**Structure**

**Introduction**

Start with the … the new regualtion

Current state of higher education supported with numbers – already big differences. How many unis in Bp how many anywhere else. Polarized country. Why it’s important to diversify the unis in a country.

The new regulation that will take in place in the future giving an entry requirement that effecting the already disadvantaged young population in the country.

**Research question (or hypothesis)**

Would the new mandatory foreign language exam governmental proposal more significalty effect certain areas in Hungary’s then others?

**Literature review**

To measure the young population’s foreign language capabilities, I look at the the highschool final exam data.. what is that, blablabla

Nyelvtudas minek kell hogy mernok legyel …

Diversity of though importance

Diversity of socioeconomic background

Why bad to discriminate on type of population

Midlevel, higher-level, how it differs and what can we do the make it to the same scale.

Moran’s I and Location Quotient

**Methodology - 1500**

Highschool data

Foreign Language Proficiency Score calculation

Study area: Hungary LAU 1

Flowchart

**Results (including descriptive statistics and further analysis)**

Moran’s I Global - Local

Location Quotient

**Discussion (including specific recommendations)**

Referenced literature  
Not the extensions the of the Results!   
Why it’s important  
Is there other solution by other countries to this  
Provide a solution + other examples

Bring poverty in ( [104010-BRI-PUBLIC-ADD-SERIES-Poverty-in-Europe-DOI-10-1596-K8683.pdf](file:///C:\Users\botiv\Zotero\storage\EVCVH23T\104010-BRI-PUBLIC-ADD-SERIES-Poverty-in-Europe-DOI-10-1596-K8683.pdf))

**Conclusion**

**An Analysis of the Impact of the Foreign Language Exam Entry Requirements for Hungarian Universities**

The purpose of this essay is to review the impact of a recent proposal by the Hungarian Government, that would require all students applying to Hungarian Universities to earn a Certificate evidencing minimum intermediate proficiency in a foreign language (any language other than Hungarian), to be eligible to apply.

**Introduction**

Hungary is a Central European country, located in the Pannonian Basin (Haas, 2012). The Hungarian language, unlike its neighbours who all belong to various branches of the Indo-European language tree, originates from the Asian Uralic Region and is a member of the Finno-Ugric language tree (Honti, 1979). An estimated 14-15 million people speak Hungarian world-wide, around 4 million of whom live outside of the country’s borders (Fenyvesi, 2005). As a predominantly mono-lingual country, the vast majority of Hungarians speak Hungarian as their first language (98%) (Medgyes, & Nikolov, 2014). There are numerous features of the Hungarian language that distinguish it from prominent Indo-European languages (English, German, French, Polish, Swedish, etc.) for instance the presence of vowel harmony which is common in many Asian languages, such as Korean, Mongolian and Samoyedic (Fenyvesi, 2005). While Hungarian is generally considered to be a very difficult language for non-nationals to learn, the distinctiveness of the language can also be seen as an impediment in Hungarians’ ability to learn other languages.

Historically, Hungarian Governments have placed importance on investments in the public advancement of foreign languages. In the 19th century, the Austro-Hungarian empire (1867-1918) placed the German language as the major foreign langue to learn as it became to official language of the empire. Later during the communist era (1949 -1989), as part of the Soviet Union the Russian language became prominent and was mandatory to study in the Hungarian primary and secondary schools (Medgyes, P. & Miklósy, K., 2000.). The collapse of the centrally planned Socialist Regime in Eastern Europe (1989-91) led to an array of socio-economic developments, such as the end of the Soviet occupation in Hungary and the commencement of privatisation of previously state-owned operations. The fall of the Iron Curtain in Germany allowed the opening of borders with Western Europe and caused an influx of foreign, ‘western’ media becoming increasingly popular in the region (Dornyei, et al., 2006). The increased tourism to and from Hungary and the expansion in economic relationships outside of the Eastern Block led to the growing demand for English and German language skills by employers, which was further accelerated by the country joining the European Union in 2004 (Dornyei, et al., 2006). Today, Hungarian students are required to study minimum one foreign language as a part of their primary school (X-Y years) and secondary education, (X-Y years) with numerous students studying second or third foreign languages (Medgyes, & Nikolov, M. 2014).

