefore, based on tables 27 and 28, the results are consistent with the theory of Fantini.

Table 28. Indirect effects - SEM

Endogenous variable	Exogenous variables	β
Awareness	*Knowledge*	0.105*
Awareness	*Attitude*	0.151
Awareness	*Skills*	0.385***

*Note: where * p < 0.050, ** p < 0.010, and *** p < 0.001.*

Source: Author's own calculations.

In other words, the knowledge, skills, and attitude of foreign students enhance their awareness. Also, their awareness promotes the development of their knowledge, attitude, and skills. These results are congruent with Fantini and Garrett-Rucks' research (2016), Fantini et al. (2001), and Stevens (1971), where awareness is considered a central element in this model since it plays an important role in enhancing the effectiveness of intercultural interactions across various cultures.

As generally known, intercultural knowledge, skills, attitude and awareness are considered main dimensions in intercultural competence studies, especially those which were written by Fantini (2000; 2006) and Deardorff (2006). However, intercultural awareness is mostly ignored in the literature (Hofstede et al., 2002). In fact, intercultural awareness is considered one of the most important dimensions in the intercultural competence model. For instance, according to Fantini's observation, intercultural awareness is an integral part of the development of the intercultural competence, where it can be enhanced through the development of intercultural knowledge, attitude, and skills (Fantini & Tirmizi, 2006). In other words, as mentioned earlier, intercultural communication as well as learning could help to increase the intercultural competence of students. Following the theory of Fantini (KASA), this can happen through the following. Firstly, intercultural knowledge can be exchanged through intercultural communication between people from different cultures. Furthermore, it can be also enhanced through learning about other cultures (Lu et al., 2017). Secondly, by encouraging the intercultural communication between foreign students and Hungarian students, their intercultural awareness can be improved and they can learn from other cultures (Bazron et al., 2005). Simultaneously, based on the theory of cultural learning, the ability to adapt to the consequences of being involved in multicultural place can be earned through learning the related knowledge as well as different patterns of behavior (Bochner, 2003). Third, according to the study of Berry (2013), it was found out that there is negative relationship between intercultural communication and people's anxiety. In return, this could enhance student's intercultural attitude. Besides this, awareness can be developed when the students have the ability to realize, differentiate and analyze different cultures. For example, according to the study of Fantini (1997), most of the survey respondents emphasized the necessity of intercultural awareness while learning about the rest of the dimensions (knowledge, skills, and attitude). Furthermore, most of the ICC courses does not cover all these dimensions. However, they may focus on one of them (Fantini, 1997). Furthermore, the importance of intercultural awareness stands for the fact that as long as the person is aware for cultural differences, this

means that it is not easy to return to be unaware. In addition, it is placed in the center of the intercultural competence model due to its importance since it helps to enhance the knowledge, skills and attitude of the individuals and vice versa (Fantini, 2000). This casual relationship was proved in this study using structural equation modelling approach. In addition, enhancing these factors is required in order to ensure the existence of tolerant environments within the economy (Fantini, 2021). Therefore, decision makers should consider the interactive approach as well as cultural learning courses in order to enhance these factors, especially intercultural awareness. This procedure could help to enhance social tolerance on the level of Hungarian institutions and the country as well. Furthermore, having tolerant economy could attract creative human capital (Florida, 2002a). Human capital consists of knowledge, skills and labor forces which are necessary for productivity and economic growth. However, as Fantini emphasized, language is integral part of culture. Furthermore, host language proficiency helps to ease and support the development of intercultural competence (Fantini & Brattleboro, 2010). Hereby, the enhancement of second language quality education in the Hungarian schools could help to overcome the problem of linguistic anxiety of Hungarians, especially while dealing with foreign students. On the other hand, this could encourage foreign students to communicated and interact with their local counterparties. This mutual process creates tolerant atmosphere where their intercultural competence and social tolerance get better. Moreover, Hungarian economy (on the macro and micro economic level) become more attractive for creative human capital. This argument was proved through the cross-sectional analysis in the beginning of this research.

4.2.7. Open-ended questions and students' feedback

At the end of the survey, the last question was formulated to offer space for the respondents in order to express their concerns and opinions about their intercultural experience as well as university programs and events. The answers of participants can be summarized and listed in figure 28. According to the statistics reported on the par chart, about 29.41% of the respondents illustrate that the Hungarian language is difficult to learn. Therefore, according to their perspective, the language barrier hinders the process of communication and adaptation. Also, the participants justify the lack of interaction due to the existence of cultural barriers (17.65%) and the absence of the interactive approach within-host culture (17.65% too). On the other hand, the rest of the respondents, with equal proportions of 5.88%, highlight several issues such as the necessity of empathy factor, linguistic and cultural obstacles, lack of contact, and racism. Finally, awareness can be enhanced and developed by previous experiences as well as interaction, which are missing based on the opinion of the respondents.

