

INFORMATION AND COMMUNICATION TECHNOLOGY BASED REGIONAL DEVELOPMENT STRATEGIES IN HUNGARY

STRATEGIJE REGIONALNOG RAZVOJA U MADŽARSKOJ ZASNOVANE NA INFORMACIJSKOJ I KOMUNIKACIJSKOJ TEHNOLOGIJI

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Abstract: *After the creation of the national information strategy regional development also recognised the importance of this topic in Hungary. Regional Information Society Strategies formulated several development directions and suggestions, which however, did not reach their aims. Interviews with regional development agencies confirmed that the efficiency of the strategies is below expected. Due to lack of allocated financial sources these strategic plans seem to be only bookshelf documents with no influences on regional inequalities. On the other hand there are also examples on successful development tools, but those have only indirect connections with regional information strategies.*

Key words: *regional development, information society, information and communication technologies, Hungary*

Sažetak: *Nakon osmišljavanja nacionalne informatičke strategije regionalnog razvoja ovoj se temi u Mađarskoj pridaje značaj. Regionalno informatičko društvo osmislilo je nekoliko smjernica razvoja i dalo upute koje nisu postigle željene ciljeve. Razgovori s regionalnim agencijama za razvoj potvrdili su da je učinkovitost strategija ispod očekivanja. Zbog nedostatka financijskih izvora ovi su planovi mrtvo slovo na papiru. S druge strane postoje primjeri uspješnih razvojnih alata koji imaju samo indirektnu vezu s regionalnim informacijskim strategijama.*

Ključne riječi: *regionalni razvoj, informacijske i komunikacijske tehnologije, Mađarska*



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1. Introduction

The influence of recent years' international flows made it necessary in Hungarian strategies of regional competitiveness to include the topics of information society development as well. After the creation of the national information strategy regional development policy also recognised the importance of this theme, or at least its possibilities. Regional Information Society Strategies were created, which formulated several development directions and suggestions, which however, did not reach their aims. Therefore the objective of this paper is to introduce the plans and experiences, as well as to reveal the real possibilities of the application of this development tool. After presenting main features of the Hungarian information society strategies and their regional implications, the experiences of these documents will be reviewed as well as an examination will be presented on the still significant differences of regional information society competitiveness. This picture on inequalities aims at reflecting different regional and structural problems, which should be taken into consideration when making future regional development plans.

2. Information society development and regional information society development in Hungary

As most development policy instruments the tool of information society development can be defined among wide conceptual borders. According to researchers' experiences [1] problems appear already at the definition of information society or information economy, to which the diversity of development tools – including regional development instruments – is added [2]. Comprehensively it still can be asserted that information society development and regional information society development has the aim to take advantage of the opportunities given by the information and communication technologies (ICT), as well as to steer the changes caused by these appliances to a positive direction for the society [3]. This obviously comes from the thought that the progressive development of information society has beside the numerous positive consequences a lot of negative influences as well. It can be mentioned for example that not all of us can take part the same way in information society, namely new regional and social inequalities may evolve. By the recognition of this the first plans, programs or strategies took shape already at the beginning of the '90s in order to act upon the new environment and requirements of the information age. Information strategies are the most stressful tools within information society development. This strategy heightens the development of information infrastructure, the informatization of social systems and IT-industry policy (or the development of information economy), hence making a uniform platform to perspective plans. In many cases information strategies are communicated just as information society development programs, with direct concentration of governmental resources and systematic realization of long-term operative programs. The Hungarian way of national and regional information society development was of course not without preliminaries: it followed basically the EU trends. The European

