BUILDING AN INFORMATION SOCIETY –
THE FINNISH MODEL AND HUNGARY

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Abstract: Information society can be inappropriate for some countries due to special social structure, market conditions and identities of people. Silicon Valley, Singapore and Finland may be identified as models of information societies since they could be characterised by the high level of use of information technologies. However, these countries represents different ways of information societies regarding the role of civil society and the importance of the state’s coordinating role. This paper examines the way how Hungary can manage to apply information technologies in everyday life and which one of the previous models might be followed by Hungary. As an European example, the Finnish model is likely to be a possible choice due to Finland’s achievement of combining the information-based economy with the welfare state. So to prove it the paper introduces the system of the Finnish information society focusing on its main components. This is followed by a summary of general spatial processes and regional policy acts. In conclusion this paper examines which component of the Finnish model could be adopted by Hungary and what social and spatial challenges Hungary may have to face with in case of combining information technologies and social institutions.

Key words: information society, Finnish model, innovation, regional policy, civil society.

Rezumat: Construirea societății informaționale – modelul finlandez și Ungaria. Societatea informațională se poate dovedi nepotrivită pentru anumite țări, datorită unei structuri sociale specifice, a condițiilor pieței sau a identității poporului. Silicon Valley, Singapore și Finlanda pot fi identificate ca modele de societăți informaționale fiind caracterizate printr-un nivel ridicat de utilizare a tehnologiilor informaționale. Cu toate acestea, aceste țări reprezintă diferite tipuri de societăți informaționale cu privire la rolul societății civile și la importanța rolului de coordonare al statului. Articolul examinează modul în care Ungaria poate să aplice tehnologiile informaționale în viața de zi cu zi și care din modelele amintite ar putea fi urmat de Ungaria. Fiind un exemplu european, modelul finlandez e mai degrabă potrivit ca alegere, datorită reușitei Finlandei de a combina economia bazată pe informație cu bunăstarea statului. Ca dovadă, articolul prezintă sistemul finlandez al societății informaționale accentuând componentele acestuia. În continuare se prezintă o sinteză a proceselor spațiale generale și a acțiunilor de politică regională. În concluzie, articolul examinează ce componente ale modului finlandez ar putea fi adoptate de Ungaria și la ce provocări sociale și spațiale trebuie să facă față Ungaria în cazul în care ar combina tehnologiile informației și instituțiile sociale.

Cuvinte cheie: societate informațională, model finlandez, inovație, politică regională, societate civilă.
1. INTRODUCTION

In the last three decades a new logic of the global world has started to emerge. Society, as a whole, has also gone through a serious transformation as the role of services is now determining in everyday life. This so-called post-industrial society, which has already become typical in several developed countries, proved to be a proper social basis for adopting innovations and high-level technologies, especially information and communication technologies.

Information society is one of the possible approaches of post-modern social formations. In their case creating, conveying, storing and possessing information are the basis of variable social interactions, policy actions. Economies are also transformed in the sense of gathering information; firms put a stronger emphasis on effective communication, which demands a flexible structure at both local and global level. This results in the birth of network enterprises (Castells 2005).

Building a strongly informationalized society, and therefore strong connections to the global world, is a question of competitiveness. Although every country is at a different stage of reorganizing its society in a network structure, in general they all struggle to connect to the global networks of economic and communication systems and flows.

As for Hungary, a post-socialist country, it is also a burning issue how to adopt modern information technologies and involve preferably all segments of the Hungarian society in a flexible and open information society, which can easily react to the challenges of the global world. In this paper, thus, I examine what foreign experiences Hungary may be able to follow and what methods would be useful in social and regional policies.

2. THEORHETICAL BACKGROUND

2.1. Modeling information societies

The existing information societies seem to be very different all over the world. According to Castells and Himanen (2002) the social adaptation of information technologies always reflects local features, i.e. historical tradition, economic conditions and people’s general attitude towards innovations. Though the competitive network corporate structure and the high rate of investments in research and development sectors are global phenomena, social reactions, institutional background and the coordinating role of the state are usually typical of each country.

