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# Economic problems of Visegrad Group countries and Ukraine

Collective monograph

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## FOREWORD

The *Visegrad Group* (also called the *Visegrad Four* or *V4*) is the formation of four Central European countries: Poland, Slovakia, Hungary and Czech Republic. The original purpose of V4 in 1991 was to promote integration within NATO and EU. Once it has been successfully implemented, the concept of organisation was rethought. During the summit in 2004, the member countries adopted a new Visegrad Declaration, which envisaged more active cooperation of organization with other states in the format of V4+. The main objective of this cooperation became the transfer of integration experience and support of neighbouring countries that were interested in European integration. It should be mentioned that Ukraine occupies one of the main ranks among the countries invited to the partnership within the Visegrad Group (numerous talks about expanding of Visegrad Group into V5 are rather often during last years in the context of Ukraine).

V4 states have implemented numerous reforms in vast variety of fields on their path to European integration: economic, financial, medical, educational etc. However, the most successful seems to be administrative and territorial reforms that accompanied the process

of transformation from centrally planned to market societies. The aspect of territorial arrangement of economic and social processes is focal in current monograph. There were several attempts to conduct administrative and territorial reforms in Ukraine during more than 25 years of transformation that is still lasting. But even now we are at the initial phase of the process. Taking this into account the experience of more successful in the researched area V4 countries could be very important for Ukrainian politicians and practitioners.

CHAPTER 1.  
**Transformation of  
territorial self-government  
in the Slovakia**

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Introduction

The right to participate at public affairs is one of the most important democratic principles. This right is the easiest to implement in areas where people live. The idea of self-governance is not in terms of Europe and Slovakia quite new, but it has its own specific history of a performance which was influenced by the position of individual countries and states. Formation of self-governance is not implemented continuously in some European countries as a

natural evolutionary process in which the local communities gradually learn to manage their affairs, to seize the powers and extend them to cultivate its autonomous customs and traditions and pass them on to future generations.

Democratic transformation in the Slovak society effects also the self-governing parts of public administration. After several decades it has been again reinstated, so called revitalized local self-government, at first at the level of municipalities (local government) and in 2001 at the level of self-governing regions (regional government). However, regions in Slovakia were not created at the natural boundaries. Municipalities act as a fundamental article of territorial self-government with relatively broad powers, they became separate legal and economic entities.

The Slovak Republic currently consists of 2,891 municipalities, of 140 cities and eight self-governing regions. They provide a number of tasks – original competence and transferred (delegated) competence. The basic task of municipality is to provide public services to citizens in the territory.

The core of self-government is an implementation of the real impact of citizen who can effectively intervene in political decision-making, either directly or indirectly. In this sense, the Slovak Constitution in Art. 30 paragraph. 1 defines that "citizens have the right to participate in public affairs, directly or through the will of their representatives."

The principles of self-government are closely linked with the decentralization of management. However, it requires a permanent deal with the search for an optimum ratio between centralization and decentralization in public affairs (public administration). This process is influenced by many factors such as the historical development of socio-economic and political system in the country, the historical forming of municipal traditions, political conditions in the country, the current economic situation, economic performance and the tax system.



J. Průcha (1999) stresses that the self-government differs from the state administration in forms and methods of its acting and in the public sector, as well as in the executive administration of the state, it is an influencing, but also an effecting the social life by means of non-state nature.

Self-government is an execution of the state functions that have been entrusted to entities of non-state - corporate character by law. It differs from public administration also by forms and methods of action, using tools that are not as state power in character.

Self-government to fulfil public interest is dedicated to the certain place, or is implemented based on the law to a particular interest. A right to associate to a particular interest is a basis of the interest self-government.

In the literature we can meet also with other approaches and definitions of self-government. "The term municipality is derived from the Latin municipium, which means a city with a certain autonomy. The municipality is defined as the city council, city parliament, but the municipality includes also self-government" (Švantnerová 1997, p. 6).

Other authors (Ištók R., Matlovič R., Michael E., 1999; Ivanička K., 1999; Lacina K., Čechák V., 2001) frequently use synonyms of this term as village, town, local government, local self-government. In the text we work with the concept of territorial self-government, which includes local and regional municipality.

## 1.1. Historical development of local self-government reforms in Slovakia

Public administration reform is a part of the dynamic changes taking place in the Slovak Republic since 1990. The historical experience of the neighbouring states shows that an important factor of their stability is a territorial and administrative arrangement and maintaining their own, continuously evolving, forms of public administration.

