

# **BUREAUCRACY AS A PART OF THE TRIPLE HELIX MODEL AND AN AGENT OF INNOVATION DEVELOPMENT**

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## **Abstract**

In the time of globalization, knowledge economy and information society, creation of innovations becomes one of the key ingredients for social and economic growth of states and regions. But according to Innovation Union Scoreboard, in 2012 Latvia ranked 25th in the EU in terms of innovation, whereas according to the State Chancellery of Latvia, in 2010 the number of civil servants in Latvia was 183,800 people or 23% of the economically active population. One of the problems in Latvia is that the state cannot radically decrease the number of officials at the moment, because it may lead to many problems for the budget, situation with unemployment, state control, social stability and others. The aim of the paper is to determine the place of bureaucracy in Latvian society, its genesis and distinctive features, and to investigate the possibility and necessary conditions under which the bureaucracy could become an agent of change towards the innovative economy. Among these conditions the following were determined: increase of professional level of officials; political neutrality and administrative autonomy of officials; working out innovative management practices at the local level; combating corruption; transparency of administrative activities; interaction of cultures; creating of innovative environment; introduction of positive foreign experience; information and ideological support of all initiatives aimed at real changes towards innovative economy, and priority setting procedures.

**Keywords:** bureaucracy, economy of Latvia, innovation development, regional development, Triple Helix model.

**JEL:** I28, R11

## Introduction

In the time of common globalization, knowledge-based economy and information society the creation of innovations becomes one of the key ingredients for social and economic growth of states and regions. Globalization is a significant force reorganizing the world's economy through new knowledge and technology (Carnoy, Rhoten, 2002). Innovative development is imperative for Latvia (Eglitis, Panina, 2010), but a report by Innovation Union Scoreboard (IUS) revealed that in 2012 Latvia ranked 25th in the EU in terms of innovation (IUS, 2013).

Also, in 2011 in Latvia:

- Gross Domestic Product (GDP) expenditure on R&D (GERD) was 0.45% (the EU average 2.01%);
- Business enterprise expenditure on R&D (BERD) was 0.16% of GDP (the EU average 1.21%);
- Summary Innovation Index score of Latvia was 0.201 (the EU average 0.516) (Kristapsons, Dravniece, Adamsone-Fiskovica, 2012);
- 99,4% of Latvian enterprises were small and medium enterprises (SMEs) (CSBL, 2012);
- Investments in entrepreneurship and innovation made 9.6% of the available EU resources (Egle, 2012).

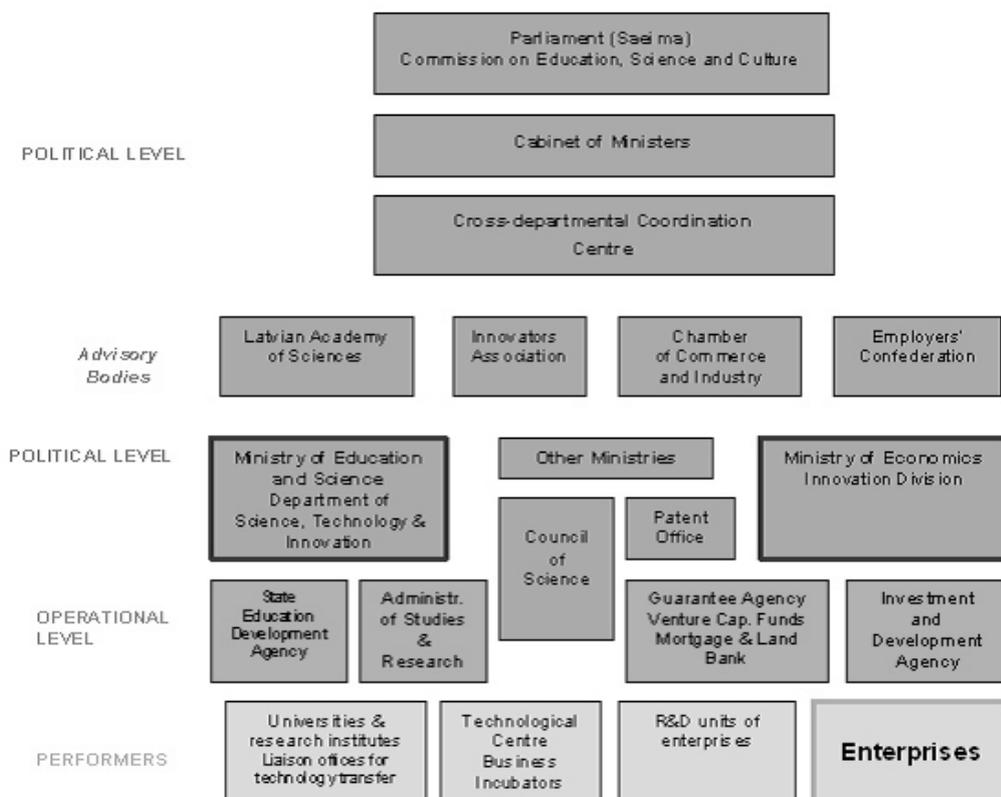
Thus the accelerated development of innovation agenda is one of the major issues for the country as well as the catching-up development of the whole Latvian economy.