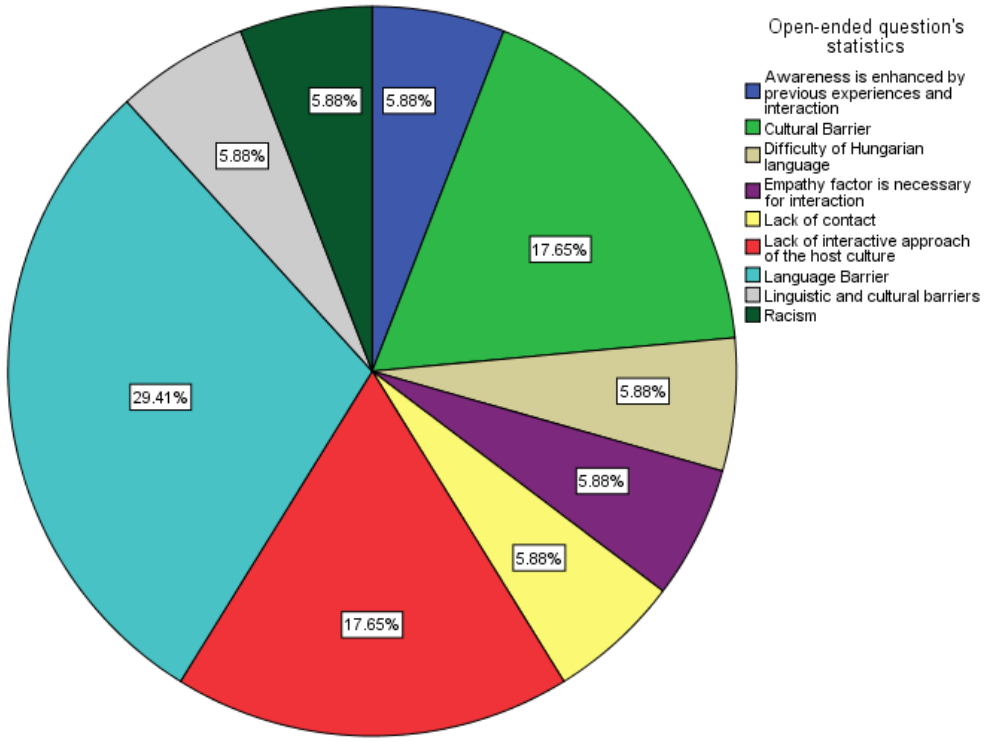

Figure 28. Open-ended question's statistics.

Source: Author's own calculation

These findings match the results of Kovacs and Kasza's study (2018). Based on their study, in the Hungarian higher education system, there are few possibilities for integration. As a result, international and domestic students do not interact or speak with one another. Furthermore, it was discovered that both international and domestic students are interested in shared programs and collaborative courses. Furthermore, the events are ineffective in mixing the two groups (Kovacs & Kasza, 2018). Furthermore, the lack of intercultural contact may be explained by Hungarian students' introverted personalities as well as language anxiety as a result of their poor English language proficiency (Dombi, 2013; Kéri & Révész, 2019; Kovacs & Kasza, 2018). According to Fantini, foreign language proficiency plays a significant part in cross-cultural communication's success. Knowing the language of other cultures is thus equally essential to the achievement of integration between the two groups. On the other hand, international students' intercultural knowledge has the least effect on their intercultural awareness when compared to other variables. The literature indicates that knowledge of the culture of the host country and its language contributes to the promotion of the cross-cultural adaptability of individuals. On that basis, an integrative approach taken by the university may improve the intercultural knowledge of foreign students (Kim, 2001).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. General conclusion

In sum, the research addresses the topic of languages proficiency, quality education, and social tolerance on the macroeconomic level (their effect on the economic growth). Using the same variables, the research also analyzes the economic performance of Hungary and its implications on each of Hungarians and foreign students in terms of different aspects such as their linguistic skills as well as their intension to interact with other cultures. As for foreign students' intercultural competence, the research used the assessment of intercultural competence (AIC tool) in order to illustrate the attitude of foreign students and their intercultural awareness while dealing with Hungarians during their stay in Hungary. Furthermore, the research mainly discussed the internationalization process of the Hungarian higher education industry from different perspectives. Each of the Stipendium Hungaricum, Erasmus+, and Campus Mundi programs, as is widely known, plays a major part in increasing the number of foreign students in Hungary and improving the internationalization of Hungarian higher education. However, the major barrier to this initiative succeeding is that the Hungarian higher education institutions have not made effective use of the interactive approach. As mentioned earlier, the college has an effect on the improvement of cognitive skills and performance of its students, where there are three interrelated components, including students' output, inputs, and the college environment. As for the college environment and students' output, Hungarian universities should take into account the development of their students' intercultural knowledge, skills, attitude, and awareness. However, by looking at student attitudes during their stay in the host culture, there are different issues that should be handled, such as linguistic barriers, cultural barriers, and the shortage of connection between foreign and local students. On the other hand, as for domestic students, Hungarian literature argues that this could happen due to language anxiety and the introverted personality of local students, which may hinder intercultural communication between the two groups. Based on these observations, the research has built a scientific investigation based on four interrelated elements: *language proficiency, quality education, especially on the education of the English language, social tolerance toward cultural differences, and intercultural competence*.

On the macroeconomic level, globalization, and internationalization trends, in general, present a number of problems that must be controlled and addressed by economies and their entities. Currently, trends in internationalization have many forms, including migration and diversity, the reaffirmation of various entities and associated languages, and the creation of new economic

regions such as the EU. As a result, the world's landscapes have been dramatically altered. As a result, solid and adaptable policies and regulations are required to adapt to and deal with these problems effectively and efficiently.