Slovakia was a part of larger state units (except the existence of the Slovak State) till 1992. Although the Slovaks could not substantially interfere to the formation of public administration, the public administration has its own tradition.

This section aims to summarize the historical background of the spatial arrangement of Slovakia, to research the development of public administration reform in the transition phase of the society after the "Velvet Revolution".

Since 1990, Slovakia as well as all countries of the Eastern Block has passed through several major political and social changes. The changes were mainly of a political nature, associated with a transition from a totalitarian to a democratic state, horizontal and vertical distribution of power of economic nature, transition to a market economy based on the significant strengthening of private property, transformation of the economy; organizational changes affecting also the organization of the state.

By establishing of an independent Slovakia (SR) it was necessary to make the new organization of the state. Theory and practice were not prepared for the transformation of the social system, and therefore lacked the concept of public administration reform, taking into account the new social system.

The highest authorities of SR spread the public administration reform in several stages, within were gradually created systematic steps towards forming a rational form of public administration. Public administration reform in the new social conditions of Slovakia should be seen in the context of the new and changed philosophy. Implementation of public administration reform does not include only changes in the distribution of powers between the levels of government (central and local government), or decentralization of power to lower levels but at the same time it was necessary to accept the new conditions arising in 2004 by Slovakia's accession to free group of states in Europe, e.g. the European Union.

Public administration reform does not take place only in countries with economies in transition, but in most European countries.

Although the EU Member States and associated countries apply different reform strategies, they have to respect in their implementation the fundamental principles of public administration reform, which is a principle of civil society, a principle of subsidiarity, a principle of efficiency, a principle of transparency, a principle of flexibility, a principle of solidarity, but also internationally newly applied principles of "Good Governance".

### The first stage of public administration reform, years 1990–1991

The first stage is characterized in particular by abolishing National Committees (government authorities) and creation of a real self-government at the basic level in villages.

By Act of SNR no. 369/1990 Coll. on Municipalities was from 1.1.1991 in Slovakia again introduced the principle of self-governing bodies as municipal arrangements. It began to be formed non-integrated dual model of public administration. Public administration was constituted as a state sector and self-government sector. The process of transformation of public administration is shown in Figure 1.1.

The process of public administration transformation addressed also the territorial administrative organization of the country. The regional level of public administration (national committees) was cancelled, this means that the three-level hierarchy of territorial public administration (municipality - district - region) was terminated. There was created a new hierarchy of territorial government in the form of district - *area*. Districts were divided into smaller territorial units – areas to which they delegated some of their responsibilities. Slovak territory was divided into 38 districts and 121 areas. The first stage of transformation was characterized by the deconcentrating of state administration.

The first stage of public administration decentralisation was realised by the adoption of Act No. SNR. 369/1990 Coll. on municipi-

palities and Act no. 138/1991 Coll. on the property of the municipality under which responsibility for many basic services for citizens have passed from state government to local municipalities.