At the same time, in 2010 the number of civil servants in Latvia was 183,800 people or 23% of the economically active population (Director of the State Chancellery of Latvia, 2011), although, the typical number of bureaucrats in the most countries is usually no more than 2% of the workforce (Heady, 2001). Of course, not all of them should be counted as bureaucrats. A bureaucrat, by definition, is someone who has decision making authority, but who regularly defers in their decision making to rule or precedent (O'Connor, 2012). The elected representatives and state managers of high level are more the policy makers, whereas lower

office clerks could have no authority in any decision making at all. But anyway, as Latvian President recently announced, in Latvia the expensive and inefficient system of governance has been created that will lead to the fact that: "In less than ten years, we are lost" (Berziņš, 2012).

The present structure of the National Innovation System of Latvia is rather cumbersome and vague, there are many bodies in charge, but the scheme of their interaction and communication, including hierarchy, horizontal links and feedback, is rather uncertain (Kristapsons, Dravniece, Adamsone-Fiskovica, 2012).

**Figure 1. Structure of Latvian System of Innovation.**



Source: Kristapsons, Dravniece, Adamsone-Fiskovica, 2012.

One of the problems is that the state cannot radically decrease the number of its officials at the moment because it may lead to many problems for the budget, situation with unemployment, state control, social stability and others.

The aim of the paper is to determine the place of bureaucracy in Latvian society, its genesis and distinctive features, and to investigate the possibility and necessary conditions under which the present bureaucracy could become an agent of change towards the innovative economy.

The research is based on concepts of globalization, information society, knowledge-based economy, emerging markets, transitional economies, catching-up economies, entrepreneurial academic paradigm and entrepreneurial university.

In the framework of the research the review and analyses of scientific monographs, articles and scientific papers of local and foreign publicists was carried out. The data from official documents and bulletins of Latvian government, reports of international institutions and international statistics were examined, summarized and interpreted in order to formulate comprehensive interaction between state, business and academia.

The results given in the research is the part of a wider research devoted to the application of the Triple Helix model in the regions of Latvia.

### **Research results and discussion**

"A bureaucracy is a particular form of organization composed of bureaus or agencies, such that the overall system consists of conspicuously coordinated activities which have been explicitly created to achieve specific ends" (Jackson, 1982:121). Thus, it may be said that coordination is the main function of bureaucracy, especially the coordination of big projects involving many people and resources. According to Max Weber, a "father of bureaucracy", among the characteristics of rational legal authority of "ideal" bureaucracy are:

- Continuous organization of official functions with rule boundaries;
- Specialization via specified spheres of competence in a division of labour;
- Rules which require qualifications and training to understand and administer;
- Impersonality via equality of treatment for all clients of the organization;
- Appointment and promotion on the basis of merit and not bias or favour;

- Separation of public and private life in terms of interests and finances (Weber, 1947; O'Connor, 2012).