As a result, policies aimed at achieving a high level of educational quality should be prioritized. This is supported by the importance of education in achieving the other previously stated sustainable development goals. At the same time, the study found a link between English proficiency and quality education, where every unit increase in quality education improves the economy's language proficiency. Achieving a high English proficiency score increases openness and social tolerance toward other cultures (as proved in the results chapter). Consequently, to meet the challenges posed by internationalization and globalization, economies should implement policies and rules aimed at improving quality education, language proficiency, and societal tolerance for diversity. Therefore, the research aimed to prove the economic value of these three elements through the augmentation of Solow's economic growth theory (Nobel Prize winner, 1987). Based on the method of Mankiw et al. (1992), the research added each of human capital, English language proficiency, secondary and primary quality education, and social tolerance to the economic growth equation. Using time-series-cross-section analysis, it was discovered that these factors had a favorable impact, with varying degrees of significance, on the economic growth of these economies from 2009 to 2017.

As for quality education and the economy's English proficiency, both are related to human capital. For instance, English proficiency is considered an essential human capital asset in the labour market. Furthermore, it is important for knowledge spread and technological progress. This justifies why research considers it as the main determinant of the economic growth equation. Additionally, quality education helps to enhance human capital and labor skills in the economy. In other words, it aids in increasing productivity, along with education quantity. For example, regarding Eastern Europe, quality education has improved in the last decade and has seen an increase in the number of years of secondary education per worker and the number of children who take part in school learning. As for human capital, the quantitative element of education, as measured by years of schooling and returns to education, has a greater impact on the economy than the qualitative aspect. However, education has two components: quantitative and qualitative. These two factors should be considered while developing an economic strategy.

Regarding social tolerance and English proficiency, they are also associated with human capital and its role in enhancing productivity. In other words, as proved by literature, productivity is boosted by knowledge, which is brought by skilled migrants, as well as other categories. This

also justifies the inclusion of social tolerance in Solow's equation. Therefore, having a high level of social tolerance toward differences could achieve a high degree of harmony within society. Furthermore, this promotes economic growth, as proved in the results.

On the other hand, to decrease the cost of transaction among different economies as well as individuals, the economy should enhance the proficiency of common language through raising the quality of education, since speaking a foreign language is also considered another form of toleration toward cultural differences. Consequently, achieving this could increase the level of creativity and innovation in the economy, since heterogenous societies result in different ideas and consumption preferences which should be satisfied by competing firms. As a result, new goods and services will be developed to meet society's diverse demands.

At the microeconomic level, Hungary was the main case study of this research, among other economies listed in the panel data. In this regard, the research used different diagrams along with previous scientific works to prove the hypotheses of the study. Based on the investigation, it was found out that Hungary has achieved satisfactory improvement in terms of its English proficiency index in the last years. This increase can be justified due to the internationalization process which was initiated by the government to enhance the performance of the Hungarian higher education system. This step entailed different structural changes in the services and the approach adopted by Hungarian universities. However, on the other side, graphs and data indicate poor performance of the economy's social tolerance toward cultural differences. In addition, the statistics of this study as well as PISA diagrams likewise indicate no substantial improvement in the country's educational quality. Based on this, the study contends that these trends and developments may have a detrimental impact on the degree of integration of international students into the host economy. In other words, the lack of interactive approach held by Hungarian universities, except the University of Szeged, may negatively affect the cognitive skills of foreign students, including their intercultural knowledge of the host economy, their skills, their attitude toward the host culture, and their awareness development and experience during their stay in Hungary. This also has a negative influence on the intercultural competence of Hungarian students as well. Therefore, Hungarian universities should consider these aspects in a serious way, since globalization results in the establishment of multinational firms where workplaces become more culturally diverse than before. As a result, in order to meet the requirements of the labor market, students in the Hungarian higher education system must improve their intercultural competency. In return, this procedure also

enhances the level of creativity within the university (Bultseva & Lebedeva, 2021) and minimizes the level of anxiety among students (Cao & Meng, 2020).

As mentioned earlier, the University of Debrecen's foreign students were the target population of this study. As generally known, this university is considered the largest educational institution on the level of Hungary. In addition, it has the biggest quota of foreign students compared to other universities. According to the results, the Fantini model, which is considered a western model, was validated in estimating the intercultural competence of foreign students at the University of Debrecen in Central Europe. This means that the model is a multi-dimensional instrument including four dimensions.

Furthermore, the results demonstrated the validity of the theory, which states that knowledge, skills, and attitude all play an essential role in the development of students' awareness and vice versa. According to the significance level for each variable, it was found out that the intercultural knowledge of foreign students has the least impact on their awareness, followed by their attitude. This can be justified due to the lack of training courses which aim to strengthen their knowledge about the culture of the host economy, as well as the introverted attitude shown by the local people. However, their skills have the highest effect on their awareness. Additionally, the feedback provided by foreign students matches the findings of the Hungarian literature, where the majority of foreign students emphasize the necessity of integration among two groups, joint courses, events, and language acquisition. Therefore, to enhance the effectiveness of the internationalization of the Hungarian universities, intercultural competence, as student output, should be taken into account. This can be achieved by adopting an effective, integrative, and interactive approach. This could have a beneficial effect on the microeconomic and macroeconomic levels.

