

ROMANIAN KNOWLEDGE SOCIETY DEVELOPMENT. A PROPOSAL

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Abstract

This article is an argument for the applicability of the Finnish model of knowledge society oriented public policy-making and not a detailed recommendation on the specific steps Romania should make in order to become a knowledge society. The article is elaborated as a synthesis of the Finnish knowledge society oriented public policies and an analysis of the adequacy of policy transfers from Finland to Romania. Data on Romania are not rich as the task of the article is not to make a diagnosis on Romania's stage of development. Its main contribution consists of the identification of Finnish public measures meant to foster knowledge society that may be a best practice example for Romania.

The introductory part briefly introduces the reader into the theoretical understanding of the concept of knowledge society. Then, I argue that there are several types of knowledge societies and Romania should look for European examples given the resemblance of the starting conditions. The main part of the paper presents the Finnish knowledge society development as an experience modeled by public intervention and I mirror these developments with the Romanian case. In the end, I explore the differences between the two countries that may interfere with the application of the Finnish model. Still, my conclusion is that those differences do not make the Finnish model less applicable. The efforts might need to be more intense and the results might show up later.

Keywords: *knowledge society development, Finland, Romania.*

1. Introduction

Given the various approaches of the concept, and the economy of this article, I will not review the theories concerning the knowledge society. I will only briefly review the most important issues around the concept of knowledge society. To my understanding, the most important idea is that the knowledge society is based on a new type of economy in which knowledge is a new mean of production; unlike the classic economic theory that considered production as a result of three factors: land, capital and labor. According to Tilak², Hayek underlined the role of knowledge in the development of the society and Fritz Machlup analyzed its role in economic development. Then, in the '90, the World Bank and OECD reasserted knowledge as a key factor to economic and societal development. What distinguishes today's trends from early accounts on the contribution of knowledge to development is the speed in knowledge production, dissemination and application. There are also analyses on the different types of knowledge and their contribution to the development of the society, like the World Bank³ distinguishing between codified and popular knowledge, but this is not relevant for the purpose of this paper. Another point in the literature concerns the differentiation of the knowledge society from the knowledge economy. But, while separable

theoretically, the two are intertwined in practice. The economic development in a knowledge economy is dependent on the development of certain societal factors. In my opinion, an essential differentiation is that between the knowledge economy / society and the information society. While ICT development is a necessary condition for a knowledge economy, it is not sufficient. In fact, the development of an information society can happen very fast and thinks might stop there, without an evolution towards the knowledge society. To my understanding, Romania is the most illustrative example in that respect.

Although the USA represents *the model* for a knowledge-based society, one could not be more wrong than to try to import the USA knowledge society style in Romania. We are a European country; meaning that we share certain cultural and economic characteristics, which make the USA model unsuitable for Romania.

The issue of knowledge-based growth dominated the Special European Council from Lisbon in May 2000. Unlike the USA, Europe lacks both the labor market and the capital market conditions necessary for a knowledge economy. According to Watson⁴, the success of the USA is due, among others, to certain labor market flexibility that cannot be found in Europe. The special capital market condition of the USA consists mainly of the well-developed venture capital market.

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¹ This paper continues early work on this issue presented at the International Summer School on European Peripheries, organized by Jean Monnet Centre of Excellence, Tampere University, in 2005.

² Tilak, 2002.

³ World Bank, 2003.

⁴ Watson, 2001.

Because of these conditions, the governments of the European countries need to be involved in the development of a knowledge society in ways that are unthinkable to the USA government and public opinion. As Schneider⁵ states, in the USA policy context, the active involvement of government and public sector was to a large extent reduced to symbolic promotion and coordination of private initiatives and to regulation of negative externalities. Unfortunately, the European governments cannot reduce their contribution to a symbolic promotion of private initiatives. For example, giving the low developed venture capital markets, the European governments have no way but to finance themselves knowledge economy start-ups. At the moment, a leading player in the European Venture Capital market is the European Investment Fund, thus confirming my view on the need for governmental involvement.⁶

Those are some of the reasons Romania needs to look for a European model of knowledge society development strategy. Romanian knowledge society is lagging behind. One quick look at the literature and the few data available on Romania clearly show that what we developed is mostly an information society, not a knowledge-based one. This is why I think that Romania needs a public approach on knowledge society development. By way of public policies, the Romanian government should help the development of the knowledge society in order to foster economic growth and competitiveness on the European market.