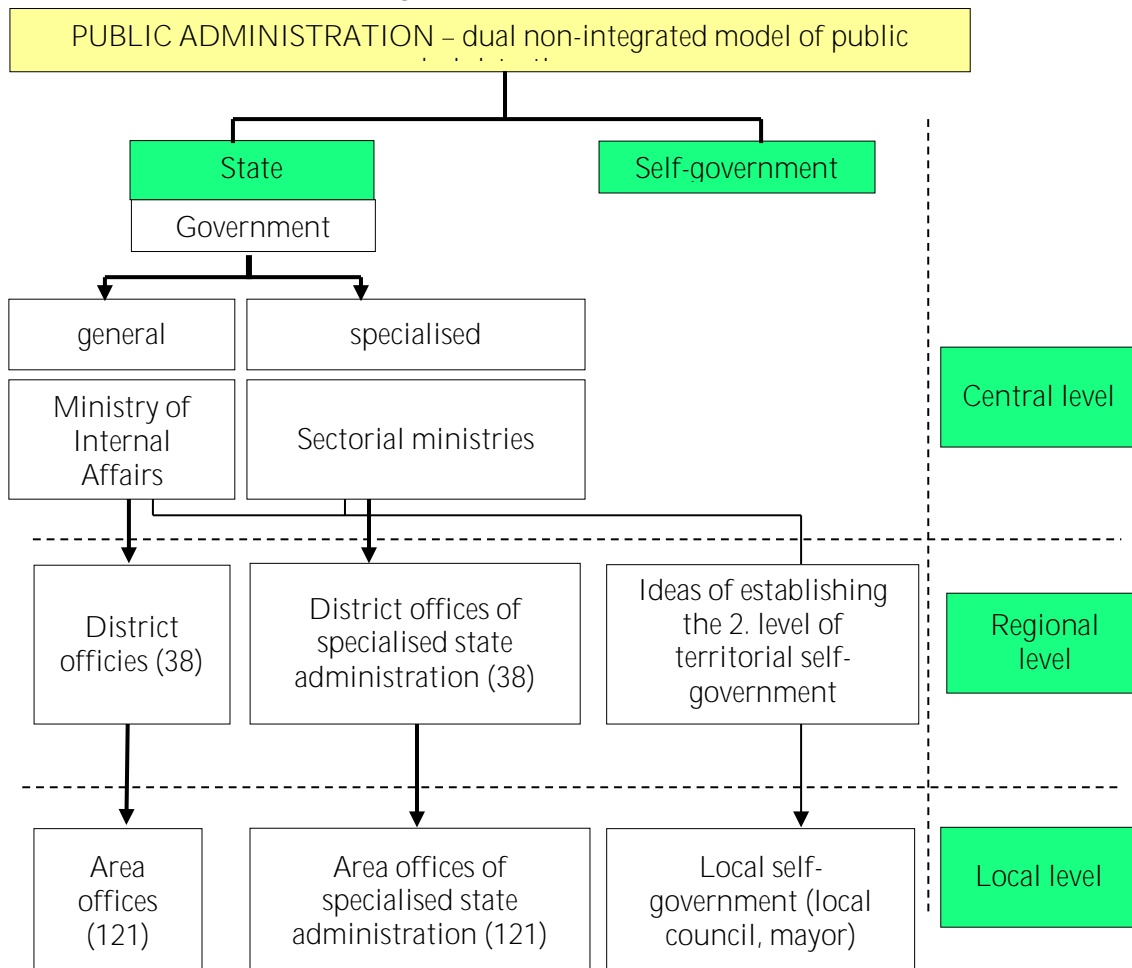


Figure 1.1. Organization of public administration in the Slovak Republic after 1990

Source: own workmanship

Changes in the first phase of the reform include: the abolition of national committees and creation of new public authorities in the form of a dual system consisting of state administration and local self-government, the establishment of local self-government at the local level by SNR Act no. 369/1990 Coll. on municipalities, change of territorial organization of the country, i.e. the abolition of regions, districts and areas, creation of a new non-integrated system of local state administration.

From the system point of view, it had not been resolved a functional link between state and local self-government, it was not established the regional self-government, it had been substantially increased the number of employees in local public administration, which required to continue the reform of public administration.

The second phase of public administration reform,  
years 1996–2000

The transformation of public administration was again revived in 1993 after the establishment of the independent Slovak Republic. Due to the change of government in 1994 and the early parliamentary election, the process continued from 1995. The aim of the public administration reform in the second stage was to create horizontal integration of local state administration and to set up a second level of territorial self-governments. Belajová I. (2004, p. 29) defines this stage as aimed at establishing regional self-government bodies, strengthening self-governing nature of municipalities, eliminating the fragmentation of territorial state administration in relation to the previous steps to carry out new territorial administrative organization of Slovakia.

The long and complicated debate of qualified experts and public to the model approach was completed by adopting the political decisions of the government - two acts, Act n. 221/1996 Coll on territorial and administrative division of the SR, Act no. 222/1996 Coll on local state administration.

Adoption of these acts did not fulfil all objectives of the second phase of public administration reform. The public administration represented a dual model of developed subsystem of state administration and incomplete subsystem of self-government (see Figure 1.2).

The administrative units were created as regions, districts and municipalities. It was created: 8 regional offices (Bratislava, Trnava, Trenčín, Nitra, Žilina, Banská Bystrica, Prešov and Košice) - regional level of state administration. In addition, there were established 79

district offices of three size types - degrees with a population over 90,000, from 60 to 90,000 and to 30,000 and 2,883 villages with self-government at the local level.

The characteristic changes in the second stage of the reform include abolishing the set of areas, and non-integrated area offices of general and specialized local state administration. There was created a set of integrated local state administration offices with general competences at the district level. The number of local state administration offices was significantly reduced, as well as the number of employees in local public administration.