In comparison with the abovementioned ideal model, characteristics of the modern Latvian officials are the following (here are mostly negative, in our opinion, general features, which imply personal exclusion):

1) General reduction of professionalism of government officials within last 10 years may be explained by the following reasons:

- The career of top civil service officials depends more on political views than on knowledge and experience, because, common practice involves the appointment of heads of departments and agencies from members of parties that won the parliamentary and municipal elections;
- The change of top civil service officials and higher civil service officials does not lead to more effective management, as it is often done for political reasons. Frequent changes in leadership of higher bureaucracy leads to confuses, inconsistent decisions, breach of obligations, e.g. problems and scandals related to public procurement and megaprojects, struggle of appointed senior officials with elected ones;
- In a fast-changing environment executives prefer to attract additional working resources rather than to mobilize available personnel, though, after the crisis of 2008-2009 this practice has become less common due to the policy of "belt-tightening";
- The present policy of belt-tightening, which is mainly affected ordinary civil service officials, makes the latter more strictly follow the rules and regulations by refusing to display any initiative for fear of losing their jobs;
- The planned double reduction of the state apparatus makes the most active, mobile and competent officials to join the business structures and the structures of the EU, particularly the European Commission, in advance;
- Administrative database is still inefficient;

- Conducted researches in the field of administration, though being largely prescriptive, rarely taken into account in decision-making due to the inertia of thinking and an underestimation of the scientific approach by officials;
- Scientists are usually involved not for the solution of urgent challenges, but to confirm decisions already taken.

2) Educated stratum of the population in the mass is permeated with the spirit of collectivism inherited from the Soviet era. Even the leading intellectuals and entrepreneurs of the country are consumers of foreign innovations, rather than "creators", thus the creation of innovations is out of view of ordinary officials;

3) Key actors in innovation processes on the bureaucracy level are selected for their private relations, rather than in terms of knowledge and qualifications. There is a shortage of experts who could evaluate knowledge base and qualifications of candidates to official positions;

4) Most of administrators are not supporters of innovations in practice; they often do not understand its matter and importance;

5) Scholars and practitioners do not find common ground on issues of innovation while officials are neither mediators nor the agents in the transfer of information, knowledge and technology.

...According to the classification by Heper (see Table 1 below), Latvia has a party-controlled bureaucracy with residues of historical bureaucratic ruling tradition

**Table 1. Heper's Six Types of Bureaucracy**

Personalist polity		Ideological polity		Liberal polity	Praetorian polity
State=Ruler	State=Ruler	State=Bureaucracy	State=Party	Absence of a predominant state	No state

Personal servant bureaucracy	"Machine model" bureaucracy	"Bonapartist" or Rechtsstaat bureaucracy	Party-controlled bureaucracy with residues of historical bureaucratic ruling tradition	Weberian "legal- rational" bureaucracy	Spoils system bureaucracy as part of a Hegelian civil society
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Source: Heper, 1987.

The National Innovation System consists of “the elements and relationships which interact in the production, diffusion and use of new, and economically useful knowledge... and are either located within or rooted inside the borders of a nation state” (Lundvall, 1992). The OECD’s National Innovation System Project “stresses the need for domestic policies to adjust their objectives and instruments to the new paradigm for technological innovation, based upon more systematic and intensive exploitation of available knowledge bases and strategies of recombination and integration for the generation of novelty” (OECD, 1994). Small-scale national innovation systems should build predominantly on human and social capital in order to cope with inherent financial constraints (Roolah, 2012)

The process of information, knowledge and technology transfer, as a part of National Innovation System consists of the linkages between three groups: source, user and change agent. The source develops or modifies new knowledge and technology and attempts to spread information about such knowledge and technology to users either directly or through an agent. The user in its turn is often looking for a new technology or ideas. In either case, the technology must be translated or redefined to address user needs, discarding the situation when the source and the user is one subject. The role of the change agent in networking, maintaining and strengthening the relationship between the other two groups is critical. It's not just pure agency or mediation, but also creation of appropriate favourable environment for the exchange of

knowledge and innovation development. One of the models describing such agency is the Triple Helix model that was worked out by Henry Etzkowitz and Loet Leydesdorff in mid 1990s.