Recently, the Hungarian government has proposed a new, nationwide requirement for students applying to universities, whereby all secondary students must obtain a Certificate evidencing intermediate proficiency in a foreign language (any language other than Hungarian), to be eligible to apply to Hungarian universities. The proposal excludes foreign students applying to Hungarian universities. There are a few ways for students to obtain such a Foreign Language Certificate, however, by far the most common method is to complete an ‘Advanced Level’ Foreign Language exam as a part of the Secondary Education Leaving Exams, which I will use as the basis of my analysis and will discuss in detail further on in the paper.

While the Government has not specified the specific motivation behind the new requirement, one reason could be to further incentivise young students (and their parents) to invest in their foreign language skills at younger ages. After all, it is a well-documented phenomenon that younger children learn languages more easily than older ones (Bleakley, & Chin, 2004). Further, improving the Hungarian population’s Foreign Language skills could lead to numerous longer-term benefits, such as the increase of foreign direct investments (CITE recent FDI % of GDP) and large foreign multinationals expanding in the country. An estimated 20% of the Hungarian Private Sector workers are employed foreign multinationals (Dobrai, et al. 2011). The presence of such international companies in Hungary are a significant contributor to the modernisation of the country, as they provide important foundations for learning and cross-border knowledge transfer (Dobrai, et al. 2012).

Stats from EUROSTAT

https://ec.europa.eu/eurostat/statistics-explained/index.php/Foreign\_language\_skills\_statistics

Foreign language is a bad indicator of other skills.

However, this essay will find that the requirement for Secondary Students to obtain a Foreign Language Certificate in order to apply to Hungarian Universities would disadvantage students from rural communities and Districts without large cities, leading to a decrease in the socioeconomic diversity of universities.

**Research Question**

As per the above, this paper will analyse the foreign language proficiency levels of Hungarian final year secondary students based on Secondary Education Leaving Exam results, to discover inequalities in foreign language skills between the various Districts of Hungary. The goal is to observe a potential pattern in the distribution of foreign language skills, and therefore determine whether the new governmental proposal would disproportionally negatively impact students from certain Hungarian Districts. For example, students from Eastern-Hungarian districts may have poorer foreign language skills and therefore be disadvantaged when applying to universities compared to those on the Western side, regardless of the degrees they are applying to.

**Methodology**

1. Secondary school data

To understand the potential effect of the new regulation proposal, a foreign language proficiency level indicator is required. To calculate such indicator, the publicly available Secondary School Leaving Exam (SSLE) scores were used. In Hungary, every final year secondary student is required to take 5 final exams in multiple subjects to finish their secondary level studies. These subjects are the following:

1. Hungarian Language and Grammar
2. History
3. Mathematics
4. One chosen Foreign Language (written and oral exam)
5. Additional optional subject selectable from a large variety

All these exams above have two difficulty variations: an intermediate and an advanced level option. The result of these exams will be directly used as entry scores to universities. Therefore, every final year secondary student who wishes to continue their studies at a university level is required to take a foreign language SSLE. This test justifies a good measurement of the level of foreign language proficiency among young people finishing secondary school.

Information regarding secondary schools’ location, number of pupils, final exam results etc. are available on the website of the Hungarian Education Ministry (oktatas.hu). To collect the information for my analysis, a web scraper was written, and addresses were geocoded by Google’s geocoding API. The dataset was then cleaned to remove inconsistencies due to duplications, typos and unrealistic outliers. The final dataset includes every 59155 foreign language exams taken on the spring of 2020 in 1100 educational institutions.