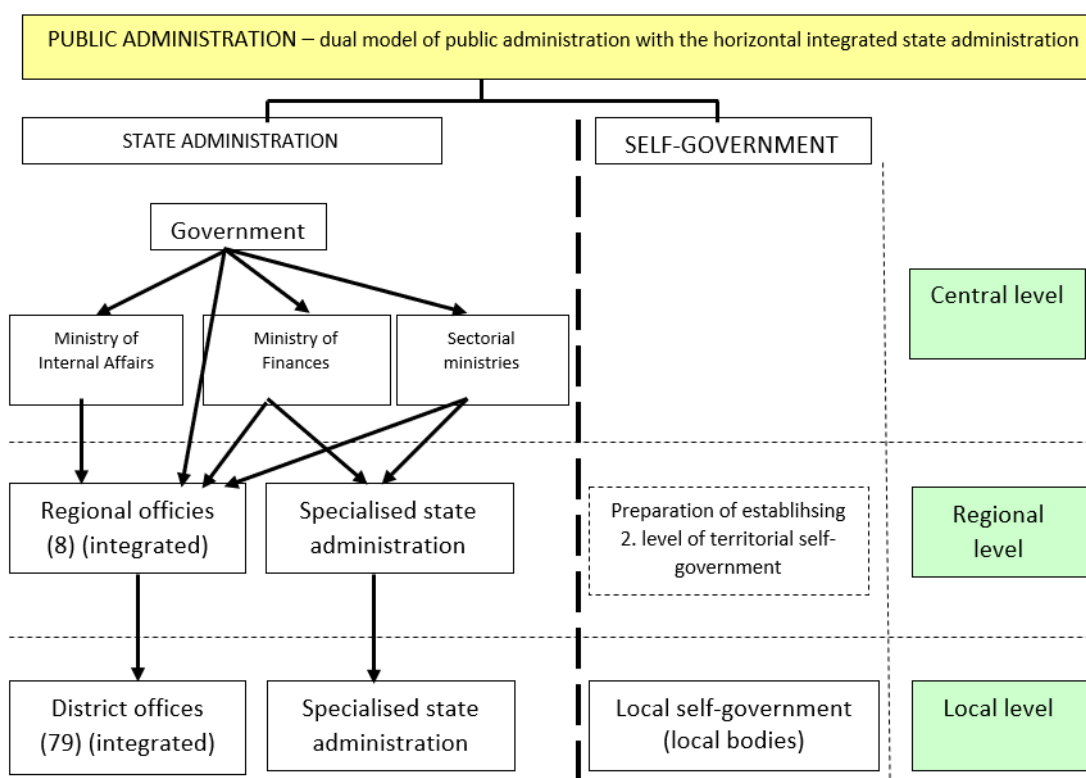


Figure 1.2. Organisation of public administration in the Slovak Republic from 22.6.1996

Source: own workmanship

In the second stage of the reform were met only two of the original four reform objectives. There were not created a regional bodies of territorial self-government and the autonomous nature of local municipalities was not supported.

### The third stage of the public administration reform, 2000–2004

In 1999, the Slovak Government initiated the continuation of public administration reform. The responsibility for the preparation and course of reforms took over the government and the plenipotentiary of government. In April 2000, the government approved the concept of decentralization and modernization of public administration as a comprehensive and systematic process, but this theoretical form was never realised (as well as the earlier concept of public administration reform).

The main objectives of public administration decentralisation in the third stage were: decentralization of competencies from state administration to self-government, deconcentration of competencies from central government bodies to special local state administration, decentralization of finances.

With the adoption of Act no. 302/2001 Coll. on self-government of higher territorial units and Act no. 416/2001 Coll. on the transfer of some competencies from state administration to municipalities and higher territorial units and other laws, the process of **competencies' decentralization started to gradually implement**. The transformation of 3<sup>rd</sup> stage of public administration reform is illustrated in Annex 3.

To 1.1.2002 was constituted the regional self-government by Act no. 302/2001 Coll. There were created eight higher self-governing territorial units, known as self-governing regions. To the self-governing regions were delegated the competences of the district authorities of local state administration.

By this step was established at the regional level a symmetric model of public administration. In the same territorial districts operate institutions of state administration as well as the bodies of self-government. It is a period of implementation of the second stage of public administration decentralization in Slovakia.

At the local level it has been previously established as self-government by Act no. 416/2001 Coll the additional competences were

gradually shifting during 2002-2004 from state administration to municipalities and self-governing regions.

To the local municipalities were delegated since 1. 1. 2002 competences of the civil registers' management (Act no. 154/1999 Coll.), since 1.4.2002 competences associated with social assistance (Act no. 195/1998 Coll. on social aid and physical culture, Act no. 288/1997 Coll.), theatre activities (Act 384/1977 Coll.), since 1.7.2002 other competences in the field of education (Act 29/1984 Coll and Act 542 / 1996 Coll). Since 1.1.2003 to the local municipalities were delegated activities of construction offices at the first level of state administration (except expropriation, Act no. 50/1976 Coll.), as well as responsibility for health care - specialized ambulatory care.