According to this model, an innovation is an outcome of interaction among social coordination mechanisms or “helices”: markets, knowledge production, and (public or private) governance. Three environments or functions are specified in the model: (1) wealth generation (industry), (2) novelty production (academia), and (3) public control (government) (Etzkowitz, Leydesdorff, 2000). Neo-evolutionary approach presents the Triple Helix model as “a dynamical mechanism, underlying a national (regional) innovation system and leading its transformation” (Martynovich, 2011: 13). All functions are highly interdependent: when two of the helices form bilateral relations, the third helix acts as a selection environment through having mutual relations with each of the first two and reduces the uncertainty in the system. Brought together, such selective environments form the synergetic mechanism, which enforces the systemness of an economic as well as innovation system and its ability for self organization (Leydesdorff, 2012). For instance, when we study the interaction between two components of the TH model – knowledge production and wealth generation (that can be measured in absolute terms – applied patents, number of spin-offs, employed alumni, etc.), we have to consider that at the same time the third component – normative control (or bureaucracy) can reduce the uncertainty in the system and increase the synergetic effect of such interaction by various means, like legal regulation, assistance in information transfer, coordination of activities, etc. In its turn, this leads to changes in the structure of industry and education thus the helices make another curl.

In spite of the common opinion that bureaucracy is an obstacle of any progressive change, based on the ideas of Weber (1947) and Schumpeter (1942), there are some indisputable reasons to recognize the phenomenon of bureaucracy useful in certain circumstances (Table 2).

## **Table 2. The Reasons Why Bureaucracies are Good**

### **The Reasons Why Bureaucracies are Good**

1. Bureaucratic organizations are the most efficient means of controlling the work of large numbers of people.
2. Bureaucratic organizations are technically superior to any other type of organization in accomplishing complex goals.
3. Bureaucratic organizations bring about equality since civil service rules and codes of conduct reduce discrimination.
4. Bureaucratic organizations are rational, efficient, and expert because they master a problem through specialized knowledge.

Source: O'Connor, 2012.

Being a part of local government, and thus a component of the Triple Helix model and National Innovation System, Latvian bureaucracy can make an important contribution to the innovation development of the country and its regions. For this, it must be transformed into a modern, flexible and committed to innovation institution. Among the conditions that could convert bureaucrats into agents of innovation development are:

- Increase of professional level of officials. Quality instead of quantity. While reducing the number of officials, it is necessary to significantly increase their wages and increase the professional requirements for candidates for state and municipal offices;
- Political neutrality and administrative autonomy of officials on the principles of politics-administration dichotomy (Goodnow, Rohr, 2003);
- Working out innovative management practices at the local level;
- Combating corruption;
- Transparency of administrative activities;
- Interaction of cultures;
- Creating of innovative environment;
- Introduction of positive foreign experience;

- Information and ideological support of all initiatives aimed at real changes towards innovative economy.

**Table 3. Goals, attributes, activities and necessary qualities of the bureaucracy acting as an agent of innovation development.**

Bureaucracy as an Agent of Innovation Development in the Triple Helix model			
Goals	Attributes	Activities	Necessary qualities
1. Widely recognized and declared priority of innovation development.	1. Unselfishness: User needs are above personal goals. Sensitivity to vested political interests without being subservient to them.	1. Matching particular user groups (e.g. entrepreneurs) with specific technologies or innovations.	Effective change agents - Evaluate results, rather than activities. - Relish creative problem-solving.
2. Promoting innovation development of the region thus increasing its competitiveness and number of wages.	2. Enthusiasm: Believe in its mission, imagination, patience, persistence, and a genuine urge to serve the community.	2. Translating highly technical information into concise, clearly written formats. Developing effective ways to present technical information to users with limited technical backgrounds.	- Delegate willingly. - Set specific goals and action plans for achieving them. - Actively seek responsibility.
3. Networking and coordination of stakeholders of the Triple Helix model aiming creation of innovations.	3. Sensitivity: Ability to deal effectively with a wide range of people in a style appropriate to each group.	3. Encouraging information and knowledge sharing and networking among users in similar	- Continually sharpen their communications skills. - Listen to others actively and positively.
4. Continuous and		users in similar	- Build on the

