

Final Report

Principal investigator: Dr. Ádám Németh

Project title: Modeling of the dynamics of ethnic, religious, linguistic diversification and the potential effects on social cohesion within a new paradigm and conceptual framework of 'diversity studies' (Az etnikai, vallási, nyelvi diverzifikálódás dinamikájának, és a társadalmi kohézióra gyakorolt potenciális hatásainak modellezése egy új paradigma, a „diverzitás-kutatás” elméleti keretében)

Project number: PD115951, PD136608

Project duration: 01.01.2016 – 31.12.2019 (interruption: 01.04.2017 – 31.03.2018)

Host institutes: (1) University of Pécs, Institute of Geography and Earth Sciences, Department of Human Geography and Urban Studies. (2) University of Sopron, Alexandre Lamfalussy Faculty of Economics, Institution for International and Regional Economy: between 01.08.2019 and 31.12.2019.

1. Progress in the project

In the research proposal I presented the expected milestones and outcomes of the project in a yearly breakdown, as well as the planned forms of scientific publication. In this final report I will summarize the achievements according to “work packages”.

1.1 Processing relevant literature

One of the most time-consuming tasks during the whole research period was the collection and systematic processing of the relevant scientific literature. Since the topic had been a seriously under-researched one in the Hungarian literature, I found mostly English and German articles, books and project reports regarding:

- the conceptual framework of 'diversity studies' as a new, supra-disciplinary field of social science (e.g. Vertovec 2015);
- the multidisciplinary literature on the core notions of the investigation, such as identity, ethnicity, culture or multiculturalism (e.g. Kertzer and Arel 2002, Eriksen 2008, Feischmidt 2010), including papers aiming to bridge the gap between quantitative and qualitative approaches (e.g. Brown and Langer 2013, Williams and Husk 2013);
- the methodology of diversity measurement (Esteban and Ray 1994, Laitin and Posner 2001, Desmet et al. 2009, Koopmans and Schaeffer 2013, Schaeffer 2014 etc.);

- the concept of social cohesion (Pahl 1991, Bernard 1999, PRI 1999, Chan et al. 2006, Jenson 2010, Dickes and Valentova 2013, Bertelsmann Foundation 2013, 2016, Dragolov et al. 2016, Schiefer and Noll 2017);
- the case studies on the diversity–social cohesion nexus (Putnam 2007, Gijsberts et al. 2012, Laurence 2014, Sturgis et al. 2014, Harell and Stolle 2015, Dinensen and Sønderkov 2015 etc.).

1.2 Database building, data analysis, GIS work

In parallel with the previous work package, I focused on database building as well. During the first year I built topology: with the assistance of a student, Dávid Sümeghy, I compiled the georeferenced map of Europe on five administrative levels (settlements, municipalities, counties, regions and countries), and labeled the polygons in ArcGIS. Census data by ethnicity and native language from certain post-socialist Central and Eastern European countries were joined these units.

However, I realized that cross-European input data on social trust and social cohesion – as dependent variables – are available only on NUTS2 and NUTS3 levels. Therefore, I decided to focus on the analysis of the diversity–social cohesion nexus on regional level. An important part of the data collection exercise was the acquisition of country of birth and citizenship data on NUTS2 and NUTS3 levels. In case of most European countries these data are not available at all for the public. Thus, I had to get in touch with all national statistical offices one by one. Stock data on country level was provided by the UN (2015). Data by lower administrative level played crucial role in case studies about the Baltic States (municipalities), Sweden (communes) and Vienna (23 districts and 250 neighborhoods).

During the third year I collected religious data as well. In contrast to 'ethnic', country of birth or citizenship data, information on religious affiliation is even more difficult to access. Thus, I used the 'Swiss Metadatabase of Religious Affiliation in Europe' by the University of Luzern. The SMRE has been established to improve the data situation of religious affiliation and to provide more reliable data for further research. It provides detailed statistics and consolidated estimates on religious affiliation for European countries and regions.