2. Foreign Language Proficiency Score (FLPS) calculation

To create a unified language proficiency score, the intermediate and advanced level tests scores need to be converted to the same scale. The conversion method used was based on the official higher education entry score system’s calculations. Every advanced level exam above 45% is awarded with 50 additional points*. For example:* *where a high school’s advanced English language average reached 30% no transformation will obtain, but if the average is 65% an additional 50 point will be added to the score, which gives 115.* Note that the maximum points available for the intermediate exam is 100 and for the advanced exam is 150. (<https://qips.ucas.com/qip/hungary-erettsegi-bizonyitvany>)

Given that we obtained the Hungarian SSLE information, the formula for creating a specific Foreign Language Proficiency Score of a spatial unit will be the following:

*nmij: Number of students took the midlevel language leaving exam (m) in a specific school (j) of a foreign language (i)*

*naij: Number of students took the advance language leaving exam (a) in a specific school (j) of a foreign language (i)*

*μmij: Average score of midlevel language leaving exam (m) in a specific school (j) of a foreign language (i)*

*μwaij: Average weighted (w) score of advance language leaving exam (a) in a specific school (j)of a foreign language (i)*

*μa: Average score of advance language leaving exam of a secondary school of a foreign language*

*μwa: Average weighed score of advance language leaving exam of a secondary school of a foreign language*

*j: number of schools in spatial area (i)*

*i: number of spatial areas (districts)*

Important to note that according to the current Hungarian SSLE regulations, obtaining a foreign language SSLE with 60 or higher points would automatically be awarded with the Intermediate Language Certificate that proposed to be required for Higher Education. Following our FLSP formula that would mean score 110 is the equivalent of that performance. In other words, 110 would be the implied measurement that a student language proficiency reaching the level of a the Intermediate Language Certificate.

3. Study area: Hungary LAU 1

In the analysis, the lowest level of territorial and organisational units of the public administration is used defined by the Hungarian government. There are 168 districts. The shape file was provided by GDAM. 10 number of districts don’t have currently operating high school. These spatial units will be not used in the calculation as Foreign Language Proficiency Score cannot be assigned to them.

4. Flowchart

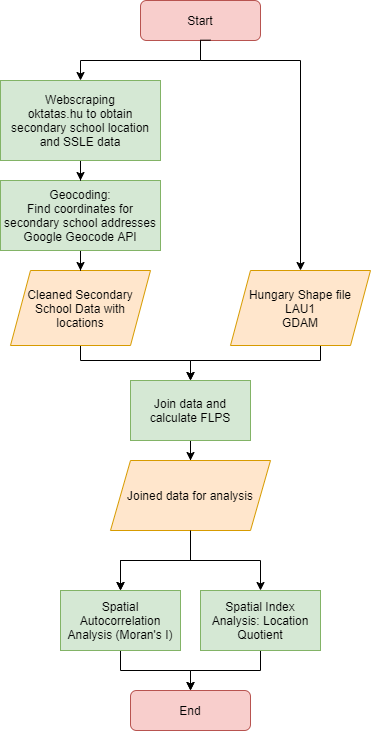


Figure : Data Analysis process flowchart

[**https://www.ksh.hu/regionalatlas\_districts**](https://www.ksh.hu/regionalatlas_districts)

**Results, Descriptive Statistics and Further Analysis**

Following the appropriate data transformations and data mergers, we can observe how the FLPS distribute across the country. The range of the scores are 0 to 150, the hypothetical highest potential number meaning every student studying in the areas achieved 100% advance level foreign language final exam. As Figure 1 shows below that there wasn’t any district averaging above 110 points, indicating the difficulty of gaining the mandatory foreign language certificate. According to the plot below, we can observe the clear pattern of the higher average areas are occurring in the Western, North-Western region of the country. Furthermore, we can find relatively highly scored district “islands” due to a larger city’s location.

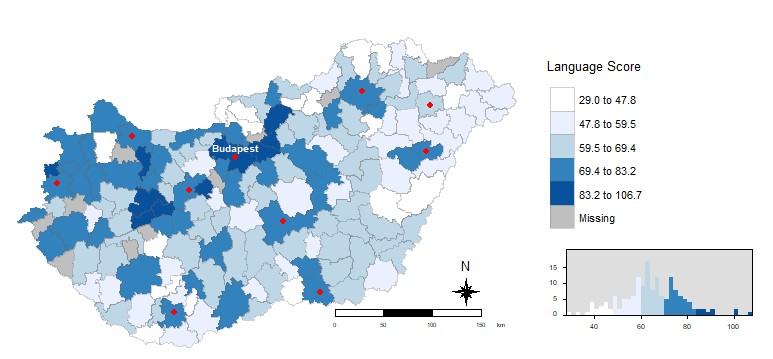


Figure : Foreign Language Score based on Secondary School Leaving Exam results in Hungary. Red dots indicate the top 10 most populated cities in Hungary

