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Contemporary sustainability challenges
and novel solutions in the domain of
autonomous authorities

Angol nyelvű tézisfüzet · Thesis Booklet in English

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1. Introduction – Research background

It is stated in Article 3 of the Treaty on European Union that the European Union „shall work for the sustainable development of Europe”. By way of transition to sustainability, which is ensured by the integration of the ideals of sustainability into policy, sustainable development becomes a part of the every day lives of European citizens. The requirements of sustainability must also be integrated into the various processes of decision-making on member state level as well as on subnational level, within the European Union’s framework. In my dissertation, I research the connection between sustainability transitions and the governmental sphere in the middle of the 2010s, following the 2008 global economic crisis. The UN’s Stiglitz Commission urged paradigm shift and systematic reforms. In my dissertation, I put forward proposals for the harmonisation of the UN’s, the EU’s and the local communities’ strategic objectives, as well as innovative methods for their implementation.

Based on Agenda 2030, local communities increasingly become significant actors in the paradigm shift and the transition. However, their success depends greatly on their resources, and the legal, economic and social circumstances. The success of the government departments, in particular the local municipalities, in managing these duties is predestined by the size of the public administration unit, in terms of geography, economy, and demography, as well as the delegated duties. It is expected that through the increase in significance of the lower administrative units, the duties shall shift toward the local level, and the distribution of duties will be transformed. From among the various levels of government, the synergy between bottom-up and top-down initiatives must be found, and must be exploited. To achieve this, partnerships between the levels and a pragmatic distribution of duties are necessary. These efforts could be assisted by a European Union which is more federalised, more homogeneous in public administration than now, and could contribute more to the distribution of duties, and thus could participate more directly in fulfilling the duties of sustainability efforts.

In my dissertation, I explore novel options for harmonisation serving the European Union’s sustainability transitions. Through the hierarchical structure, I progress from general to specific, from macro to micro level. In my dissertation, I assess the questions pertaining to the

interpretation of sustainable development; I will review the international implementation, the legal background of sustainability efforts; and I will clarify the sometimes confusing relationship between sustainable development and climate change.

In my dissertation, I will produce all my assessment from the perspective of the government sector, in particular the level nearest to the people, the local municipality sector. I will evaluate the current European public administration structure's sustainability aspects as well as a new method of cooperation and coordination, and I will justify the functionality of innovative urban management. My aim is to contribute to the reconstruction of the sustainability-conscious European public administration, the deepening of the future-conscious vision, the decrease in government expenditures, and last but not least the integration of social initiatives.

2. Research question, hypothesis and objectives

In my dissertation, I researched the following question:

Research question

What innovative solutions are available for the harmonisation of the objectives of sustainable development, the strategic plans and social initiatives, in various levels of public administration, in particular regarding the unfavourable macroeconomic/macroeconomic circumstances, at (1) the European Union's member state level, (2) the transnational level, and (3) local level?

In my dissertation, essentially, I researched this questions, which may essentially be answered theoretically. In view of the theoretic background, based on the research questions, I formulate the following hypotheses:

Hypothesis 1

The rationalisation of European Union member states' public administration and functions, recovering from economic crisis, created potential for the harmonisation of sustainability efforts on various levels.

Hypothesis 2

The gaps of the transnational governance of the sustainable development transitions may be filled by the open coordination mechanism, and new means of cooperation may then be established.

Hypothesis 3

The urban symbiosis model provides opportunity for local governments and stakeholders to project and harmonise integrated sustainability (economic, social and environmental) objectives.

The hypotheses will be supported by fulfilling the following objectives:

Objective 1:

The objective of the thesis is to demonstrate the features of the current form the European public administration structure: the fragmentation; the incoherence among the delegated duties; the challenges in subnational management and harmonisation arising from thiis; and their impeding consequences concerning sustainability efforts. It is also an objective to feature a prominent European subnational public administration reform strategy, which manages the abovementioned features and provides for a better integration of the sustainability objectives.

Objective 2:

It is the objective of the thesis to demonstrate the preconditions and limits of the applicability of the *open coordination method* supporting the harmonisation among sustainability objectives of the European level, the member state level and the transnational level.