Finland built its knowledge society in response to dire economic times and became one of the EU's most developed knowledge societies. This is the reason why, from all the well-developed European knowledge societies, I argue for the application of the Finnish model in Romania. Finnish knowledge society is based both on the welfare state and on a good public-private partnership. This country succeeded to be one of the leading countries in knowledge society development despite of the fact that it had exactly the opposite conditions from those present in the USA. What lags behind in the Finnish knowledge society is, according to Eurofound⁷, the lack of entrepreneurship. This means that there is a low economic exploitation of the innovations, but entrepreneurial spirit is not something that the state can plant into the society.

Benner⁸ described the Finnish type of knowledge society as “based on universal access to tax-financed social services and social insurance,

full employment secured by expansive macro-economic policies and active labor market policies, highly organized labor markets, corporatist interest mediation, and so on.” The importance of welfare policy in knowledge society development in Finland is also mentioned in a Eurofound⁹ document.

2. Finland – a model of knowledge society development through public intervention

According to Ducatel, Webster & Herrmann¹⁰, Finland had three waves of knowledge-based growth. The first one, between 1970 and 1990, is named the ICT revolution. The second, starting from 1991, is characterized by concern for competitiveness, economic growth, access, regulation, privacy, security, and intellectual property rights. The third, from late '90, is characterized by the preoccupation that technology policies and social policies need to be complementary.¹¹

As Romania is in the phase of the ICT revolution, we must search for ways to speed up the process of economic and social transformation. This is what I will explore next.

2.1. Institutions

In Romania, the only institution that seems to be aware of the necessity to become a knowledge society is the Ministry of Education. Other Ministries and public institutions may promote policies that foster the knowledge society but that is only because of the natural course of mechanisms acting in our economy and society. What I mean by that is that our public institutions do not have a guiding plan for building a knowledge society, a plan towards which the public policies should converge. Building a knowledge society is not a focus for our policies. As a result, the policies designed and implemented by our public institutions are rarely complementary, as they should be. The only existing coordination is the annual allocation of the state budget. The first RDI strategy in Romania was designed for the 2007-2013 period, as a result of EU membership. According to the current strategy¹², innovation is not key to Romania's economic and social development. The strategy mentions the small number of researchers, the small involvement of private parties in research and the small connection between different research fields.

⁵ Schneider in Tuomi, 2001.

⁶ It is true that the EIF is self-financed, but it owes its existence to a decision of the European Council.

⁷ Eurofound, 2004.

⁸ Benner, 2003, p. 132.

⁹ Eurofound, 2004.

¹⁰ Ducatel, Webster & Herrmann in Tuomi, 2001.

¹¹ Ducatel, Webster & Herrmann in Tuomi, 2001.

¹² available at <http://www.cdi2020.ro/>, accessed 1.04.2016.

As the Finnish Science and Technology Policy Council stated in its 2003 report, “the ministries must be able to operate as a network. Achieving set aims requires that decision-making on information and knowledge systems is sufficiently centralized to ensure compatibility.”¹³

But the up-to-date language of the Ministry of Education and its agencies does not necessarily reflect in practice. For example, the “third mission” of the universities is not a reality in Romania.

To my understanding, Romania does not have the right institutions that could mould the transformations in our country into a knowledge society. The consequence of not having the right institutions is lack of coordination in our public policies and the missing collaboration between the state, the private sector and the universities. That is why I consider it useful to look at Finland’s institutions and public policies in order to learn from the experience of other countries.

Research and Innovation Council, former *Science and Technology Policy Council*. This governmental body, founded in 1987 to continue and enrich the task of the 1963 founded Science Policy Council, has the coordinating role within the innovation policy field.¹⁴ The main tasks of the Council include directing science and technology policy, dealing with the overall development of scientific research and education, and issuing statements on the allocation of public science and technology funds to the various ministries and fields.

Being chaired by the Prime Minister and having a membership that consists of ministers and other members specialized in science or technology from public and private sector¹⁵, the Council is a good institutional solution for creating the overall vision of the future development of the country. The Council publishes reviews summarizing main trends and presenting targets for future developments.

I think that the Council could be a successful solution for Romania because, as stated earlier, the targets of our institutions are rarely complementary and lack common vision. This type of governmental body would get them to think of a common path.