In addition, regardless of their educational level, time spent in the host culture, gender and linguistic difficulty to communicate with Hungarians, foreign students share the same level of their knowledge about the host culture, skills, attitude toward host culture, and their awareness development. On the other hand, their intercultural knowledge, attitude and skills differ in terms of their continents. In contrast, students per continent share the same level of intercultural awareness. Furthermore, their knowledge, attitude and skills are equal when it comes to their intension to learn the Hungarian language. However, the two groups do not have same level of intercultural awareness in this case. In contrast, foreign students, whether they face linguistic difficulty dealing with Hungarians or not, have the same level of their intercultural awareness, knowledge, attitude, and skills while dealing with Hungarians. In fact, the majority of foreign

students has the same level of competencies in most of the comparisons mentioned above. However, the differences between foreign students could exist only in terms of their continents. Hereby, it is not possible to justify the reason behind why foreign students' intercultural competencies are similar in most of the comparisons (educational level, time spent in the host culture, gender, linguistic difficulty to communicate with Hungarians, and intension to learn the Hungarian language). However, the research attributes the existence of these similarities to the following assumptions. Firstly, the lack of culture training programs and joint activities prevents students from becoming more culturally aware and evolved. Secondly, during the period of survey circulation, some respondents complain about the difficulty of the survey questions, where there are different questions which are not easy to be understood. Others claim that this survey is more specialized and should be circulated among students studying intercultural courses. This implies the fact that the respondents are not familiar with different concepts which were used in the survey such as the ability to describe the model of cross-cultural adjustment, culture definition, strategies used to learn about host culture (intercultural knowledge). This explains why intercultural knowledge has the least influence on the intercultural awareness of foreign students. Furthermore, students share the same level of intercultural knowledge in all comparisons (besides attitude and skills). Based on that, the university of Debrecen should afford preparatory courses for the newcomers (foreign students) at the beginning of their education journey in the host culture (Hungary). These courses should cover all necessary dimensions mentioned in this study such as knowledge about the host culture and other cultures, skills on how to interact with the members of the host culture. On the other hand, the course should encourage foreign students to communicate and interact with each other's and with Hungarian students as well. This could enhance and improve their attitude as well as awareness. This procedure could minimize the level of anxiety of foreign students as well as Hungarian students. In return, this may enhance their performance and creativity (Bultseva & Lebedeva, 2021). For example, according to the study of Astin (1970a, 1970b), the cognitive skills (such as intercultural knowledge, attitude, skills and awareness in our case) represent the student output. The student output can be enhanced by two things. The first one is student inputs such as students' ability, ambition, and other possibilities. However, this factor is not enough alone. Secondly, university intervention should contribute to the development of the cognitive skills of its students through what is called the effect of the college environment. The college environment (University of Debrecen in this case) enhances the cognitive skills of its students through its policies, activities, and procedures which aim to enhance the intercultural communication within the campus.

5.2. Recommendations

The recommendations and policy implications of this research can be listed and summarized as the following.

5.2.1. On the macroeconomic level

Firstly, decision-makers should develop language education policies that are compatible with the country's economic strategy aimed at increasing openness and international commerce. As a result, governments should make investments to improve quality education since it is critical to achieving other development goals. It's also possible to boost an economy's EPI while maintaining the survival of the mother tongue by creating laws and processes that emphasize a bilingual education system and internationalization in higher education.

Secondly, governments should enhance the social tolerance of their societies through developing policies that protect the rights of minorities, and foreigners in the economy. Furthermore, decision-makers should create specific educational policies which aim at increasing the proficiency of the English language, as another form of tolerance toward the integration of different cultures in the economy. Government policies should also encourage cultural appreciation and see it as a fundamental right. Additionally, establishing cultural justice may lead to economic, social, and political fairness. Because of this, issues like cultural acknowledgment and economic-political equality should be tackled at the same time.

In addition, anti-discrimination legislation should be integrated into educational programs and other government efforts, especially in developing nations. Economic strategy should be aligned with language education policies, if the economy is to develop at its full potential. These procedures may assist in reaping the economic benefits of cultural diversity while also minimizing the associated costs, such as a lack of trust and conflict between individuals and groups.

5.2.2. On the microeconomic level

Firstly, in order to enhance Hungary's EPI, it is essential and important to build international schools and kindergartens. This type of investment could internationalize the economy of the country and make it more competitive since Hungary's location represents a linking point between the west and east.

Secondly, to alleviate language anxiety among Hungarians, policymakers should create a new strategy aimed at reducing class size to ten students. It can empower the speaking and listening

skills of the students and minimize their language anxiety. Hereby, it can change the introverted personality of Hungarians and increase their intercultural competence level. Additionally, attracting English native speakers through affording high salaries also helps to raise Hungary's EPI.

Thirdly, introducing bilingual education systems to Hungary's economy also enhances EPI as well as quality education. In addition, it meets the economic strategy of the country by raising the level of openness and foreign direct investment.