strategic documents, such as the "White Book" in 1993, the "Bangemann-report" in 1994, "eEurope" in 1999, "i2010" in 2005 etc. had a significant influence on Hungary's information development policy. Hungary recognised the necessity of the development of the information infrastructure relatively early (in the form of the Information Infrastructure Development Program or later the National Information Strategy, and National Information Infrastructure Development Program). Real information development program was however only created in 2001 (National Information Society Strategy), which later was developed to the most important document of the Hungarian Information Society Strategy [4] in autumn 2003. This national strategy formulated both plans for 10-15 years and accentuated programs for 2004-2006. The document's main system of aims were formulated in accordance with the strategies of the EU highlighting topics like the enhancement of economic competitiveness, the improvement of life quality, or the broadening of the application of ICTs, which henceforward represent an infrastructure-oriented way of development. The real – empirical – operation of development policy of information society raises some questions at the same time: as far as the main aspect of the policy is concerned, it seems that information society development is not a primer direction of horizontal development, but only a side-line, therefore development acts were only done since they coincide with development directions of other branches. The regional side of the Hungarian Information Society Strategy is represented by Regional Information Society Strategies (RITS), which assign regional aims of development. These documents are following primer concepts of eEurope and the national strategy, but in accordance with the previously created local or regional programs and concepts. The main goal of preparing IT strategies was the determination of tasks, which could be made during information society development more efficiently on local or regional level than on the level of central government. As a result of the 66/2004 Governmental order regional development councils received 140 million HUF to accomplish information society development programs fittingly to the expectations of the Ministry of Informatics and Broadcasting. The aim of the decentralised usage of this money was to create the regional strategies (or to actualize the previously prepared ones), additionally the detailed elaboration of programs and projects in relation with information society, which could be served as bases for applications to EU tenders, as well as for the creation of a regional monitoring system of the society. Regional Information Society Strategies were accomplished in 2004-2005 in all regions. They include all the plans, which were needed to achieve by the regions during the period of the Hungarian Information Society Strategy, namely in 10-15 years. Documents were prepared by regional agencies or passed out to companies, so thus people could take part in planning, who really see the possibilities hidden in the region and know the region-specific characteristics and local problems. Regional Information Society Strategies formulated typically the same strategic aims (development of information infrastructure, implementation of e-government, creation of knowledge based economy and society etc.), since they had to fit in with national development strategies. The regions aimed at including all national development directions in regional documents, but with different weights. The region

of Central-Hungary formulated a significantly different aim (putting the reduction of inequalities and the society-cantered development in the foreground) than the region of South-Great Plains (naming the expansion of ICT in order to advance life quality). According to experiences generally the more developed a region, the more significant shift can be seen from infrastructure development to the direction of human resource development. This is justified also on *Figure 1.*, which represent structural inequalities calculated and drawn upon the factors of information society of the regions. This regional structural model reflects the level of information society development by giving a comprehensive picture on regional characteristics. Beside that the model shows the variance of regions, and make possible to see also the structural disproportions of the regions, for example by demonstrating the deviation from the average in infrastructural factors or in the level of qualification.