Moran’s I Global

By observing the map above, some level of clustering of high and low language scores can be noticed. To test whether spatial autocorrelation occurs, a Global Moran’s I test was conducted. According to the test below, the Moran’s I Index is 0.2 and the small p-value indicates that closer, neighbouring spatial features tend to have similar language proficiency score in Hungary. There are high-level and low-level subregion clusters in the country.

|  |  |
| --- | --- |
| GLOBAL MORAN’S I | |
| Moran I statistic | *0.206* |
| p-value | *5.569e-06* |
| Moran I statistic standard deviate | *4.394* |
| Expectation | *-0.006* |
| Variance | *0.002* |

Table : Result of the Global Moran's I Test of the Language Score attribute

Location Quotient

The following analysis is performed to measure and highlight the relative concentration of the FLPS of an area compared to the national average. This way we gain a better understanding where the underdeveloped areas are based on students’ foreign language skills. This analysis also reveals where the secondary school language education would need to be improved to reach the average national level. Even though, the average is only 64.51 which is far form the level of capability of gain a Foreign Language Certificate, the divide of the language proficiency stands out. Certain areas perform only half of the average and some above 50-60% of the national averge.

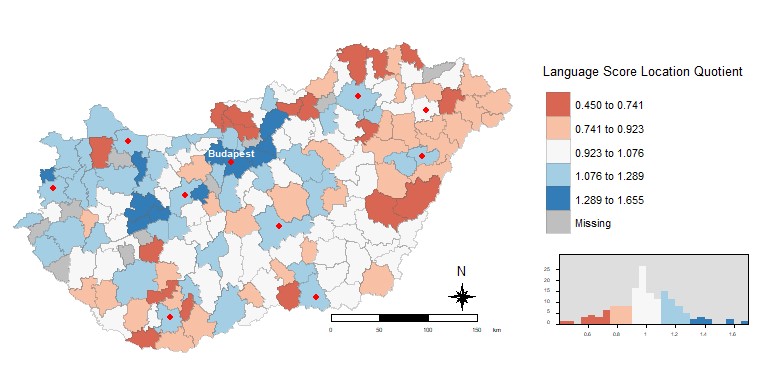


Figure : Location Quotient of the Foreign Language Scores in Hungary. Red dots indicate the top 10 most populated cities in Hungary

INNEN AZ HIANYZIK, HOGY A MAPPEKBEN MI VAN. MIK AZOK A HELYEK, AHOL ROSSZAK A SCORE-OK? MONDD KI, HOGY A VAROSOKBAN JOBBAK. MONDD KI, HOGY KELETEN ROSSZABBAK, STB.

IRD BELE VALAHOVA, H 110 PONT A HATAR

**Discussion (including specific recommendations) – 400**

The analyses performed above on mapping the Language Proficiency Scores clearly indicates there is heterogenicity in the Hungarian secondary seniors’ languages capabilities. Regional variations in exam results can be driven by a variety of factors. One explanation may be that the quality of language education available in the poorer performing regions (rural and Eastern districts) is of lower quality than of those regions where students achieved higher results. However, even if such a statement were true, it is likely to be the product of a number of contributing factors that cause systematic differences in the quality of language education across the country. Numerous studies have found that the economic geography of talent tends to be significantly concentrated (Florida, 2002), suggesting that highly talented, ambitious individuals are more likely to live in urban areas (Lawton Smith, et al., 2005). It can be assumed, that this also holds true for language teachers, where many talented individuals are drawn to living and working in urban districts. Additionally, the students in urban areas may have more exposure to foreign influences than those in the rural areas, via tourists, or media, which could be an encouraging factor in their language studies.

Another interesting trend emerging from the above analysis is the divergence between the exam results of the North-Western and Eastern Hungarian Districts (Figure 2). The results are even more interesting when viewed in conjunction with Figure 3 from a 2016 World Bank report, illustrating the poverty distribution in Hungary. The red areas represent the districts where the largest proportion of residents live below the poverty threshold. It is a well-documented experience, that students from impoverished backgrounds generally achieve lower levels of educational attainment and perform poorer on exams (Goodman & Gregg 2010, Chowdry, et al. 2010).