Fourthly, on the other hand, several training programs and activities should be made available by the University of Debrecen in order to improve the intercultural competency of both international and local students alike. These programs could enhance their knowledge about the culture of the country, its language, and traditions, and improve their attitude. This procedure is necessary for the development of their intercultural awareness for successful intercultural communication.

Fifthly, the university's decision-makers should formulate effective policies and rules which adopt an interactive approach, including joint courses, events, and programs that aims to decrease the level of anxiety among foreign and domestic students and raise their intercultural competencies, which is necessary for the labour market.

5.3. Limitations of the study

The limitations of the research as well as future studies are the following:

1. One of the main limitations of this study is the unavailability of data related to the time period after 2017. In addition, many economies were eliminated from the panel data. For example, about 40 different economies were removed due to their missing data in terms of different indicators.
2. The results of the modelling process are only limited to 99 economies. Therefore, future studies should expand the panel data in terms of the number of included economies as well as the time. This could help to make the results more reflective and representative. In addition, this can support the theory behind the economic value of social tolerance, the English language, and quality education.
3. The study could not find enough data related to other languages such as Chinese, German or Spanish. Therefore, due to data availability, the study only concentrated on

the economic impact of English on the economic performance since it is a multinational and multicultural language.

4. The majority of the literature concentrated on the microeconomic value of the English language on the development of individuals as well as multinational workplaces. The evidence of the economic impact of the English language on the macroeconomic level is not enough in the literature.
5. The study could not find enough data covering the quality education of the universities for each economy. Therefore, the study was limited to the quality education of primary and secondary schools.
6. The study just focused on the foreign students at Debrecen University. The reason behind that was due to the Covid pandemic, where it was not allowed to have face-to-face interaction or to circulate the survey within universities' campuses. This made the progress of the survey's circulation very slow. Therefore, future studies could make comparative studies in which the intercultural competence of international students from one institution is compared to another.
7. The length of the survey was long, and it was not possible to include other scales to examine each language proficiency and integration of foreign students. Therefore, future studies could take these two factors into the consideration while analyzing the data.

6. MAIN CONCLUSIONS AND NOVEL FINDINGS OF THE DISSERTATION

The main conclusions and novel findings are summarized as the following:

1. According to the literature, there isn't enough proof to support the claim that the English language has economic value. Therefore, the study used different ways to prove the soundness of this hypothesis. For instance, the research successfully augmented Solow's equation model by including English language proficiency, quality education, and government consumption. Based on the results, **each of English language proficiency and quality education plays important role in enhancing economic growth in the non-English speaking economies.** This finding matches the claim of Suárez (2005), where the economy should focus on the second language education in order to satisfy the economic strategy of the country. This could result into the enhancement of industrialization as well as openness of the economy (as in the case of Singapore and Ireland). However, by looking at the literature, previous studies did not include second language proficiency into the economic models which address the relationship between human capital (quantity or quality education) and economic growth (methodological gap – using cross sectional time series analysis).
2. In addition, the study successfully augmented the model of Solow by including social tolerance and English language proficiency. This variable reflects the toleration of people to different cultural categories, including religions, gender, LGBTs, nationalities, migrants, minorities, etc. Literature usually concentrates on cultural diversity's effect on the economy. However, this research argues that social tolerance should be considered the main economic predictor instead of cultural diversity since tolerance is useful in managing diversity and avoiding its related costs. In addition, the research has proved that social tolerance can be regarded as the main predictor of economic growth since it helps to attract skilled people and knowledge. Hereby, it can be an important component of the total factor productivity. This matches the study of Florida (2002a) in which tolerant places attract different cultures and skills (creative human capital). Based on this assumption, social tolerance helps to enhance economic growth. In this research, this evidence was investigated using cross sectional time series method (methodological gap). Besides this, the research includes English language proficiency into the economic model since speaking a common language could ease the

intercultural communication, transactions, and knowledge spread within culturally diverse region. In return, this could enhance level of productivity since knowledge is considered important part of the total factor productivity. **As a result, the existence of English language proficiency and social tolerance within the economy plays important role in increasing the economic growth (literature gap)**.

3. On the microeconomic level, Hungarian literature on the assessment of foreign student's intercultural competence in Hungarian higher education is still insufficient. Hereby, **this study contributes to this literature gap using western intercultural competence tools in the central European context since this model is validated in new environment.** The model was validated in estimating students' intercultural competence. Furthermore, the survey's statistics are compatible with the conclusions of previous studies on the same subject. For example, based on the findings, most foreign students attribute the lack of intercultural communication between them and Hungarians due to the language barrier. This feedback confirms the results of Dombi (2013), Kéri and Révész (2019). Others justify this problem due to the lack of interactive approach held by the university (Kovacs & Kasza, 2018). This could lead to negatively influence the intercultural knowledge of foreign students about the host culture (Kim, 2001). Based on that, this explains why the effect of intercultural knowledge has the least significant level comparing to other dimension in this study. Consequently, the lack of the interaction between foreign and local students represents obstacle which hinder foreign students' intercultural knowledge and hence their intercultural awareness. Also, communication gives a chance of the development of student's intercultural knowledge (Gondra & Czerwionka, 2018).