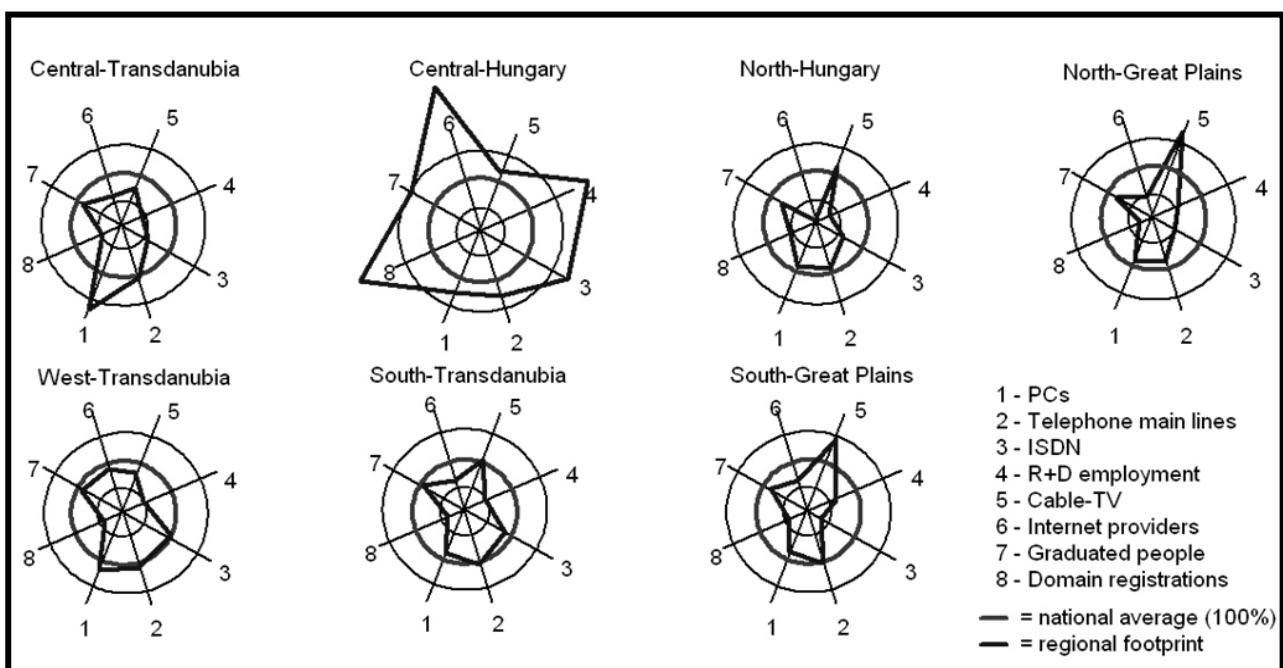


Figure 1. Structural composition of ICT indicators of Hungarian regions (2007) (the author's creation based on data of the Hungarian Central Statistical Office)

The strong concentration of ICT tools and adaptivity seems to be justified on the level of regions in Hungary. It is beyond doubt that the region of Central-Hungary including Budapest has the highest values above national average. While this region is significantly different from other parts of the country, there can be seen smaller but still decisive differences among other regions. The regions of West-Transdanubia and Central-Transdanubia have values around or sometime over national average in many indicators. Meanwhile regions of the Great Plains or North-Hungary in most cases can reach values only less than 75% of national average. The results certify the existence of digital divide, as well as its stability within the country, which was confirmed by the unchanged results of the 2001, 2003, 2005 and 2007 models.

Both national and regional strategies deal with the reduction of regional differences, namely on questions of fostering regional inclusion. A declared aim of the Hungarian Information Society Strategy is the “reduction of cultural distances arisen from

geographical and inherited disadvantages", so thus the abolishment of digital gap, which appears directly or indirectly in every documents also on regional level. The solution of it can be very diverse, but it is already joyful that regional strategies try to achieve this goal not only by infrastructure development, but also or rather with tools of human resource development.

3. Experiences of regional development policy

Since the 2004-2005 completion of regional strategies it was rightly expected that ever broader results of information society development could be seen. Real experiences of development policy are however not so reassuring, since the aims and thoughts formulated in regional strategies did not come true or became realized only indirectly. Interviews made with fellows of regional development agencies tried to discover the real possibilities of the application of this policy tool by focusing on the afterlife and consequences of Regional Information Society Strategies. It aimed to reveal the problems of regional information society development, the attitude of the agencies, as well as the developments took place since the publication of the regional strategies. According to our results, the opinion of the fellows of the agencies the efficiency of the strategies are questionable. A concordant judgement was that however the creation of Regional Information Society Strategies had sense, they mostly were rather prepared as "bookshelf documents". These materials belong to the group of non-used documents, having the main reason of the lack of sources in the background, the termination of the anyway small sources put behind the strategies. At the beginning 10-12 million HUF were available for one region yearly (which was not enough even for the shallow completion of the thoughts formulated in the strategies), later this source also ran out by the reorganisation and discontinuance of the Ministry of Informatics and Broadcasting. It follows from the level of efficiency that concrete developments connected to Regional Information Society Strategies were realized nowhere in the country, on the contrary other developments (e.g. in connection with regional operative programs) sometimes indirectly influenced the topic of information society development. A positive example can be the region of West-Transdanubia, where as a result of some bottom-up initiatives and the demand of the public and the private sector, the idea of regional information society development is not idle. Among regional operative programs only the West-Transdanubian one contains concrete priority aiming at the development of information society. According to the results of the interviews with regional agencies, information society development in itself is not treated as a main direction of development. Agencies do not think in coordinated development, rather prefer to drive these processes to market basis. Some regions on the contrary would certainly deal with information society development, but have neither material nor labour sources for this aim. It seems, the attitude of regions to information society development is ad hoc like in case of other development processes. It is only positive if there happens to be a person, who takes up this topic and is able to assure the management to deal with this important thing. That's why like a common thought

could emerge the demand to shape up an organisation for coordinating information society development, which could manage and harmonize development actions and possibilities. Regional information society development is not a forgotten area despite the unsuccessful instrument of Regional Information Society Strategies. Among successful or at least intensively applied local development tools of the last years or already decade the system of telehouses, the starting up of distant work programs, the evolution of regional websites and portals, or the development of the network of e-Magyarország access points can be mentioned. Some disparate pilot-like initiatives of the regions (e.g. wifi-village in South-Transdanubia or e-Learning academy in Western-Transdanubia) are showing that some of the thoughts drawn up in Regional Information Society Strategies could perhaps prevail in the regions by getting around the ways of traditional development policy.