Tekes – Finnish Funding Agency for Technology and Innovation. Founded in 1983, Tekes is the key planner and executor of the new technology oriented policy.¹⁶ Tekes is the main R&D funding body in Finland¹⁷ with a budget of around

390 millions Euro per year¹⁸ and is subordinated to the Ministry of Employment and the Economy.¹⁹

Some might say that we do not need to burden our state budget by creating new agencies when we might as well leave the funding mission to the Ministry of Finance or to the other public institutions already involved in industry or economy in general. My opinion is that this would not be a constructive strategy and that because of the limited capacity of any institution to process information. What I mean is that a ministry, being caught up in its daily assignments, may not be efficient, or successful, in selecting the most promising projects that should receive public funding. That is why an agency like Tekes, that has developed a special competence in fostering innovation, would be the second institutional solutions that may help Romania transform its society.

In Romania, the National Authority for Scientific Research is under the Ministry of Education. NASR’s tasks are complex as it is involved strategic thinking regarding research and innovation as well as financing. Its president is secretary of state²⁰ and is named by the prime minister based on a minister of education proposal. Thus, this is an isolated institution with low political power and, although it may have a great influence on allocating research funds, it does not have a significant impact on the share of RDI funds from the total public funds. A leaflet of the Ministry of Education in Finland that explains the Finnish research and innovation system²¹ clearly shows that the Research and Innovation Council has the same power as a Ministry, it is subordinated only to the Parliament and the Government.

Sitra. Founded in 1967, Sitra is a public organization with venture capital operations that was mandated to make equity investments in SMEs as a way to support growth.²² Among the organization’s tasks was to increase the efficiency of public investments, to foster the application of new technologies, and to support innovation.²³

Sitra was an institutional solution meant to compensate the small private venture capital market in Finland. Compensation for the small venture capital market is the target of various public policies in Romania but the non-existence of a specialized organization in the field of financing new

¹³ Science and Technology Policy Council, 2003, p. 15.

¹⁴ Koch and Oksanen, 2003.

¹⁵ the Academy of Finland, the National Technology Agency-Tekes, industry, and employers’ and employees’ organizations.

¹⁶ Koch and Oksanen, 2003.

¹⁷ Tekes shares its funding mission with the Academy of Finland.

¹⁸ Tuomi, 2001.

¹⁹ http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/Competitiveness_and_wellbeing.pdf, accessed 1.04.2016.

²⁰ In Romania, secretaries of state are next in rank after the ministers.

²¹ available at http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2013/liitteet/Competitiveness_and_wellbeing.pdf, accessed 1.04.2016.

²² Koch and Oksanen, 2003.

²³ Koch and Oksanen, 2003.

technologies and innovation made the effect less concentrated.

TE-Centres. Another institutional solution in Finland regarded the regional level administrative structures and the empowering of regional bodies. The solution consists of the creation of regional Employment and Economic Development Centres in 1996.²⁴ The TE-Centres are also involved in regional foresight studies.²⁵

The TE-Centres, unifying several regional administrative structures, would be a good solution for the unequal regional development in Romania. This type of centres could be used in order to identify regional strengths and weaknesses as well as solutions for stimulating regional development. Although Romania has regional employment agencies, they are not involved in economic development and have rather re-active strategies, not pro-active such as foresight studies.

Committee for the Future. Established in 1993, the Committee for the Future belongs to the Finnish Parliament.²⁶

Belonging to the Parliament, and not to the government – as is the case of the Science and Technology Policy Council, the Committee for the Future is a good instrument for preventing a single political vision to take its course. In fact, according to the above-mentioned leaflet regarding the Finnish research and innovation system, the Parliament is at the top of the coordinating hierarchy.

If we look at the structure of the Romanian Parliament we can easily notice that the various dimensions of the knowledge society are dealt with separately, they are spread over the Parliament's commissions.²⁷

Association of Members of the Parliament and Scientists. Also known as Tutkas, this association helps the Finnish Parliament to take advised decisions concerning the development of the Finnish knowledge society. It was created in 1970 and comprises 600 scientists and 200 MPs.²⁸

Of course, these are not all the institutional elements in Finland that lead to success in research and innovation, but my focus was on the central public institutions.