4. Furthermore, **using SEM, the findings indicate that each of foreign students' intercultural knowledge and attitude has least significant impact on their intercultural awareness about Hungarian language and culture.** Therefore, intercultural knowledge and attitude of foreign students should be enhanced through arranging joint events, standard classes for foreign and domestic students, and training programs**.** This was proved where the majority of foreign students do not share the same level of awareness while dealing with locals due to linguistic barriers. In addition, their intercultural attitude, skills, and awareness are not the same when it comes to their intension to learn the Hungarian language. In turn, this supports the previous studies conducted in the Hungarian literature.

5. On the other hand, the research proved the theory of Fantini (2001) in which the **enhanced intercultural awareness of foreign students help to increase the development of their intercultural knowledge, skills and attitude toward Hungarian culture.** By investigating the indirect effects between these dimensions, when the foreign students become interculturally aware about cultural differences, this could help to encourage them to grow in terms of other dimensions since awareness is something inherent in student's personality (A. E. Fantini, 2000). As a result, universities should consider interactive approach as important step to grow foreign as well as Hungarian students' intercultural competence. This could satisfy the requirements of labor market and the internationalization process of Hungarian education system.

6. Based on the findings, the research provides useful information which can help to guide decision-makers and managers to formulate policies and rules in order to reach effective economic performance. For instance, on the macroeconomic level, findings and information could get the attention of interested decision-makers regarding the importance of languages, social tolerance, and quality education, especially for developing economies. **On the microeconomic level, survey feedback could help university managers and decision-makers to develop effective roles and programs which ensure the interactive approach within the university's campus**. Also, these ideas can be generalized to be used in other institutions in order to boost the effectiveness of higher education internationalization.

Table 29, as shown below, helps to give a brief illustration about the hypotheses of this research and their interpretation (i.e., whether they are accepted or rejected based on the statistical analysis).

Table 29. Hypotheses and their interpretation

Items	Hypothesis statement	Interpretation
H_1	*English language proficiency is positively related to the economic growth in non-English speaking economies.*	Accepted (insignificant effect)
H_2	*Social tolerance and English language proficiency have a positive effect on the economic growth in non-English speaking economies*	Accepted

Items	Hypothesis statement	Interpretation
H_3	*Quality education and English language proficiency have a positive effect on the economic growth in non-English speaking economies*	Accepted
H_4	**H4.a**: *Students per continent do not have the same levels of intercultural knowledge, skills, attitude, and awareness.*	Partially Accepted
	H4.b: *Students, for each educational level, are not equal in terms of their intercultural knowledge, skills, attitude, and awareness.*	Rejected
	H4.c: *Students do not share the same intercultural knowledge, attitude, skills, awareness regardless of their different periods spent in Hungary.*	Rejected
	H4.d*: Males and Females are not equal in terms of their intercultural knowledge, attitude, skills, and awareness.*	Rejected
	H4.e: *The two groups (based on their intention to learn the Hungarian language) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness*.	Partially Rejected
	H4.f: *The two groups (whether they faced linguistic difficulty to deal with locals or not) are not the same in terms of their intercultural knowledge, attitude, skills, and awareness.*	Rejected
H_5	*Intercultural knowledge of foreign students has a positive effect on their intercultural awareness*	Accepted
H_6	*Intercultural attitude of foreign students has a positive effect on their intercultural awareness*	Accepted
H_7	*Intercultural skills of foreign students have a positive effect on their intercultural awareness*	Accepted
H_8	*Intercultural awareness of foreign students has a positive effect on their intercultural knowledge, skills and attitude*	Accepted

Source: Author's own compilation.

SUMMARY

The main issue the research aims to handle and investigate is related to the effectiveness of the internationalization status of the Hungarian higher education system. This was discussed and investigated by examining different related aspects. For instance, the intercultural competence of foreign students is partly neglected by Hungarian higher education institutions. Based on the Hungarian literature, it was found out that Hungarian universities' internationalization process does not consider the interactive approach which aims to mix foreign with domestic students. Some authors justified this issue due to the language anxiety of domestic students. Others argue that the introverted personality of domestic students is the reason behind the lack of integration between the two groups. Besides this, the research also argues that lack of social tolerance and second language quality education could be another reason behind this problem and this may negatively affect the two parties.

On the other hand, some academics recommend that it is necessary to arrange joint classes, events, and workshops that aim to mix two groups and enhance their intercultural competence. Achieving this objective has economic returns on universities since it enhances the level of students' creativity and reduces their anxiety. Also, it has economic returns on the labor market since multinational companies' managers are usually looking for individuals with specific features such as a high level of social tolerance as well as the flexibility to work in multi-cultural teams. Based on that, the research has built its scientific debate based on four important factors. Firstly, on the macroeconomic level, the research investigated the economic value of the English language, social tolerance, and quality education. Secondly, on the microeconomic level, the research first investigated Hungary's economic performance in terms of these previously mentioned variables and then validated an intercultural competence model on the foreign students at the University of Debrecen, which is considered one of the largest educational institutions in the level of the country. Therefore, the research was structured like the following.

The first chapter includes an introduction as well as related topics and objectives. The introduction provides a general overview of the field of economic growth, and its connection with second language quality education and social tolerance and their importance on the level of individuals and economies. Besides this, it gives several pieces of evidence on the connection between languages and each of quality education and social tolerance. Finally, the introduction highlights the main problem of the research and how it can help to contribute to the literature.