Map

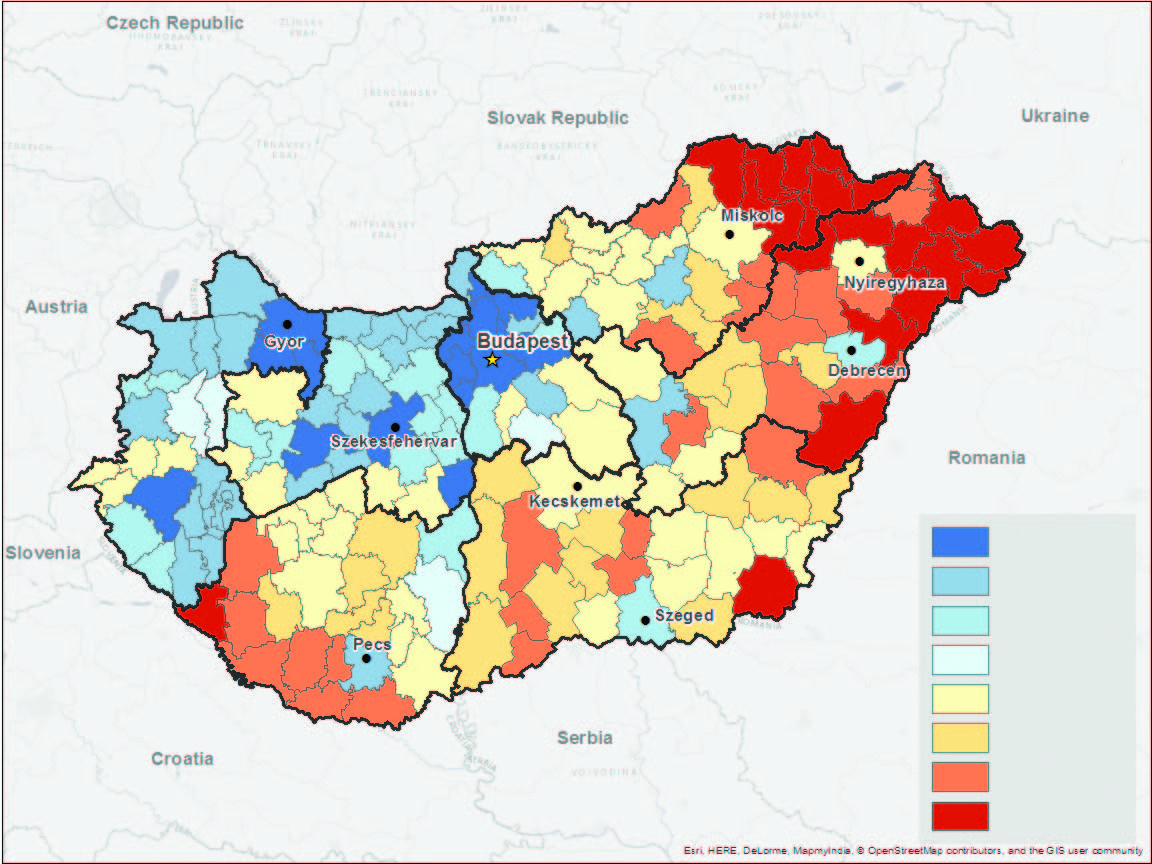
Description automatically generated

Figure : World Bank Data 2016 Poverty in Europe – Hungary Country Policy brief (World Bank, 2016)

Based on the above, the Hungarian government’s proposal to require all students to obtain a certificate evidencing intermediate foreign language skills to be considered for university level education would predominantly negatively impact students from the most deprived areas of the country. Students from these areas are already likely to have lower quality educational institutions and are much less likely to have ample home learning environments than students from the wealthier, urban districts. Therefore, it is already less likely that they should attend university in the same proportion as students from less impoverished areas. While the intentions behind the new proposal are to improve the nations’ human capital by encouraging foreign language studies, it would provide an unreasonable barrier to university level studies for students who are already disadvantaged in their educational opportunities.