From my point of view, all the above-mentioned institutional instruments are meant to confer public policy coherence by the centralization of decision-making. The idea of centralization might not be attractive for the Romanian decision-makers

or for the Romanian public because of the bad past experience we had with centralization during communism. But, studying the Finnish institutional solutions for the centralization of decision-making, I have reached the conclusion that the type of centralization implied in Finland's institutions is different from the classical understanding of centralization as one person or small group taking the decisions. The idea of centralization underlying the Finnish institutions is that of creating special institutional structures where public and private stakeholders work together in order to reach to a common plan of development that suits everybody's interests. Networking with stakeholders and other partners is a role that Romanian ministries should assume too.

2.2. Actions

The main public policies that Finland adopted in order to have a knowledge-based society were all channeled towards the same idea – building a national innovation system. According to Eela,²⁹ the concept of national innovation system reshaped the role of the state. In the new policy framework, the role of the State is to be a providing actor, which supports other actors in the innovation system to achieve the targets they have set for themselves.

Regional development and innovation policy. The main trend in Finland's regional innovation policy is to devolve more decision-making power to the regional level. The actual regional policy had its start in the 1994 Regional Development Act that increased the importance of local government.³⁰ The 1994 strategy for regional development is carried out through the national Centre of Expertise Programme, which aims to enhance regional competitiveness and increase the number of high-tech products, companies and jobs.³¹ This programme is “an umbrella-like instrument assisting regions in targeting resources in areas which are defined as strategic”, and in channeling the EU funding that is meant for regional development.³²

Another part of the regional policy is the TE-Centres that are financing their client companies' investment and development projects.

Cluster programmes. Finland's strategy was to identify industrial clusters and then use them as a tool for targeting technology policy.³³ The cluster programmes, administered by various sector

²⁴ Koch and Oksanen, 2003.

²⁵ Kaivo-oja et al, 2002.

²⁶ <https://www.eduskunta.fi/EN/lakiensaaminen/valiokunnat/tulevaisuusvaliokunta/Pages/default.aspx>, accessed 1.04.2016.

²⁷ www.parlament.ro

²⁸ <https://www.eduskunta.fi/EN/kansanedustajat/verkotot/Pages/default.aspx>, accessed 1.04.2016

²⁹ Eela in Koch and Oksanen, 2003.

³⁰ Koch and Oksanen, 2003.

³¹ Benner, 2003.

³² Koch and Oksanen, 2003, p. 156.

³³ Science and Technology Policy Council, 2003.

ministries, are meant to promote cooperation in certain industrial fields, or around certain themes.

As stated in the 2003 report of the Science and Technology Policy Council, the particular assets of Finnish business and industry are the ICT cluster, the forest cluster and the metal cluster. During communism, Romania had a chaotic industry that was meant to produce everything in order to create an autarchic economy. That implied the lack of serious studies on what is most profitable for Romanian industry to produce. After the 1989 fall of communism, that industrial structure remained unchanged due to social pressures. A profound change in our industry would have provoked, at least in the short run, social unrests due to unemployment.

This industrial structure has consequences not only on cooperation and networking but also on the regional development. The communist industry was not built on economic grounds in the sense that factories were not always built close to the resource of the raw materials needed for that factory to function. For example, alumina, a raw material needed to produce aluminum, was processed at a very long distance from the plant that produced aluminum. The consequence of that was that our regions, with small exceptions, do not have specific industries.

The Romanian Cluster Association³⁴ states that "in Romania, experience has proved that the three natural partners of the "Triple helix" model³⁵ not only do not cooperate, but they also do not know each other and do not get to discuss with one another." The Association's website lists around 40 clusters, but not all of the clusters in Romania are members of this association. For example, Atlas Cluster Romania is not listed. Despite the Association's statement cited above, these clusters have public authorities as partners, but my undocumented guess is that their membership is just formal. In fact, I think it would be interesting to gather some empirical data on the actual activity of these clusters because what I have noticed is that, with few exceptions, these clusters did not exist before 2007, when Romania joined the EU.

Industrial policy. Finland's redefined industrial strategy dates back in 1993. The goal of new industrial policies was not to improve the reallocation of current resources but to influence the quality and quantity of future resources by strategically financing R&D activities. The Finnish industrial policy "was transformed into a policy which touched upon the goals and activities of society as a whole – the perspective of industrial

policy broadened from industrial sector policy to national social policy."³⁶ Thus, the 1993 Finnish industrial strategy is a very good example of government as a network. There are large societal goals and all the policy areas are designed to reach them, even if that may sometimes mean reaching compromise on some of the issues. As stated earlier, the most important context in which the Romanian ministries are coordinated is when it is decided what part of that year's budget everyone would have.