Dependent variables on social cohesion (including the attitudes toward migration and cultural plurality) and social trust (e.g. generalized trust) were mainly based on datasets of the European Social Survey (ESS) and the European Quality of Life Survey (EQLS). Furthermore, the result of certain political elections were also collected and aggregated on municipality level in case of Sweden and Latvia.

Finally, I joined all input data (the dependent and independent variables too) on NUTS2 and NUTS3 levels in ArcGIS and QGIS. Therefore, it has become possible to classify European countries and regions by the degree of diversity and the direction of ethnic, ethno-cultural or religious diversification.

1.3 Modeling the dynamics of diversification

The main purpose of this work package was to gather and categorize the major diversity indices found in the international literature (Desmet et al. 2009, Baldwin and Huber 2010, Lancee and Dronkers 2011 etc.). While during the first year of my project I focused rather on the parallel application of certain indices to grasp the pace and directions of ethnic, linguistic or religious diversification (see e.g. my article entitled ‘Patterns of Ethnic Homogenisation, Fragmentation and Polarisation and the Vote Shares for Nationalist Parties in Latvia’ and my conference paper entitled ‘Spatial Patterns of Ethno-linguistic Diversification in the Baltic States’), the direction of my scientific activity somewhat changed in the second year.

I realized that the synthetic diversity indices may be better suitable for the purpose of analyzing the diversification processes. They are able to compress information on the number and proportion of as well as the degree of disparity between the groups into one single number; in other words: they are able to capture all three dimensions of diversity: ‘variation’, ‘balance’ and ‘disparity’ too. Since the great majority of these quantitative measures had been unknown in the Hungarian literature before my research project, I decided to elaborate a paper with an explicit focus on their methodological background (see: ‘A diverzitási indexek alaptípusai és alkalmazási lehetőségei az etnicitáskutatásban’). The analysis showed the relationships between these indicators, their advantages and disadvantages, and took account of their possible application in diversity studies. I pointed out that the basic types of these indices can be grouped by the form of diversity they measure (fragmentation or polarization), and whether they apply a weight or not.

During the second and third year of the project I tested the applicability of the synthetic indexes with empirical data. See the conference papers entitled ‘Ethno-cultural Diversification and its Impact on the Attitudes toward Immigration in Europe’, ‘Religious Diversity, Social Trust and Perceived Tensions. A cross-European Study’ or ‘Social Cohesion and Radical Right-wing Parties in Europe’ as well as journal articles such as ‘Competing Diversity Indices and Attitudes toward Cultural Pluralism in Europe’.

1.4 Conceptual framework to study the diversity–social cohesion nexus

Following this methodological line of thought, I paid particular attention to the development of a conceptual framework to better understand the diversity–social cohesion nexus. In order to answer the question how ethnic, ‘ethno-cultural’ or religious diversity and diversification influences community cohesion, first of all the core notion ‘cohesion’ had been clarified. Although its roots date back to the classic works of Tönnies (1887) and Durkheim (1897), social cohesion emerged as a relatively new concept in the 1990s (Pahl, 1991, Bernard, 1999). As the landmark report of the Bertelsmann Foundation (2013) summarized, it is the glue that holds of societies together. Jenson (2010) described five broad dimensions of cohesion: perceived social exclusion, perceived economic and ethno-cultural tensions, participation in society (civic engagement and political activity), interpersonal trust and the sense of community (attachment to people in the local area, e.g. interpersonal and intergroup contacts).

As important indicators of the fourth and fifth pillars of cohesion, I put people's general trust and their attitudes toward cultural pluralism into focus. I applied the results of the European Social Survey (ESS) and the European Quality of Life Surveys (EQLS). Both surveys have been monitoring the behavior patterns of the European population since the millennium. I joined the databases (independent and dependent variables) in SPSS and visualized the results in ArcGIS. I presented the results at a number of international conferences and summarized in peer reviewed journal articles.

1.5 Visualization of findings

Appropriate visualization is obviously a crucial part of a human geographical research project. Therefore, I paid particular attention to construct high quality thematic maps, diagrams and graphs. I created these figures in SPSS, MS Excel and QGIS or ArcGIS (and finally in CorelDraw) and presented the results mostly in Prezi.