Understanding which districts underperform on national exams can support the more efficient targeting of resources for development, especially for foreign language subjects, which is a key area of interest for the Hungarian Government. The language score maps (Figure 2 & Figure 3) provide a more comprehensive picture on sub-national variations in senior students’ language skills, which could potentially facilitate resource allocation. Based on the maps, the average students from main cities like Budapest: 84.9, Győr: 77, Pécs: 80 are significantly closer to reaching the 110 points for the minimum entry requirements, than students from Eastern Hungary like Encsi, Edelény locations (above Miskolc), where their average language scores are 65-71 points below the minimum university entry requirements.

While there have been studies to suggest that learning and speaking multiple languages can improve one’s cognitive abilities, (LeFevre, et al., 2010, Novitskiy, et al., 2019), there is insufficient evidence to conclude that linguistic skills can be used as good indicators for mathematical and numerical capabilities. CITE. It is unreasonable to assume that students with poor foreign language skills, either due to personal ability, poor quality education or suboptimal home environment could not otherwise be successful in other fields of study, such as sciences, history or the arts. Therefore, setting a minimum level entry requirement in foreign language skills for all university degrees would be extremely limiting to otherwise talented students from areas with inferior foreign language education.

One-size fits all regulatory approach doesn’t work.

As such, it should be the focus of the government to support the

Also inqual for the University. The rural less prestigious university wouldn’t be able to accept student. And also certain more technical/teachers/ medical courses would be also disadvantaged.

Targeting poor areas alone can have limitations. Policy makers have an interest both in areas where poverty is high and in areas that have the most poor people. These two are not the same: areas that are poor may also be sparsely populated, whereas large cities tend to have low poverty rates, but large numbers of poor people because  
of the large populations. “

*(Figure from World Bank Data 2016 Poverty in Europe – Hungary Country Policy brief).*

BEEF UP METHODOLOGY & DISCUSSION

Kiterni arra hogy socioeconomic kolunbsegek is szerepet jatszanak hogy varosok es egyes regiok jobb scoret ertek el. De az allam feladata, hogy tamogatassokal igyekezennek ennek kiegyenlitesen, de az uj szabalyzat cask nagyobb egyenlotlenseghez vezet. Videk egytemeknek is hallgato hiannyal kuzdhetenk ennek kovetkezmenye kepp.

Referenced literature  
Not the extensions the of the Results!   
Why it’s important  
Is there other solution by other countries to this  
Provide a solution + other examples

Mindenkit leferdo policy nem mukodnek ennyrie inequal helyeken

Bring poverty in map to compare with LQ( [104010-BRI-PUBLIC-ADD-SERIES-Poverty-in-Europe-DOI-10-1596-K8683.pdf](file:///C:\Users\botiv\Zotero\storage\EVCVH23T\104010-BRI-PUBLIC-ADD-SERIES-Poverty-in-Europe-DOI-10-1596-K8683.pdf))

**Limitations (150-250)**

The Hungarian Secondary School Leaving exam data is publish in an aggregated format. The information provided on secondary school level, and not individual student level. Due to this compression the exam results losing some of its precision since we only able to use the average of reach scores by schools and weighting them by the number of students. Because the data points are schools it’s important to not directly reflect the finding to the young population, but the schools situated in the certain areas.

The analysis and calculation of the Language Score included every secondary school across the country without excluding exceptional institutions. These outliers for example schools where the teaching take place in a foreign language. Further, the assumption was made that every student who would procced to Higher Education reached and took the Highschool leaving exam.

As the population the secondary schools are unevenly spread across the country. This result that for certain areas only few (in some cases non) available datapoints this provide low sample to calculate the Language Score for those areas.

During the analysis, demographic or economic data were not introduced to compare the relationship of the language capabilities with other socio-economic factors.

**Conclusion (350-500)**

**References**

Honti, L., 1979. Characteristic features of Ugric languages (observations on the question of Ugric unity). *Acta Linguistica Academiae Scientiarum Hungaricae*, *29*(1/2), pp.1-26.