As for the topics and objectives section, the research provides a detailed description of research topics, objectives, as well as the agreed structure and approach.

As for the second chapter, the research discussed the literature review in a gradual way starting from a general overview of the sustainable development goals and their importance to the presentation of each factor and its connection with the English language proficiency of the economy. For example, the research addressed the economic importance of quality education, followed by cultural diversity's economic benefits and costs, economic and social value of language in general and English language in particular. The second part of the research presents previous scientific works on the connection between toleration and intercultural competence, IC's effect on the higher education industry, foreign students' experience in higher education in general, and Hungarian higher education in particular. Finally, the study ended the discussion by presenting several models which can be used in the higher education industry, their definition, and dimensions, as well as a detailed discussion about Fantini's model, which was successfully validated to examine the IC of foreign students at Debrecen University.

The third chapter describes the materials and methods which were used to prove the soundness of the study's hypotheses proposed in this research. The order of this section was structured according to the topics presented in the literature review chapter as well as hypotheses and objectives. Hereby, the first part of the research described in detail the development and augmentation of Solow's equation. Based on this, two specified equations were developed and used to study the association between English, quality education, social tolerance, and economic performance. The method used in this study was the GMM estimate technique. The type of the data was time-series cross-section data. The second part of the research used descriptive statistics, EFA, and CFA to determine the survey's effective items and their factors and to validate the model for estimation. Also, the study used SEM to highlight the relationship between foreign students' awareness and each of their knowledge, skills, and attitude toward the host culture. In addition, the study used different questions to highlight the intercultural experience of foreign students during their stay in Hungary.

The fourth chapter described and discussed the results according to their order explained in the material and methods chapter. This chapter included different figures, diagrams, statistics, and tables along with supportive evidence proved by previous scientific works.

The fifth chapter concluded the results and discussion by highlighting how the current knowledge was advanced. Besides this, it provides a scientific justification behind this research and its importance at the macro and microeconomic levels. Furthermore, recommendations and

policy implications were discussed and detailed. Finally, this chapter also identifies research limitations and gives various ideas for future studies.

The sixth chapter ends the research by providing the most important main research conclusions along with novel findings and ideas which were proved during the statistical analysis.

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ANNEXES

List of Tables

Table of Figures

99 non-English speaking Economies:

Africa		South America		Europe				Asia		Middle East	
Country	**En.**	**Country**	**En.**	**Country**	**En.**	**Country**	**En.**	**Country**	**En.**	**Country**	**En.**
Angola	VLP	Bolivia	MP	Austria	VHP	Romania	HP	Bangladesh	LP	Algeria	LP
Botswana	HP	Brazil	LP	Belgium	VHP	Russian Federation	MP	Cambodia	VLP	Bahrain	LP
Burkina Faso	VLP	Chile	MP	Bulgaria	HP	Serbia	HP	China	MP	Egypt, Arab Rep.	LP
Burundi	VLP	Colombia	LP	Croatia	VHP	Slovenia	VHP	Hong Kong	MP	Iran, Islamic Rep.	MP
Cameroon	LP	Costa Rica	MP	Cyprus	LP	Spain	MP	India	MP	Iraq	VLP
Congo, Rep.	VLP	Dominican Re.	MP	Czech Republic	HP	Sweden	VHP	Indonesia	LP	Israel	HP
Gabon	VLP	Ecuador	VLP	Denmark	VHP	Switzerland	HP	Japan	LP	Jordan	VLP
The Gambia	LP	El Salvador	MP	Estonia	HP	Turkey	LP	Kazakhstan	VLP	Kuwait	LP
Ghana	MP	Guatemala	LP	Finland	VHP	Ukraine	MP	Korea, Rep.	MP	Morocco	LP
Kenya	HP	Honduras	MP	France	HP	Albania	MP	Malaysia	HP	Qatar	LP
Liberia	VLP	Jamaica	LP	Germany	VHP	Armenia	LP	Mongolia	LP	Saudi Arabia	VLP
Mauritius	HP	Mexico	VLP	Hungary	HP			Nepal	LP	United Arab Emirates	LP
Nigeria	HP	Nicaragua	LP	Iceland	VHP			Pakistan	LP		
Rwanda	VLP	Panama	LP	Italy	MP			Philippines	HP		
Sierra Leone	LP	Paraguay	MP	Latvia	HP			Singapore	VHP		
South Africa	VHP	Peru	MP	Lithuania	HP			Sri Lanka	LP		
Tanzania	LP	Uruguay	MP	Luxembourg	VHP			Thailand	VLP		
Togo	VLP			Moldova	MP			Vietnam	LP		
Tunisia	MP			Norway	VHP						
Uganda	LP			Poland	HP						
				Portugal	VHP						

Notes: the economies are categorized in terms of their English proficiency index, as very high proficiency (VHP), high proficiency (HP), moderate proficiency (MP), low proficiency (LP), very low proficiency (VLP). This information is provided by the annual report of Education first (2021). As for Angola, Botswana, Burkina Faso, Burundi, Gabon, Gambia, Liberia, Mauritius, Sierra Leone, Togo, Uganda, Jamaica, Cyprus, Iceland, Slovenia, and Israel, their English proficiency index was evaluated through the scores provided by TOEFL report in comparison with those of Education First report and its categorization.