To the regional self-government since 1.1.2002 were transferred competence in the field of pathways, civil protection, since 1.4.2002 road transport, social support, theatre activities, museums and galleries, libraries and educational activities, since 1.7.2002 education, physical health and human formation, since 1.1.2004 road infrastructure.

Deconcentrating the competencies within state administration bodies began to be implemented from 1.1.2004. It was connected also with elimination of the district offices of general state administration and strengthening of specialized state administration at the regional level, the formation of district offices of general and specialized state administration and the branch network of the general state administration, as well as specialized branches of state administration.

The results of the third stage of reform steps

Implementation of the reform in terms of the concept of decentralization and modernization of public administration (3<sup>rd</sup> stage) brought the following results: the organizational structure of public administration has been supplemented by higher territorial units, the other competences were transferred from state administration to territorial self-government (local and regional), from 1.1 2004



it changed fundamentally the organizational structure of state administration, the new act on public services was created, and by establishing higher territorial units the decentralization of regional policy was implemented.

To the negative phenomena of the third reform stage belong failure to reform public finances in relation to the transfer of duties for public affairs from the state administration to regional self-government and to the municipalities, the consistency between decentralization of responsibilities and decentralization of finance was not achieved. The significant change was not done in the modernization of public administration, in clear separation of powers in relationship to the citizen, in the quality of legislation, in law enforcement, as well as in high professionalism and ethics of public servants. Newly created "district offices" of non-integrated local state administration were not backed by law NR SR 221/96 Coll on the territorial and administrative organization, what caused the expansion of the number of local state administration offices and confusions of citizens associated with lack of transparency of public administration **offices' activities.**

The changes in the organizational structure of state administration are illustrated in Figure 1.3.

The third stage of reform continued in 2004 and 2005 for territorial self-government by fiscal decentralization primarily focused on the reform of public finances. From 1.1.2005 it started to apply the new system of allocation of public resources between the state administration and territorial self-government. It was given by the overall concept of tax reform, which was implemented from 2004 to 2006.

In connection with the transfer of more competences to local municipalities and the effectiveness of the public resources usage especially in small municipalities, it begins to discuss new questions. It was assumed that this phase of public administration reform will be aimed also at the municipal reform. In 2006, the Slovak government

following an agreement with the Association of Slovak municipalities postponed the municipal reform for an indefinite period.