Fenyvesi, A. ed., 2005. *Hungarian language contact outside Hungary: Studies on Hungarian as a minority language* (Vol. 20). John Benjamins Publishing.

Medgyes, P. and Miklósy, K., 2000. The language situation in Hungary. *Current issues in language planning*, *1*(2), pp.148-242.

Csizér, K. and Lukács, G., 2010. The comparative analysis of motivation, attitudes and selves: The case of English and German in Hungary. *System*, *38*(1), pp.1-13.

Dörnyei, Z., Csizér, K. and Németh, N., 2006. *Motivation, language attitudes and globalisation: A Hungarian perspective*. Multilingual Matters.

Medgyes, P. & Nikolov, M. 2014, "Research in foreign language education in Hungary (2006-2012)", Language Teaching, vol. 47, no. 4, pp. 504-537.

EU Commission Organisation of General Secondary Education [WWW Document]. Eurydice - European Commission. URL <https://eacea.ec.europa.eu/national-policies/eurydice/content/organisation-general-secondary-education-2_en> (accessed 12.23.20).

Bleakley, H. and Chin, A., 2004. Language skills and earnings: Evidence from childhood immigrants. *Review of Economics and statistics*, *86*(2), pp.481-496.

Dobrai, K., Farkas, F., Karoliny, Z. and Poór, J., 2011. Analyzing Knowledge Processes–Knowledge Transfer in Theory and Practice. *Proceedings of MEB*, pp.3-4.

|  |
| --- |
|  |
| Dobrai, K., Farkas, F., Karoliny, Z. and Poór, J., 2012. Knowledge transfer in multinational companies–evidence from Hungary. *Acta Polytechnica Hungarica*, *9*(3), pp.149-161. |

Medgyes, P. and Nikolov, M., 2014. Research in foreign language education in Hungary (2006-2012). *Language Teaching*, *47*(4), p.504.

Haas, J. ed., 2012. *Geology of Hungary*. Springer Science & Business Media.

Florida, R., 2002. The economic geography of talent. *Annals of the Association of American geographers*, *92*(4), pp.743-755.

Lawton Smith, H., Glasson, J. and Chadwick, A., 2005. The geography of talent: entrepreneurship and local economic development in Oxfordshire. *Entrepreneurship & Regional Development*, *17*(6), pp.449-478.

Goodman, A. and Gregg, P. eds., 2010. *Poorer children's educational attainment: How important are attitudes and behaviour?* (pp. 76-92). York: Joseph Rowntree Foundation.

Novitskiy, N., Shtyrov, Y. and Myachykov, A., 2019. Conflict resolution ability in late bilinguals improves with increased second-language proficiency: ANT task evidence. *Frontiers in Psychology*, *10*, p.2825.

Chowdry, H., Crawford, C. and Goodman, A. (2010) *Explaining the Socioeconomic Gradient in Child Outcomes during the Secondary School Years: Evidence from the Longitudinal Study of Young People in England*. www.ifs.org.uk

LeFevre, J.A., Fast, L., Skwarchuk, S.L., Smith‐Chant, B.L., Bisanz, J., Kamawar, D. and Penner‐Wilger, M., 2010. Pathways to mathematics: Longitudinal predictors of performance. *Child development*, *81*(6), pp.1753-1767.

*(Figure from World Bank Data 2016 Poverty in Europe – Hungary Country Policy brief).*

**Literature review**

KSH (2010): Közvetlen külföldi tőkebefektetések

Tarsadalmi (urban v rural)

*Current state of higher education supported with numbers*

*Already big differences. How many unis in Bp how many anywhere else. Centralised country.*

*Importance of available higher-level education for everyone*

*Diversity of Thoughts – why that a probable to not have equals student*

* <file:///C:/Users/botiv/Zotero/storage/WS9SL843/676150.html>
* [Wößmann - 2008 - Efficiency and equity of European education and tr.pdf](file:///C:\Users\botiv\Zotero\storage\3YBBWLLU\W%C3%B6%C3%9Fmann%20-%202008%20-%20Efficiency%20and%20equity%20of%20European%20education%20and%C2%A0tr.pdf)
* <https://www.sciencedirect.com/science/article/pii/S0272494405000575>