As Castells stated three models of information society may be regarded as fairly different ways of intensive adaptation of information technologies. Firstly, the Silicon Valley model, which is mostly well-known due to the traditionally dominant role of capital and the priority of corporate interests. Social aspects (i.e. social legality) are of less importance, thus in spite of high competitiveness and development rate this model does not mean an inclusive way of information society (Castells, 2005). Secondly, the model of Singapore is a special example of creating a rather closed, autocratic system, which is highly regulated by the state. In this case, the successful participation in global competition depends on the correct decisions of the government. (Castells and Himanen, 2002)
The third model of information society is that of Finland. As a European approach of informationalism Finland made efforts to get all advantages from the concept of information society while it was trying to preserve the former social institutions, the benefits of the previously achieved welfare state. The high level of social justice is a crucial part of this model as opposed to both Silicon Valley and Singapore (figure 1). The Finnish government is strictly devoted to maintain it, which gives social legality to high taxing rate and expensive investments in the information sector. Since Finland highly respects its own social achievements this balanced way of thinking is likely to be the closest to Hungary’s conception, where strong social problems need to be solved like in Finland in the early 1990’s (Pintér, 2006).

Fig. 1 Social difference measured by the ratio of the richest and poorest 20 percent of society
(Castells and Himanen 2002, p. 6)

2.2. Finland and the Finnish model

Finland nowadays belongs to the most competitive countries in the world. However, it was not so before the 1990’s as it was a much poorer country in the northern periphery of Europe. Even after 1990 Finland suffered from a deep economic crisis because of losing its formal main trade partner, the Soviet Union. There remained an industry of low productivity in Finland, also a high unemployment rate and worsening situation of rural areas. However, Finland managed to modernize its economy in a very short time and develop an information society with a strong network structure (Castells and Himanen, 2002).

The key factor of this success is the fact that Finland used its own resources to develop high-level technologies and managed to urge Finnish citizens to adopt the innovations in everyday life. Finland succeeded in combining the functioning of information technology producers and the different social interests, e.g. the maintenance of the welfare institutions (Nurmela, 2003).

As it may seem, the Finnish model has three main components: the cluster of business firms producing innovations and high profit rate, the society, which accepts and adopts new technologies and the state, which balance and coordinate the relation between
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The cluster and the society. A many-sided connection is to be observed among these components (figure 2).

The Finnish cluster of information technology producing firms (e.g. telecommunication, hardware and software production) consists of more than 3000 strongly connected enterprises. The most significant is Nokia, the biggest Finnish corporation, which is actually the motoring component of Finland’s economic transition and also a link to the global networks as a multinational company. Nokia originally had a profile of wide range of products but from its restructuring in the mid 1990’s it only concentrates on producing mobile phones. In addition Nokia can also be characterized by a new horizontal corporate structure that makes Nokia more flexible and open to innovations (Pintér, 2006).

Nevertheless, Nokia would not surely be successful if the state had not played a strong coordinating role from the 1960’s. The Finnish governments followed strictly consequent development strategies and kept on growing investments in the research sector (figure 3). Universities has been improved and connected to labor market (Anttiroiko, 1999). In 2002 almost 50% of Finnish enterprises had cooperation agreement with one of the Finnish universities. The open and wide-scale education system, together with the high quality and free health care system are the main welfare institutions, which are maintained by the state on the basis of high taxing level and incomes from the profitable information cluster. In return, health care system and universities assure permanent labor resource to the information technology cluster that keeps on employing talented young and qualified

Fig. 2 The Finish information society complex
workers. Therefore this is an acceptable and advantageous system for both the people and the network enterprises in Finland (Castells and Himanen, 2002).

Regarding the Finnish society it is necessary to underline that people are not only passive participants in informationalism. It is essential in the Finnish model that certain communities have developed active adopting methods and even create new innovations to enhance permanent improvement in the field of applied technologies. The Finnish society thus offers an internal market to its own innovations.

![Figure 3 The growing rate of research and development investments (percent of GDP)](Castells and Himanen, 2002, p. 50)

As a part of this social behavior there is the so-called hacker ethics. Hackers are definitely not criminals in Finland, but talented, mostly university students who attempt to develop their own innovation ideas to improve their communities where they belong to. Many experts began their career this way like Linus Torvalds, the inventor of Linux, an open-source operation system (Castells and Himanen, 2002). Besides, social hackers represent an applied version of hacker ethics. In the view of local communities they have an important role, because these are typical proofs of integrating information technologies in social services locally (e.g. e-government, distant working, virtual university programs), where state-level strategies are not effective. In general the Finnish government supports these initiatives emphasizing the fact that social services must be renewed by applying the model of network enterprises in the information sector. Civil society therefore plays an important role in strengthening the network connection between the welfare system and the information sector that bring innovations closer to local users (Anttiroiko, 1999).