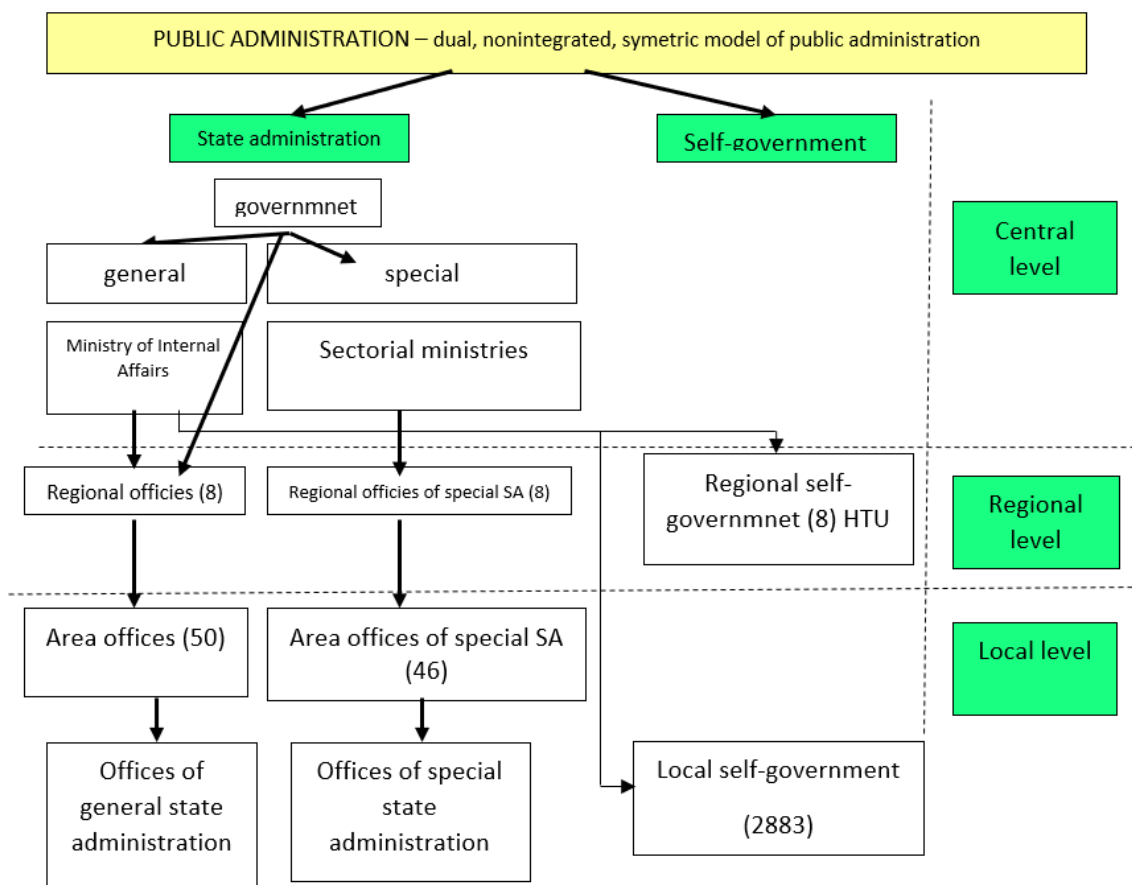


Figure 1.3. Organisation of public administration in the Slovak Republic from 1.01.2004

Source: own workmanship

The fourth stage of the public administration reform (the current phase) since 2010

The basic material for the present public administration reform is a strategy Europe 2020, which was incorporated into the documents of the national character, approved by the Government of Slovak Republic. The Europe 2020 strategy aims to ensure the economic growth till 2020 through the following priorities: smart growth - developing an economy based on knowledge and innovation, sustainable growth - promoting more ecological and resource efficient economy, inclusive growth - fostering a high-employment economy delivering social and territorial cohesion (Europe 2020).

Following this document, the Ministry of Interior Affairs in cooperation with other central state administration bodies and in line with the Government Programme for the period 2012-2016 began with the implementation of the program ESO (Effective, accountable and open public government). This is a significant reform of the state administration and its ambition is to streamline the operation, ensure the quality, transparency and accessibility of public administration for citizens. The implementation of ESO program will contribute to reduce costs and optimize the functioning of public administration, simplify the bureaucracy of natural and legal persons. State administration is closer to the citizens so that citizens equip fully the agenda of state administration in one office in the place of his residence, and last but not least it will increase transparency in the functioning of state administration.

ESO reform is divided into several stages because of its complexity and difficulty. In the first phase of the ESO program, the integration of specialized competences of state administration with effect from 1 January 2013 was realised. There were cancelled the specialized local authorities of state administration at the regional level. The main objective of the second stage of the integration process to 10.01.2013 was to create a uniform and clear structure of local bodies of state administration with concentrating competencies of selected bodies of specialized local state administration to one state office at the local level with competences in majority of the public administration sector.

To 1.10.2013 72 district office were created, which corresponded with the administrative organization of the Slovak Republic (Act 221/96 Coll). Agenda of district offices includes the agenda of the original area authorities (local state administration, trade, the **civil registers' management, citizenship offenses etc.**), as well as integrated specialized offices of state administration (after elimination of 248 area environmental offices, district offices of road traffic and roads, district forest offices, district land offices and cadastre). From

the original number of 50 district offices there were created 49 district offices (excluding the City of Štúrovo, which was not a district town, the working place of state administration there remained unchanged). There were also created 23 new district offices for an integrated agenda of state administration and as a base (back-office) to service more accessible for citizens, which will be provided at the client centers (front-office).