Objective 3:

It is the objective of the thesis to outline an innovative urban management model for the reorganisation of the management of local governments, and to prove the preconditions and limits of the practical applicability of the *urban symbiosis model*.

3. The structure of the dissertation

The first chapter of my dissertation presents the research topic; following the subject, the objectives, the structure of the dissertation and its limits, the hypotheses and the applied methods are presented.

In the second chapter, I assess the questions pertaining to the interpretation of sustainable development; I review the international implementation, the legal background of sustainability efforts; and I clarify the relationship between sustainable development and climate change, and the current state of strategic climate protection.

In the third chapter, I demonstrate the role played by governments in sustainability transitions. The presentation of the theoretical background of governments' delegation of duties is followed by innovative solutions for the delegation of duties and the review of governance and sustainability from a political science perspective.

In the fourth chapter, I demonstrate the public administration renewal of a European way to a federation; starting with an overview of the current federalisation process of the EU, the

analysis of the Hungarian public administration structure, the review of the public administration structure of other member states, and the demonstration of the prominent reform strategies.

In the fifth chapter, I present innovative organisational methods and tools for the coordination of governance. In doing so, I present the open coordination mechanism, its applicability, pre-conditions and limits.

In the sixth chapter, I rethink the operation of the level of local governance with the help of an innovative urban management model. Following the presentation of the model and theoretical support for its operation, I describe the conditions and limitations of its practical applicability.

Finally in the final seventh chapter I sum up the findings of my dissertation, I present my theses, and I provide an outlook on the possible direction of the continuation of the research, and the research questions to be addressed in a later research.

4. The scope of the research topic

My dissertation was written from the perspective of an economist specialized in environmental and spatial development, researching the harmonious relationship between public administration systems and sustainability efforts. While my topic touched upon engineering and mathematics on numerous occasions, no less were legal sciences, political sciences and a number of other applied or theoretical sciences touched upon, thus forcing me to limit my research to my knowledge of these fields.

It was not and nor could it have been the objective of my dissertation to provide an overview of the European Union's whole sustainability; both limits in length and legal sciences considering their diverse issues have rendered this will impossible. It was also not the intention of my dissertation to explore state management, democracy theory and the issues of sovereignty

from all scientific aspects, with philosophical foundations – although it was necessary to touch upon these areas in order to construct the reasoning behind certain ideas.

There were only limited possibilities to perform statistical assessments: based on my previous experiences and prior literature review, I concluded that any further statistical assessment not included in my dissertation, based on *ab ovo* distorted data and forced mathematical models shall be omitted as the results themselves would be distorted or disproportionate. Instead I opted for the seemingly softer but, in social sciences, broadly and reliably used method of qualitative analysis, to support my theses with in-depth interview research.

I consider the internal management, and the microlevel decision-making as well as the management techniques within an corporation to be out-of-scope, instead I deal with these as local legal entities, as sources and consumers of material and energy flow.

Moreover, since government structures may not be researched through for example experiments, I had to choose other, more applicable methods, thus I opted for comparison and analogy.

5. Methodology

From the perspective of the methodology, there is a fundamental conflict I had to resolve: considering the area of my research topic, verification through economic modelling or classic mathematics, is almost impossible, therefore in their place softer methods must be applied. The assessment of the success, the impact and the efficiency of innovative solutions, replacing the current administration-management structures in the 21st century (most importantly: networking), is almost impossible, or the results (projections) must be used with caution.

The condition for the usability of the necessary data sets required for empirical economic modelling is the existence of targeted data collection, or data that may be considered reliable within well-established boundaries be generated. The particularity of sustainability econom-

ics is that only recently have some of the key concepts made their way into mainstream economics. The inherent information demand of the heterodox schools of environmental and ecological economics is sparsely satisfied by sporadic data collection, and systemic data acquisition is virtually absent. Furthermore, data that has been generated will be reliable within rather large error margins. As with local authorities experimentation is impossible, hypothetical scenarios may be analysed through interviews.