<p>ongoing modifications and changes to adapt to external conditions.</p>	<p>4. Discipline: Ability to set priorities and budget time effectively. Ability to organize information into a form that is most useful to potential users.</p> <p>5. Clarity: Ability to explain technical innovations simply and clearly. Ability to translate technical materials out of jargon and into a language that users can understand.</p>	<p>situations.</p> <p>4. Developing and distributing suitable materials that highlight new technologies or techniques.</p> <p>5. Organization and promotion of interaction between Triple Helix stakeholders.</p> <p>6. Promotion of knowledge sharing in the region.</p>	<p>strengths of others.</p> <ul style="list-style-type: none"> <li>- Are consistently candid.</li> <li>- Fight against cynicism.</li> <li>- Believe anything is possible.</li> <li>- Compete only with themselves.</li> <li>- Try to structure what they do to make it enjoyable.</li> <li>- Practice what they preach.</li> <li>- Continually try to understand users.</li> <li>- Build networks to help users help each other.</li> </ul>
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Source: UWM, 2012; Styhre, 2012; Author.

As it is seen from Table 3, in order to become an agent of innovation development in the Triple Helix model the bureaucracy must have established socially significant goals, certain attributes and necessary qualities, plus conduct appropriate activities. Talking about the situation in Latvia, at first it should be mentioned that the Triple Helix model is not fully introduced here unlike in the countries - innovation leaders – Sweden, Denmark, Finland, Singapore or South Korea. It is in the framework of this model will be required above attributes, qualities and activities, because it combines the universities as a source of knowledge and business as its users through the

mediation of existing bureaucracy. “The success of small-scale national innovation systems is inherently more dependent on using limited resources and capabilities for well-defined and focused innovation activities than that of larger systems. Thus, priority setting procedures are likely to have crucial importance” (Roolaht, 2012: 35).

## **Conclusions**

Excessive amount of civil servants in Latvia, almost a quarter of the economically active population, is a serious problem for the budget and the whole society in the post-crisis environment, defined by low productivity, high unemployment and imbalance of the economy towards services rather than manufacturing. Unfortunately, the current bureaucracy is largely a direct descendant of the bureaucracy of the times of socialism and planned economy, with all their flaws - the primacy of collectivism and paternalism versus private initiative, fear of responsibility, and low level of professionalism. The political system and existing practice closely link bureaucracy with the politics, when the parties, which have won the elections every 4 years change senior and middle-level civil servants by their own nominees on the basis of party affiliation and personal loyalty rather than professionalism. But in present situation, when the country is making every effort to meet the Maastricht criteria and enter the Eurozone, the immediate and dramatic reduction in the bureaucracy can lead to a significant increase of state's social obligations and the number of unemployed with specific work skills.

At the same time, the economy of Latvia shows the lowest level of innovation development compared to other European countries and the national innovation system is still in the formative stage after decades of a centrally planned economy. But in certain circumstances, e.g. the Triple Helix model implementation, the bureaucracy may be useful and productive and become an agent of innovation development, although the latter requires minimization of restrictions and regulations. Among the necessary conditions under which the bureaucracy could become an agent of change towards the innovative economy, the most important are:

1. Goal-setting - a clear course of government and society to transform the state's economy towards the innovation-oriented, modern knowledge economy;
2. Implementation of the Triple Helix model in the level of the regions.
3. Political neutrality and administrative autonomy of bureaucracy on the principles of politics-administration dichotomy;
4. Working out innovative management practices at the local level;
5. Information and ideological support of all initiatives aimed at real changes towards innovative economy;
6. Combating corruption.

Subject to the above conditions, major but not exclusive, the bureaucracy in Latvia, even without a dramatic reduction in its numbers for the first time, could become the real agent of innovation. And the increase of innovation potential will subsequently bring the growth of economy, competitiveness and number of jobs to the country and its regions.

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