2. Scientific output

2.1 Conferences

During the life span of the project I achieved and in many categories overfulfilled the "quotas" the research plan had previously defined (Table 1). First and foremost, I proposed to attend eight conferences and share my results with the scientific community in Hungary and abroad. Finally, I presented the following papers at five Hungarian and five international conferences:

- 1) VIII. Magyar Földrajzi Konferencia. Eger, Hungary. 25-26. 08. 2016.
Németh Á. 2016. 'Etnicitás, geográfia és a „kvantitatív – kvalitatív kérdése” a diverzitás-kutatásban’. [Ethnicity, Geography and the Quantitative vs. Qualitative Approaches in Diversity Studies]
- 2) ECPR General Conference. Prague, Czech Republic. 07-10. 09. 2016.
Németh Á. 2016. 'Spatial Patterns of Ethno-linguistic Diversification in the Baltic States’.
- 3) X. Magyar Politikai Földrajzi Konferencia. Budapest, Hungary. 20-21. 10. 2016.
Németh Á. and Sümeghy D. 2016. 'Etnikai diverzitás és a szélsőjobboldal megerősödése Svédországban 1991 után’. [Ethnic Diversity and the Far Right Gaining Ground in Sweden after 1991]
- 4) XV. Településföldrajzi Konferencia. Bük, Hungary, 05-06. 03. 2018.
Németh Á. 2018. 'Az etnikai diverzitás változásának térbeli mintái Bécsben’ [Spatial Patterns of Ethnic Diversification in Vienna]
- 5) 11th Equality, Diversity, Inclusion (EDI) Conference. Montreal, Canada, 13-18. 08. 2018.
Németh Á. 2018. 'Ethno-cultural Diversification and its Impact on the Attitudes toward Immigration in Europe’

- 6) XII. Régiók a Kárpát-medencén innen és túl Nemzetközi Tudományos Konferencia. Kaposvár, Hungary, 13. 10. 2018.
Németh Á. 2018. 'Migráció és etnokulturális diverzifikálás Európában' [Migration and Ethno-cultural Diversification in Europe]
- 7) III. Dimenziók Konferencia: "Diverzitás és homogenitás a történelemben, a társadalomban és a környezetben". Budapest, Hungary, 08-10. 05. 2019.
Németh Á. 2019. 'A diverzitási indexek szerepe a kulturális sokszínűséggel kapcsolatos attitűd vizsgálatában' [The Role of Diversity Indices in the Study of the Attitudes toward Cultural Plurality]
- 8) 11th Meeting of European Geographers of Religion: "International Colloquia on the Changing Religious Landscape of Europe". Prague, Czech Republic, 27-28. 06. 2019.
Németh Á. 2019. 'Religious Diversity, Social Trust and Perceived Tensions. A cross-European Study'
- 9) 7th Central European Conference in Regional Science. Sopron, Hungary. 09-11. 10. 2019.
Németh Á. 2019. 'Ethno-cultural Diversity, Perceived Tensions and Attitudes toward Immigration before and after the 2015 Refugee Crisis in Europe'
- 10) 7th Central European Conference in Regional Science. Sopron, Hungary. 09-11. 10. 2019.
Süimeghy D. and Németh Á. 2019. 'Social Cohesion and Radical Right-wing Parties in Europe'

My presentations reflected on:

- the theoretical background of diversity studies (Nr. 1),
- the methodology of diversity measurement (Nr. 5, 7, 8, 9),
- the spatial patterns of ethnic, ethno-linguistic, ethno-cultural or religious diversification in Europe (Nr. 5, 6, 8, 9) and in certain countries (Nr. 2, 4),
- the relationship between ethnic and ethno-cultural diversity and social cohesion or political radicalization (Nr. 3, 5, 8, 9, 10).