Despite of the comprehensive and inclusive information society, Finland still have to face with several spatial challenges. Typically, Finland’s strongly informationalized
society is reflected in geographical processes, too, as the attractiveness of a region or a settlement depends on the development of its information-based economy and the rate of participation in regional and global flows (Castells and Himanen, 2002). First and foremost, a strong concentration of resources in innovation centers (e.g. Helsinki, Turku-Salo, Tampere, Oulu and Lappeenranta) must be stated, which also means a strengthening competition between them. As Helsinki, Turku and Tampere are situated close to each other geographically they may easily attract skilled labor, capital and other resources from each other. This might result either in weakening global positions or in formation of a mega-region where Turku and Tampere are subordinated to Helsinki, where stronger global connections exist already. On the other hand disadvantageous territorial processes must not be neglected either. These include migration from rural areas, ageing society and settlements with high rate of marginalization (Niemi, 2004), which may be resolved at local level. All these spatial challenges call a sophisticated, multi-level regional policy into being, which supports local governments for an active and cooperative participation in closing up to developed innovation centers and connecting to global networks (Castells and Himanen, 2002).

3. CONCLUSIONS FOR HUNGARY

Hungary has been following a different way of informationalism so far. Though before the change of regime Hungary was also a peripheral country politically and economically connected to the Soviet Union like Finland, the economic transition and the management of social crisis were much less efficient in the 1990’s. With only weak information strategies and controversial decisions of changing governments, communication infrastructure was preferred to develop, but possible social adaptations of new technologies was hardly emphasized. As opposed to Finland, Hungary did not create similar culture of innovations and policy of research investments. Application of high-technologies and closing up to developed countries were hindered by strict restrictions on trade and technology flows (e.g. COCOM list). Consequently, the institutional and corporation background of the technology improvement in the 90’s was mostly supported by foreign resources and interests. Since Hungary followed international strategy plans, like those of the EU, it became harder to build an information society with a wide social support and participation (Kanalas and Nagy, 2003).

The different models of information society are determined by certain background features like culture, people’s identity and economic environment (Castells, 2005), still some components of the Finnish model might be adopted in Hungary. Implementing long-term strategies have already started recently (e.g. National Information Society Strategy), which can only be successful with a clear financial basis and increasing investments in the research and development sector. Integrating social services and building network connections between possible actors, like civil society, local governments, and enterprises could be the foundation of a multi-level information society.

Due to the less effective informationalism of the Hungarian society, territorial processes and challenges are also less dependent on the development of the local information economy. Therefore changes in migration and mobility (Németh, 2008) are not obviously affected by the strong concentration of resources (e.g. GDP/capita, Figure 4) and
significant connections to global networks in Central Hungary. Budapest is being left by its inhabitants due to suburbanization as opposed to Helsinki. The widening gap between the capital and other innovation centers in the countryside (e.g. Debrecen, Pécs and Szeged) is also typical of Hungary. It means that only Budapest is connected to global networks, other university towns are still weak nodes and can only be centers in their own regions, so their development and modernization must go on in the future (Kanálas and Nagy, 2003).

![Figure 4 Difference between regional and national GDP/capita per regions in Hungary, 2006 (%)](Statistitkai Tükör, 2008, 2(90), p. 1. Edited by the author).

In addition, a strengthening information society and adaptation of information technologies and hacker ethics may contribute to a better conception of development strategies in the future. Activating local level is essential to prevent rural areas from further lagging behind the Hungarian innovation centers. There has been promoted only a few local initiatives (e.g. establishing a broadband internet system in Aparhant or Tokaj) and the so-called “Regions of Knowledge” programs, which are mostly separated strategies of certain towns and regions with lack of integration to national plans and conceptions of the neighboring regions (Hungarian Information Society Report, 1998-2008.). A more conscious and delicate regional policy may provide small communities with local adaptation of information technologies (e.g. distant working, e-government).

All things considered, Finland might show a way to follow for Hungary to build up a competitive information society. However, it is only possible if information policy makers take the Hungarian cultural and social environment also into consideration and adopt the components of the Finnish model on lower territorial levels, as well.
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