Survey

The first section of the survey:

1- My nationality is …….
2- My native language is ……
3- I also speak……
4- **Gender**:

□ Male □ Female

5- **Educational level :**

□ Secondary School □ Bachelor □ Masters □ Doctorate

6- The number of years I have been in Hungary: ……..
7- As a result of your intercultural experience in Hungary, did you go on to study/learn the Hungarian language?

□ Yes □ No

8- Did you face linguistic difficulties to communicate with Hungarians?

……

The second section of the survey (KAS+A dimensions):

Please respond to the questions in each of the four categories below, using the scale from 0 (=Not at all) to 5 (= Extremely High).

Knowledge							
	Statement	**0**	**1**	**2**	**3**	**4**	**5**
1	I could cite a definition of culture and describe its components and complexities						
2	I knew the essential norms and taboos of the host culture (e.g., greetings, dress, behaviors, etc.)						
3	I could contrast important aspects of the host language and culture with my own						
4	I recognized signs of culture stress and some strategies for overcoming it						
5	I knew some techniques to aid my learning of the host language and culture						
6	I could contrast my own behaviours with those of my hosts in important areas (e.g., social interactions, basic routines, time orientation, etc.)						
7	I could cite important historical and socio-political factors that shape my own culture and the host culture						
8	I could describe a model of cross-cultural adjustment Stages						
9	I could cite various learning processes and strategies for learning about and adjusting to the host culture						
10	I could describe interactional behaviours common among Hungarians in social and professional areas						

	(e.g., family roles, team work, problem solving, etc.)						
11	I could discuss and contrast various behavioural patterns in my own culture with those in Hungary.						
Attitude							
While in Hungary, I demonstrated willingness to …		**0**	**1**	**2**	**3**	**4**	**5**
12	interact with host culture members (I didn't avoid them or primarily seek out my compatriots)						
13	learn from my hosts, their language, and their culture						
14	try to communicate in Hungarian and behave in "appropriate" ways, as judged by my hosts						
15	deal with my emotions and frustrations with the host culture (in addition to the pleasures it offered)						
16	take on various roles appropriate to different situations (e.g., in the family, as a volunteer, etc.)						
17	show interest in new cultural aspects (e.g., to understand the values, history, traditions, etc.)						
18	try to understand differences in the behaviours, values, attitudes, and styles of host members						
19	adapt my behaviour to communicate appropriately in Hungary (e.g., in non-verbal and other behavioural areas, as needed for different situations						
20	reflect on the impact and consequences of my decisions and choices on my hosts						
21	deal with different ways of perceiving, expressing, interacting, and behaving						
22	interact in alternative ways, even when quite different from those to which I was accustomed and preferred						
23	deal with the ethical implications of my choices (in terms of decisions, consequences, results, etc.)						
24	suspend judgment and appreciate the complexities of communicating and interacting interculturally						
Skills							
	Statement	**0**	**1**	**2**	**3**	**4**	**5**
25	I demonstrated flexibility when interacting with persons from the host culture						
26	I adjusted my behaviour, dress, etc., as appropriate, to avoid offending my hosts						
27	I was able to contrast the host culture with my own						
28	I used strategies for learning the host language and about the host culture						
29	I demonstrated a capacity to interact appropriately in a variety of different social situations in the host culture						
30	I used appropriate strategies for adapting to the host culture and reducing stress						
31	I used models, strategies, and techniques that aided my learning of the host language and culture						
32	I monitored my behaviour and its impact on my learning, my growth, and especially on my hosts						
33	I used culture-specific information to improve my						

	style and professional interaction with my hosts						
34	I helped to resolve cross-cultural conflicts and misunderstandings when they arose						
35	I employed appropriate strategies for adapting to my own culture after returning home						
Awareness							
While in Hungary, I realized the importance of …		**0**	**1**	**2**	**3**	**4**	**5**
36	differences and similarities across my own and the host language and culture						
37	my negative reactions to these differences (e.g., fear, ridicule, disgust, superiority, etc.)						
38	how varied situations in the host culture required modifying my interactions with others						
39	how host culture members viewed me and why						
40	myself as a "culturally conditioned" person with personal habits and preferences						
41	responses by host culture members to my own social identity (e.g., race, class, gender, age, etc.)						
42	diversity in the host culture (such as differences in race, class, gender, age, ability, etc.)						
43	dangers of generalizing individual behaviours as representative of the whole culture						
44	my choices and their consequences (which made me either more, or less, acceptable to my hosts)						
45	my personal values that affected my approach to ethical dilemmas and their resolution						
46	my hosts' reactions to me that reflected their cultural values						
47	how my values and ethics were reflected in specific situations						
48	varying cultural styles and language use, and their effect in social and working situations						
49	my own level of intercultural development						
50	the level of intercultural development of those I worked with (other program participants, hosts, co-workers, etc.)						
51	factors that helped or hindered my intercultural development and ways to overcome them						
52	how I perceived myself as communicator, facilitator, mediator, in an intercultural situation						
53	how others perceived me as communicator, facilitator, mediator, in an intercultural situation						

The third section – open-ended question:

54. Is there anything else you would like to add?