The conference papers entitled 'The role of diversity indices in the study of the attitudes toward cultural plurality' (A diverzitási indexek szerepe a kulturális sokszínűséggel kapcsolatos attitűd vizsgálatában) as well as the 'Ethno-cultural diversity, perceived tensions and attitudes toward immigration before and after the 2015 refugee crisis in Europe' summarized two main directions of my research project. Both are available online:

- <https://prezi.com/view/mzorFurz3VyEctz5iu4U/>
- <https://prezi.com/view/YRYFu31FV4X9cBfvTTdV/>

2.2 Abstracts

Regarding to the conference presentations mentioned above, I prepared scientific abstracts too. All of them were published in official conference proceedings with two exceptions. The list of the online available abstracts covers the following ones:

- http://www.foldrajzinapok.hu/media/com_acymailing/upload/MFN_2016_absztrakto tet.pdf
- <https://ecpr.eu/Events/PaperDetails.aspx?PaperID=31318&EventID=95>
- http://mpfk2016.konferencia-info.hu/media/com_acymailing/upload/programfuzet.pdf?3
- <https://www.edi-conference.org/userfiles/Montreal/Abstracts-by-stream-302018.pdf>
- <https://konyvtar.elte.hu/sites/default/files/hirek/dimenziok-iii.-konferencia-absztrakto tet.pdf>
- http://religion-landscape.cz/download/conference/11m_egr_book_of_abstracts.pdf

2.3 Papers in books and scientific journals

I planned to publish seven articles during the whole research period. Finally, I elaborated nine papers (two book chapters and seven journal articles), and eight of them were published or accepted for publication until 31.12.2019. Since my post-doctoral research project explicitly aimed to disseminate the findings among the Hungarian and the international scientific communities too, five of them have been written in Hungarian and four of them in English. Without exception, I am the only one or the first author. Three of the articles have been published in or submitted to Q1 journals which belong to the most prestigious journals in the world according to the Scimago ranking. One of them has an impact factor as well (Europe-Asia Studies: 1,350 in 2018; 0,883 in 2019) according to the Clarivate Analytics: Journal Citation Reports.

The article entitled 'Ethnic Diversity and Team Performance: A Cross-European Study on Professional Football Squads' was elaborated in late 2019 but it was submitted in 2020 to a Q1 journal (Cross Cultural and Strategic Management, impact factor: 1,838). Although it cannot be listed as a project output technically, I would like to mention this paper as an obvious continuation of my OTKA project regarding its methodology and its main goal to explore the potential impacts of ethno-cultural diversity (in this case on team cohesion and team performance).

To sum up, the list of articles contains the following items in chronological order. About the details of their main conclusions see the annual project reports.

- 1) Németh, Á. (2016). 'Diversity Studies: új társadalomtudományi paradigma?' [Diversity Studies: New Paradigm in Social Sciences?], *Regio – Kisebbség, Kultúra, Politika, Társadalom*, 24(2), 203-218.
- 2) Németh, Á. (2017) 'Etnikai sokszínűség és társadalmi kohézió' [Ethnic Diversity and Social Cohesion], *Kisebbségkutatás*, 26(1), 133-142.

Review: Merlin Schäffer (2014) 'Ethnic Diversity and Social Cohesion. Immigration, Ethnic Fractionalization and Potentials for Civic Action,' Ashgate.

- 3) Németh, Á. and Mezs, I. (2018) 'Spatial Patterns of Ethnic Diversification and Homogenization in interwar Latgale,' *Ethnicity*, 15(1), 32-54.
- 4) Németh, Á. and Sümeghy, D. (2018) '*Migráció és diverzitás. Globális és európai trendek 1990 után*' [Migration and Diversity. Global and European Trends after 1990], In: Pap N. and Szalai G. (Eds.) 'Táj geográfus ecsettel'. University of Pécs, 237-248.
- 5) Sümeghy, D. and Németh, Á. (2018) '*Etnikai diverzitás és a szélsőjobboldal megerősödése Svédországban 1991 után*' [Ethnic Diversity and the Far Right Gaining Ground in Sweden after 1991], In: Reményi, P. and Pap, N. (Eds.) 'Az iszlám és Közép-Európa. Geopolitika és migráció'. Proceedings of the 10th Hungarian Political Geographical Conference'. 267-277.
- 6) Németh, Á. (2019) 'A diverzitási indexek tipizálása és alkalmazási lehetőségei az etnicitáskutatásban' [Diversity Indices and their Potential Application in Ethnic Studies], *Tér és Társadalom*, 32(2), 130-148.