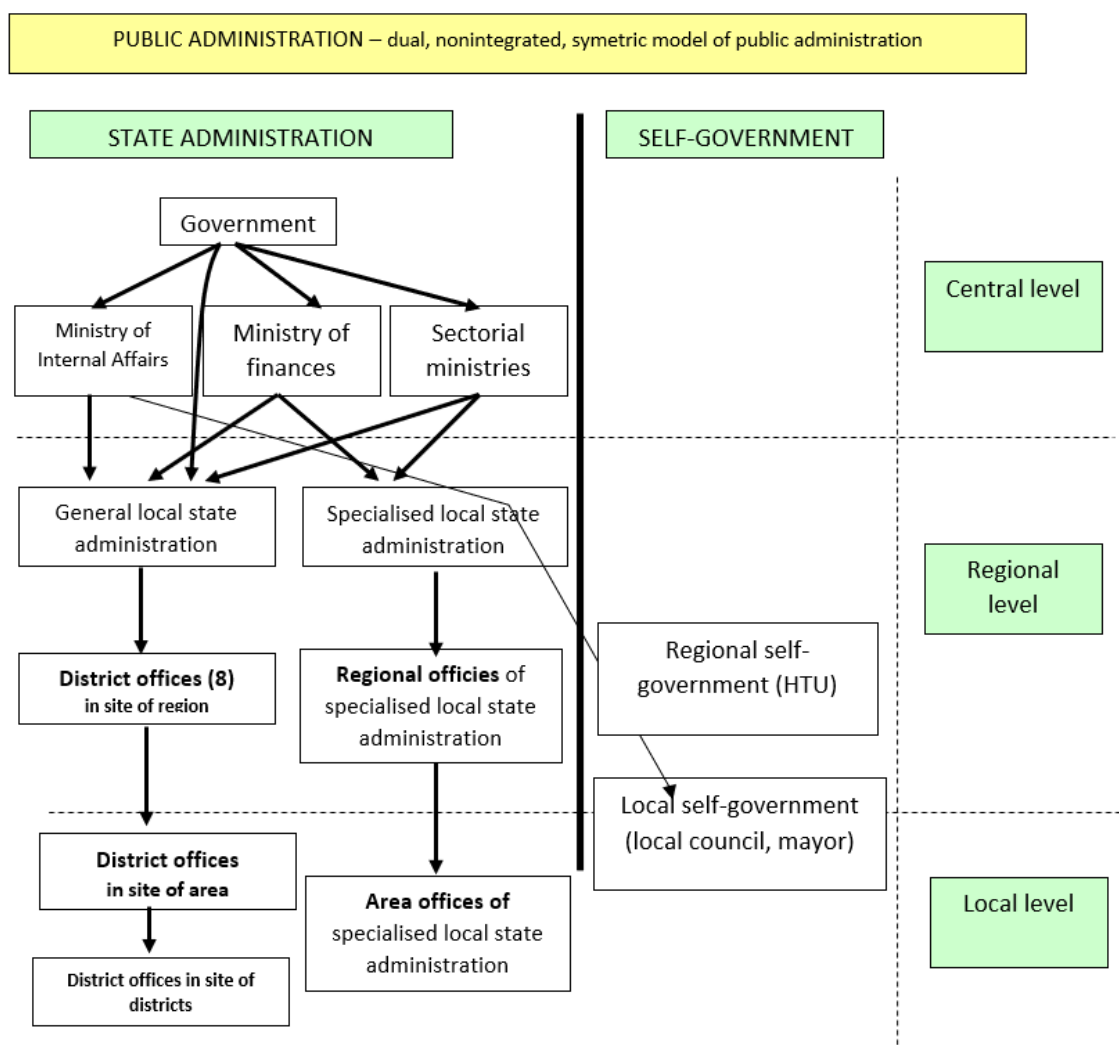


Figure 1.4. Organisation of public administration in the Slovak Republic from 1.10. 2013

Source: own workmanship

Individual measures of ESO reform will be gradually implemented until 2020 as follows: integration of specialized local state administration, customer service centers for citizens, government

performance optimization, and optimization of processes and structures of central government bodies, optimization of processes and performance of government.

The core of public administration reform is to streamline the ESO, to cheapen and modernize state administration for citizens. One of the expected impacts is to relieve people from unnecessary administrative burdens (e.g. from the numerous visits of offices, or from providing duplicate information to offices, when they are once available). Currently, there are implemented reform processes at the technical and logistical level (an integrated network of local state administration and department of the contact point for the public). The objectives contained in the program ESO approved by Government Decree no. 164/2012 were in the first stage implemented through two acts: Act no. 345/2012 Coll. on certain measures of local state administration and on amendments to certain laws and Act no. 180/2013 Coll. on the district offices.

The results of reform steps in the fourth stage

The proposed legislation retains the previously existing sectoral principle of management and control of state administration by integrated local state administration bodies, the relevant ministries and other central government bodies. It does not mean an increased burden in the decision-making of sectors.

ESO reform stabilizes public finances, streamlines the processes, improves the delivery of public services and strengthens administrative capacity.

The core of the first phase of ESO was to integrate the specialized competences of state administration to 1<sup>st</sup> January 2013, which includes the abolition of specialized local state administration authorities at the regional level.