Regarding methodology, from among the different areas¹ of theoretical methods, comparison and analogy may be applied. However from a different view it must be noted that concerning sustainable development, other, non-scientific methods may also be important, such as personal experiences, intuition, traditions and individual conclusions, not free from subjectivity. (Fűr, 2015, p.12.) It is highlighted by Fűr, that the evolution in methodology due to the sequential paradigm shifts often times depends on if and when a non-scientifically acknowledge method becomes scientifically acknowledge, or vice versa. (Boros *et al*, 2013, in: Fűr, 2015) It is not rare that something new, creative and progressive is born from methods that were previously considered to be incompatible. Fűr points out that the popularity of mathematics derives from its applicability on a broad spectrum, however its excessive dominance in certain scientific fields, where less abstract methods are necessary, may prove to be threatening. (Maródi, 2003, p.15., in: Fűr, 2015, p.13.)

During my research, I strove to quench the structural and procedural deficiencies with synergies of complementary scientific fields: in my dissertation I did this through sustainability and regionalism, sustainability and political science, and sustainability and spatial administration harmonisation. In my dissertation I follow the vertical division outlined by Iván Illés in regional economics: issues of sustainability affecting public administration are addressed at supranational and transnational (or EU-level, or macroregional), and subnational levels. According to Illés, on different levels, different scientific fields are invoked, thus issues at lower levels are addressed mostly from a technical and management perspective, while on member state level

¹ Tomcsányi lists the following theoretical methods: analysis and synthesis, comparison, abstraction, generalisation, induction and deduction, analogy, hypothesis and mathematics.

rather public administrative and legal sciences are applied, and above these legal and political sciences apply. (Illés, 2008) From a methodology perspective, I follow this structure.

In my thesis I reviewed the existing literature for the definitive and accepted interpretations of sustainable development and assessed the questions of interpretation, as well as the relationship with the efforts for climate protection. I also reviewed the existing literature on the theoretical questions relating to sustainability and governance as a discipline of management, and the dilemma regarding the delegation of duties to preexisting structures, and the adjustment of public administration to the duties. By reviewing the existing literature, I presented the foundations for the networking of public administration. In a similar manner, I presented the open coordination mechanism, as an extraordinary public administration harmonisation tool and the conditions for its applicability in order to achieve sustainability goals. Finally, based on the existing literature I explored the circular economy as the theoretical foundation of the urban symbiosis urban management model. Within this framework I went on to analyse the theoretical and practical application of the industrial ecology. Subsequently, as a result of my empirical research (in-depth interviews) I presented the preconditions and the limits of the practical applicability of the urban symbiosis model in Hungary.

6. New scientific findings

In my thesis, I approach the resolution of the issues regarding sustainability on three different levels of public administration. The three levels are that of the European, the transnational and the subnational (local/sub-regional).

First, I presumed that the fact that EU member states are recovering from the 2008 economic crisis creates a potential to incorporate the sustainability efforts within its competence into the subnational (below member state level, that is) rationalisation of public administration, and for the coordination of lower level efforts. Bearing in mind the exclusive competence of the EU member states on forming the public administration system, but questioning its legitimacy, I made the following findings during my research. I established that Europe's public

administration structure is extremely fragmented and heterogenous. (Horváth és Szlávik, 2011, p.10.) Whereas in certain member states there are too many public administration levels on the lowest level (e.g. France, Hungary, the Czech Republic, Slovakia, and notwithstanding the reform efforts Germany, Italy and Spain) (Horváth és Szlávik, 2012, pp.4-8.), others, following comprehensive reforms, managed to significantly decrease the number of public administration units, while maintaining the democratic control (e.g. Denmark, Sweden, Greece, the Netherlands).

In consequence to the structural diversity the delegation of duties, their distribution on various levels, remains member state competence: presently, the EU's level is too far from the lower levels, while the lower levels do not dispose of holistic information. (*idem*, p.9) The sub-national distribution of duties, besides carrying certain common traits, induced very particular solutions in certain member states. However, mostly due to the cost-sensitive structure and the will to reach profound rationalisation, a significant part of the duties is concentrated on member state (central) level in multiple cases. The governments try to delegate these duties to lower levels partially through deconcentration, but in practice, in many cases, these duties are delegated based on executive competences, and through decision-making. The side effect of the decision-making getting ever more distant from the citizens, is that local initiatives remain mostly undiscovered. (Horváth és Szlávik, 2010, pp.1255-1257.)