WoS Emerging Sources Citation Index

<https://tet.rkk.hu/index.php/TeT/article/view/3123>

- 7) Németh, Á. and Dövényi, Z. (2019) 'Patterns of Ethnic Homogenisation, Fragmentation and Polarisation and the Vote Shares for Nationalist Parties in Latvia,' *Europe-Asia Studies*, 71(5), 774-804.

Impact factor: 0.842

Q1: Sociology and political science; Geography, planning and development; History (WoS, SCI, SJR)

<https://www.tandfonline.com/doi/full/10.1080/09668136.2019.1604945>

- 8) Németh, Á., Sümeghy, D., Trócsányi, A. and Pirisi, G. (accepted for publication, forthcoming in 2021) 'Competing Diversity Indices and Attitudes toward Cultural Pluralism in Europe,' *Equality, Diversity and Inclusion: An International Journal*. DOI: 10.1108/EDI-02-2019-0087

Q1: Cultural studies (WoS, SCI, SJR)

- 9) 8 + 1: Németh, Á., Pirisi, G., Trócsányi, A., Reményi, P. and Sümeghy, D. (elaborated in 2019 and submitted in early 2020) 'Ethnic Diversity and Team Performance: A Cross-European Study on Professional Football Squads,' *Cross Cultural and Strategic Management*.

Impact factor: 1.838

Q1: Sociology and political science; Cultural studies; Strategy and management; Business and international management (WoS, SCI, SJR)

	Year 1.		Year 2.		Year 3.		Sum	
	Proposed	Fulfilled	Proposed	Fulfilled	Proposed	Fulfilled	Proposed	Fulfilled
Conferences	2	3	3	3	3	4	8	10
Abstracts	2	3	3	3	3	4	8	10
Reviews	2	1	0	0	0	0	2	1
Articles	1	1	2	3	2	3 + 1	5	7 + 1
SUM	7	8	8	9	8	11 + 1	23	28 + 1

Table 1. Summary of the scientific output of the project

3. Potential effects on the development of the Hungarian social sciences

At the moment it is difficult to estimate the long-term impact of my OTKA project on the development of the Hungarian social sciences but there are some positive signs. My paper entitled ‘Diversity Studies: új társadalomtudományi paradigma?’ was the first journal article in Hungarian language which introduced the theoretical background of ‘diversity studies’ as a new, cross-disciplinary field of science. Three papers have been cited this article so far, including: Kovács, Z. and Szabó, B. 2017 ‘A városi diverzitás jellemzői Budapesten a rendszerváltozás után’, *Regio* 25(4), 57-79. Moreover, my studies inspired and contributed to the elaboration of a PhD dissertation as well at the University of Szeged. (See: Horváth, D. 2019 ‘A városi diverzitás és a városrehabilitáció kapcsolatának társadalomföldrajzi vizsgálata Józsefvárosban’ [A human geographical analysis of the relationship between urban diversity and urban renewal in Józsefváros]. Doctoral thesis, 146 p.).

Last but not least, it is worth to mention the role of Dávid Sümeghy who was a student assistant during the first year of my post-doctoral project. His tasks included mainly assistance in database building (data collection by ethnicity, mother tongue, religion etc. according to the available censuses) as well as GIS work (digitizing, topology building). However, this mutually beneficial cooperation led to the intensification of Dávid’s own research activity too. Based on the concept and the methodological toolkit of diversity studies he won a special prize at the OTDK conference in Debrecen (10-13. 04. 2017) in the Political and Historical Geography Session with a paper entitled ‘The effects of ethnic diversity on the Swedish far right’s election results’. Later he became a PhD student at the Doctoral School of Earth Sciences at the University of Pécs. During the life span of the project he was my co-author in case of two conference papers and four articles.