4. Regional inequalities in information society competitiveness

The relative unsuccessfulness of regional information society development policy is reflected by the unchanged pattern of regional inequalities in the last decade. All the Regional Information Society Strategies, as well as the agencies put a high emphasis on the reduction of regional inequalities within the area. These actors, however, do not deal with causes and patterns of inequalities in detail. If we look on the regional pattern of inequalities in information society competitiveness, the problematic part of the country can be revealed that should be taken into consideration when making future regional development plans. The following figure represents results of our detailed examination for Hungary (*Figure 2.*).

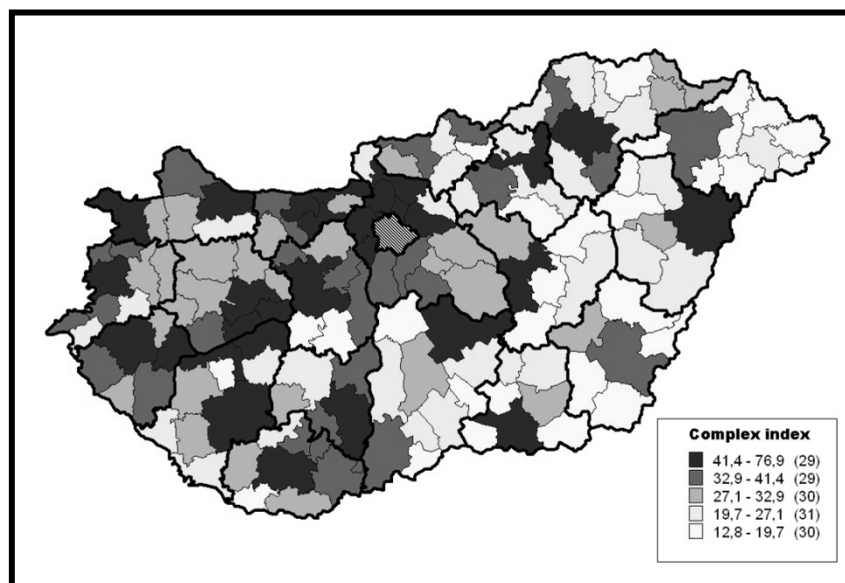


Figure 2. Complex information index of small-regions in Hungary (2003) (the author's creation based on data of the Hungarian Central Statistical Office)

The map shows results of a complex index of small-regions (LAU1) with definite differences by city-hierarchy, which could be indirectly seen in the above average

attendance of urban regions. Also regional differences between eastern and western parts of the country, and the lagging of the Great-Plains regions are remarkable. Numerous other calculations confirmed that inequalities between regions are constant, or in other words the patterns of digital divide in Hungary are rather stable. Calculations made on the three major segments of competitiveness reflect also advantages and disadvantages in structural questions. These structural factors of competitiveness were: the level of information infrastructure, the level of social adaptivity of ICT innovations and the level of the information economy. Each factor was measured by a simple complex index created from a multivariable dataset, and analysed as a comparison to the national average. According to the results for 2007 the majority (56,9%) of the small regions in Hungary had no advantage in any of the competitiveness factors. These small regions occur everywhere in the country, but with higher numbers in South-Transdanubia, East and North-Hungary. The most successful regions with complex advantage in ICT competitiveness – having advantage both in infrastructure, social adaptation and information economy – are showing a more concentrated picture. There were 17 regions (out of 174) in 2007 mostly in the Northwestern part of Hungary and around the capital of the country. Multifactorial but not total complex advantage was experienced in 20 small regions, of them 19 were competitive in infrastructure and social adaptation, and 1 (Pécs) in social adaptation and information economy. In these regions it is suggested to focus the strategic policy on the least developed factor, namely on the improvement of the information economy in 19 cases and on the development of the infrastructure in the small region of Pécs. Other small regions of the country are represented with only one advantageous factor (there are 38 small regions in this category), therefore it is needed to concentrate on at least two directions of development by these cases. As a conclusion the results of this competitiveness analysis may help policy makers to formulate the most suitable solution of information society development in each region.

5. References

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Photo 064. Dirty Old Festival in Velika/ Dirty Old Festival u Velikoj