There exists however a public administration reform strategy that is currently implemented with examples in Scandinavia, the Balkans (Horváth és Szlávik, 2012, p.99.), and the Benelux countries, which may probably be successful in other regions as well regarding its sustainable development goals and the local efforts. Although most member states in the European Union don't have a comprehensive public administration reform on their agenda, the member states continuously correct and restructure their public administration structure and institutions due to the everchanging duties. We may assume that with the deepening of the European integration the public administration and management solutions as well as the *best practices* will spread across borders.

Thesis 1

The significant heterogeneity and fragmentation of the subregional, district and local public administration units in virtue of rationalisation points the distribution of duties in the direction of centralisation, in particular among the countries that had changed their regimes, which consequently deteriorates the possible integration of bottom-up sustainability initiatives. There exists a public administration reform strategy that is currently implemented with examples in Scandinavia, the Balkans and the Benelux countries, which may probably be successful in other regions as well regarding its sustainable development goals.

Related publications: 1, 2, 4, 7.

Secondly, I searched for an innovative method for harmonisation (Horváth, 2011b, p.71.), which did not require the restructuring of the public administration, for the resolution of the governance deficiencies in sustainability efforts among the EU, the member states and the sub-national public administration levels. (Horváth és Varga, 2012, pp.110-114.)

Elinor Ostrom discusses the issue of the optimal level of fulfilling public duties and examines how harmonisation may be possible among the objectives of the various institutional levels while maintaining the institutional system. (Horváth és Harazin, 2011b, p.1306.)

In order to rationalise its operation and to improve the coordination among the various stakeholders, the European Union created the open coordination mechanism, as a decision-supporting mechanism which does not interfere with the competences but promotes its success. While in the European Union traditionally the community method is dominant, in certain

cases we may reach better (more balanced, consensual) results, if the stakeholders with various competences use a different kind of method for coordination in place of the traditional decision-making mechanisms. (Horváth és Varga, 2012, pp.114-117.)

Essentially, the method entails that a working group is set up for fulfilling well-defined coordinational-harmonisational duties, whose members represent various institutional levels, with an interest in the outcome, and whose democratic authority is clear.

The open coordination method, as a soft law tool, may probably be applied in the harmonisation of the sustainability efforts among the public administration levels, as

1. there is no conflict with sovereignty and key competences;
2. its procedures are well defined;
3. the decision-making is cyclic and not sequential, therefore benchmarking and governance according to social pressure is possible;
4. it may be observed that the network among the various policy areas, which reflects the European Unions own and the member states' institutional system.

The open coordination method's applicability is limited in the harmonisation of the sustainability efforts among the public administration levels. In order to avoid the democratic deficit, the full-scale democratic control must be guaranteed in addition, which not necessarily means a voting but a dialogue-based democratic procedure. (Horváth és Varga, 2012, pp.118-120.) Moreover, this method may only be applied in pre- and well-defined conditions, which may in extraordinary circumstances quench conflicts but does not substitute permanently the traditional means of decision-making.

Thesis 2

Besides the future-conscious, a sustainability approach has also started to become a part of the European culture, whose common features has increasingly been demonstrated within its diversity. The bottom-up social initiatives are in accordance with the objectives of the UN's Agenda 2030 and the European Union's EU2020. The cooperation and the sustainability efforts may be harmonised through the open coordination mechanism at the levels between the global and local level.

Related publications: 2, 3, 6, 8.

Regarding the second hypothesis of my dissertation, I explored within the framework of the theory of circular economy a novel urban management model based on industrial ecology. This model enables governments and stakeholders to project and harmonise integrated sustainability (economic, social and environmental) objectives.

With the penetration of the idea of the circular economy, the concept of industrial ecology was highlighted again as one of the means of closing the open material and energy chains. In the traditional approach of industrial ecology, the main role was played by the enterprises, governmental participation was limited to mostly legislation and as audit authority in the process. Later, municipalities also appeared in the circular but their contribution was merely limited to their waste, and they did not appear as consumers at all. I viewed this step, as an incomplete, interim state and instead formulated the urban symbiosis urban management model. Essentially, the model means that the municipality also participates in the symbiosis of the settlement as a consumer in order to reduce the costs of the duties delegated to it, as well as the residents. (Horváth és Harazin, 2016)

The most promising area for the applicability of the model is the energy system switch, the harmonisation of its local and higher level objectives, and the integration of the strategic planning process. There are three factors impeding its practical application in Hungary:

1. companies operating with large material and energy flows are missing from the local economic structure, and there are only a few in the country at all;
2. as a result of the spatial structure of the country, only a few settlements exist whose size would allow the simple closing of the open material and energy chains;
3. the legal surroundings, including the legal status, the acts on the autonomy and the management of local governments have numerous, known elements which may limit the autonomous efforts of the local governments. (Horváth, 2017)

Thesis 3

Besides the theoretically established applicability of the „urban symbiosis urban management model”, there are three discovered limitations to the Hungarian application of it: (1) companies operating with large material and energy flows are mostly missing from the local economic structure, and there are only a few in the country; (2) as a result of the spatial structure of the country, only a few settlements exist whose size would allow the simple closing of the open material and energy chains; (3) the legal background does not grant the settlements future-conscious initiatives – with settlements with significant savings as only exceptions to this.

Related publications: 9, 10.

Relevant scientific publications

1. **Horváth György Ádám**, Szilávik János (2010): In-Sync With Stakeholders: Corporate Social Responsibility on Local and Sub-Regional Level. In: Horvath I, Mandorli F, Rusák Z (szerk.) Tools and Methods of Competitive Engineering. Proceedings of the eight international symposium. Vol. I. Delft University of Technology, 2010. pp. 1245-1257. ISBN: 97890-5155-06-3
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2. **Horváth György Ádám** (2011a): Administrative systems and reforms across the European Union – towards sustainability? Periodica Polytechnica, Social and Management Sciences 19/2 (2011) 75-85. ISSN 1416-3837
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3. **Horváth György Ádám** (2011b): Reforming Administrative Systems: on the road towards a Sustainable Europe. In: László Balogh, Dietmar Meyer, Heinz-Dieter Wenzel (szerk.) Analysis of Monetary Institutions and Space. 140 p. Konferencia helye, ideje: Kaposvár, Magyarország, 2010.11.17-2010.11.19. Bamberg: BERG-Verlag, 2011. pp. 67-81. Public Economics Series; 21, ISBN:978-3-931052-94-2
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6. **Horváth György Ádám**, Harazin Piroska (2011b): Making Ends Meet: The Challenges of Investing In And Accounting For Sustainability. Conference Proceedings - World Academy of Science, Engineering and Technology 2011. Konferencia helye, ideje: Venice, Olaszország, 2011.11.28-2011.11.30. Connecticut: World Academy of Science, Engineering and Technology (WASET), 2011. pp. 1304-1308.
Nemzetközi konferencia kiadványában megjelent idegen nyelvű előadás (Scopus)
7. **Horváth György Ádám**, Szilávik János (2012). Το τοπικό-περιφερειακό επίπεδο βιωσιμότητας (To topikho - mikhroperifereiakho epipedo biosimotitas), In: Sifis Balyrakhis, Stergios Babanasis (szerk.) Καλλικρατής: Βιωσιμα Μοντελα Περιφερειακισ Αναπτυξης: Η Περίπτωση Της Κρητης (Kallikratis: Biosima Modela Periferiakis Anaptyxis: I Periptosi Tis Kritis). Athén: Papazisi, 2012. pp. 85-104. ISBN 978-960-02-2662-1
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8. **Horváth György Ádám**, Varga András (2012): Bridging Gaps in Climate Change Mitigation and Adaptation: Overcoming Government Shortfalls and Exploring New Forms of Cooperation. PERIODICA OECONOMICA 5:(1) pp. 109-124. (2012)
Folyóiratcikk, lektorált, Magyarországon megjelent idegen nyelvű
9. **Horváth György Ádám**, Harazin Piroska (2016): A framework for an industrial ecological decision support system to foster partnerships between businesses and governments for sustainable development. JOURNAL OF CLEANER PRODUCTION 114: pp. 214-223. (2016)
Folyóiratcikk, lektorált, Web of Science adatbázisban szereplő, idegen nyelvű
10. **Horváth György Ádám** (2017): A városi-ipari szimbiózis településszervezési modell alkalmazhatósági vizsgálata a Jászkerület települési önkormányzatai példáján keresztül. Pro Publico Bono – Magyar Közigazgatás. (megjelenés alatt)
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