4. Summary

Put succinctly, my post-doctoral OTKA project aimed to answer the following research questions: How can we define and model the process of ethnic, religious, linguistic diversification of the societies, and what can be the potential impacts on social cohesion? To sum up, my project was able to reach the expected goals.

- I reviewed the international literature of diversity studies and integrated its conceptual framework into the Hungarian scientific discourse.

- I explored the connections between human geography and diversity studies and suggested potential solutions to bridge the gap between quantitative and qualitative approaches.
- I applied different methods of measuring diversity (FI, PI, CED, GI, PHI, entropy) and modeling the dynamics of diversification (see e.g. the parallel use of fragmentation and polarization indices with or without weight factors).
- I constructed a synthetic ethno-cultural diversity index with an innovative solution to integrate “cultural distances” into the formula (based on the World Values Survey and Welzel’s (2013) factor scores).
- Based on 1,000 randomly generated ethnic compositions of a hypothetical settlement, I drew general conclusions on the relationships between the basic types of diversity indices. Although the Pearson’s correlation coefficients have been found to be relatively high in all cases, the spread of points for medium and high values is remarkable. For example, significantly different weighted values may belong to the same unweighted values, even if the proportions of ethnic groups are the same. Recognising this phenomenon can make a meaningful difference in assessing the potential social, economic or political impact of diversity. However, the application of these indices is particularly important in dynamic analyses (i.e. value changes between two points in time), because they can provide an accurate solution for measuring the pace and directions of homogenisation or heterogenisation.
- The choice of the optimal method depends on the research context, but there are several aspects to consider. My paper entitled “A diverzitási indexek tipizálása és alkalmazási lehetőségei az etnicitáskutatásban” (Diversity Indices and their Potential Application in Ethnic Studies) aimed to assist scholars in selecting suitable diversity indices in ethnicity research. Thus, the methodological toolkit mentioned above may provide an appropriate basis for future research activities, e.g. targeted field works and qualitative case studies.
- I detected and classified European areas on country and regional level where different types of diversity compositions and different directions of diversification are taking place.
- Through selected examples (case studies of the Baltic States, Sweden and Vienna) I analyzed the causes and circumstances of the diversification processes and their expected directions.
- Some of my findings regarding the relationship between ethnic and ethno-cultural diversity and social cohesion are the following.
 - I found empirical evidence that the polarization effect does matter indeed. In ethnically bipolar and/or polarizing cities of Latvia a higher proportion of Latvians and Eastern Slavs support their ‘own’ ethnocentric parties than elsewhere. This phenomenon might be related to the ‘minority backlash’ hypothesis.
 - The impact of ethno-cultural diversity on the popularity of extreme right-wing parties is not significant in Sweden. However, the dynamic analysis between 2006 and 2014 showed that the highest increase in the share of voters for the

Sweden Democrats was taking place in relatively homogeneous but rapidly diversifying municipalities.

- The macro-level, cross-European empirical studies (17 countries, 160 regions) regarding the nexus of ethno-cultural diversity and social cohesion (including social trust and the attitudes toward immigration and cultural pluralism) seem to confirm the contact hypothesis. In general, the more diverse a population of a country or a NUTS2 or NUTS3 region is, a more positive attitude is expressed, based on the input data of the European Social Survey. But dynamic analyses suggest that people tend to react very differently to similar diversification processes in their living environments (no clear trend; spread of the values). Ethno-cultural diversification per se does not have a direct impact, thus further socio-economic, political etc. factors will be required to explore the causal relationships in the future.
- Based on the methodological approach of my OTKA project, I and my colleagues at the University of Pécs seek answer to the question whether ethno-culturally diverse football teams perform better than the more homogeneous ones? Our macro-level, cross-sectional empirical study covered ca. 25,000 football players in 692 top-division clubs from 53 UEFA countries. Our findings seem to confirm the information-processing theory, which emphasizes the positive effects of heterogeneity. Technically, this paper cannot be mentioned an output of my postdoctoral project because it was submitted in 2020 only. However, it obviously demonstrates that the accumulated knowledge on diversity measurement can be used to practical goals too, even outside of the classic fields of social science.