Research funding. Funding R&D has not become a top issue in Romania as it has in Finland. A big share of Finnish public R&D expenditure was gained from the privatization of the public companies.³⁷ During the first years after the fall of communism, Romania chose not to sell the public companies, but to maintain them by subsidies. After that, part of the public companies has been sold but the process was too slow to have an effect on R&D activities; supposing that the money would have been channeled in that direction.

Finland does not use tax concessions as a way to induce R&D³⁸ and I think that Romania should not do that either. The market development in Finland is based on large allocations of public resources to financial programmes and contributions to industrial research. Although the ideal solution for Romania would be to have private financed R&D activities, we need to search for public solutions because of the economic strategies of the companies in Romania. The vast majority of the companies with Romanian capital are too small to develop R&D activities and the big companies, with foreign capital, are not interested. They are motivated by inexpensive employees and the market to sell their goods. That is why Romania needs to look for public solutions in order to make public R&D funding more efficient.

Education policy. A general European and Finnish trend seems to be that borders between universities, government research institutes and companies in knowledge production are becoming more blurred.³⁹ Education may be the only domain in Romania where the issue of funding and developing research activities is a top concern, but the positive effects are not going to show in the near future due to several factors. First, the education system is underfinanced. Second, it is unstable due to countless reforms. Third, there is very low involvement of the universities in society and the vice versa.

³⁴ <http://clustero.eu/romanian-cluster-association/>

³⁵ companies; universities and research institutes; local and regional public authorities.

³⁶ Koch and Oksanen, 2003, p. 154.

³⁷ Benner, 2003.

³⁸ Koch and Oksanen, 2003.

³⁹ Eurofound, 2004.

3. National differences

Although Finland's model might seem perfectly adjustable to Romania's needs, there are some features that differ between the two countries.

The first important difference that I can notice is Finland's small population compared to that of Romania. The smaller scale makes things easier. For example, one or two national champions, like Nokia, were enough to make a difference. In Romania, the national economy cannot be given a big push by one company. Another implication is the fact that the population is rather homogenous and that makes (political) compromise a lot easier.

The second important difference is that the process of knowledge society building in Finland was "marked by a relative lack of social and political disintegration and conflict."⁴⁰ For example, "the labor market parties have, to a varying degree, formed 'social pacts' to enact wage restraint and improve the international competitiveness of firms."⁴¹ In Finland, public policies, especially those that provoke structural changes are agreed upon with the opposition and, the government should change, the policy takes its course. In Romania, major public policies do not have continuity. They are built around sensitive issues and are subject to change even during the 4 year term of a given government. It also happened several times for a political party to disagree with a public policy when it was an opposition party, even if it was the same one it proposed while being the leading party.

The third difference consists of the lack of Romanian researchers' interest in the subject. The few studies made are usually under the coordination of IFIs or other international organizations, but those studies are mostly diagnosis of the current situation and not policy proposals. "Finnish researchers have found the development and theoretical underpinnings of the national technology policy an interesting research theme."⁴²

Despite those differences, Finland's institutions and policies may still serve as a model for Romania because they are differences that do not render the model inapplicable. Romania might need more time and effort to reach political agreement on the development of knowledge society or it might take more time for the effects to show.

4. Conclusions

Knowledge societies are diverse due to cultural, political and economic background. As presented at the beginning of the paper, unlike the USA, in Europe there is need for larger public intervention in order to foster knowledge society development due to this background. This is why countries, like Romania, who are less developed knowledge societies and need solutions to boost this kind of growth, should look for models according to other criteria than who are the champions of the knowledge society.

In my opinion, Finland is a good example for Romania because its knowledge society was not due to the evolution of the economy. In fact, it was a change induced through public policy in order to save the economy. More so, like Romania, the venture capital market was low and the state needed to compensate.

The most useful thing Romania may learn from Finland is the institutional structure that governs the development of the knowledge society. It enables the creation of a common vision, the political will to apply it, as well as policy coherence. Unlike Romania, the institutions in Finland that contribute to the development of the knowledge society have decision-making power.

It is true that structural transformations in Finland might be easier than in the case of Romania because it is a small country, but I think that this influences the duration and intensity of the transformations and not the applicability of the model.

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⁴⁰ Benner, 2003, p. 137.

⁴¹ Benner, 2003, p. 146.

⁴² Koch and Oksanen, 2003, p. 144.

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