The second phase of the integration process to 1<sup>st</sup> October 2013 brought a uniform and clear structure of local state administration bodies by concentrating competencies of selected specialized

bodies of local state administration into a single integrated state authority at local level, which will carry out the duties for the majority tasks of the state administration in the future.

The measures of the third phase of the ESO reform will be gradually implemented until 2020, as follows: integration of specialized local state administration offices to the district authority (2012-2016), restructuring and transformation of other specialized offices at the regional level (2012-2016), customer service centers for citizens (KAMO): 2014-2015, optimization of the state administration performance, optimization of processes and structures of central state administration bodies, optimization processes and performance of self-government (2014-2020).

The reform will have a direct impact on reducing public spending and effective sourcing as well as a revenue part of the public administration budget, transparency in its management and in particular the quality and accessibility of services.

The weakness of the current stage of the ESO reform is a fact that the reform does not address the streamlining of performance of self-governing bodies (local and regional) and further decentralization of public administration bodies.

## 1.2. State of art in territorial self-government in the Slovak Republic

As we mentioned in the previous subchapter, the local and regional self-government in Slovakia creates territorial self-government.

The local self-government (municipality) in Slovakia was revitalized by Act on Municipal System in 1990. Gradually, the self-governing bodies were established, as well as the practical implementation of their competences, rights and responsibilities for public governance – there was constituted an important and legitimate system for our countries as well as for world. Self-government therefore plays an irreplaceable role in the development of the state.

The legislative basis for the autonomous competence of towns and municipalities is a constitution and Act no. 369/1990 SNR Coll. on municipalities amended with the previous acts. Beside the cities of Bratislava and Košice (cities over 100 thousand inhabitants) is in Slovakia a single-level municipal government. The cities of Bratislava and Kosice have two-layers of self-government - city and city district. The division of tasks, responsibilities and duties is defined by Act on the capital city Bratislava and the Act on the city of Kosice. In abroad, in major cities, can be established by a special status the city districts with their own self-governing bodies (i.e. a statutory town).

To fulfil the tasks of local municipalities, or if it is established by law, the municipality issues generally binding regulations, which must not contradict the constitution or the acts (i.e. the regulatory power of local governments). Moreover, the village has a right to issue sub-legal normative acts in matters of local municipality and to perform the tasks of transferred state administration.

Municipalities decide autonomously and carry out tasks related to the management of the municipality and its property. The municipality in government performance according to § 4 sec. 3 Act SNR no. 369/90 Coll. and Act no. 416/2001 Coll. in particular, implements its own (original) competences.

The most important documents on competences of local municipalities includes the Act no. 369/1990 Coll. on Municipalities amended, Act no. 416/2001 Coll. on transfer of some competencies from state administration to municipalities and higher territorial units. The aim of the last act was to strengthen significantly the powers of local municipalities in terms of decentralization of responsibilities and powers' adaptation, which proved to be problematic in the performance of municipal functions since 1990.

The law on municipalities follows a number of other laws.

- Act of NRSR no. 90/2001 Coll. on the Constitution of the Slovak Republic, which in title IV, articles 64-71 defines position of municipalities and higher territorial units, municipal competences,

ways of local self-governing, bodies of municipality and higher territorial units, etc.,

- Act SNR no. 138/1991 Coll. on municipal property, as amended, which identifies which property of Slovak Republic passing to municipalities as well as regulates the status and management of municipalities with their assets,

- Act of NR SR no. 583/2004 Coll. on financial rules of territorial governments, which regulates the principles and rules for budgeting, its approval and financial management of municipalities and higher territorial units.

The municipality as self-governing community is characterized by its autonomy (own original) competences. "Own competence is essential for municipality, without it, it would be only a state department." (Hoetzel, 1934, p. 176). The literature refers to use as adjective "own" instead of "independent". "The term" independent competency" is based on the difference between independent and delegated competence; by other words the difference is if the municipality acts by own decisions or is bound by law". (Hoetzel, 1934, p. 176-177) Within the scope of this competence a municipality manages its affairs, and it is – in line with Art. 67 of the Constitution of the Slovak Republic - bound by law and international treaty.

The transferred competence (delegated) is a part of the municipal competences, which has the nature of state administration and its execution is delegated by state to the municipality. According to Art. 71 paragraph 1 of the Constitution "to the municipality can be transferred by law an execution of certain tasks of local state administration. The costs of these tasks are paid by the state. "

To the group of own competences belong in particular those matters that primarily affects the lives of municipal residents, which effect does not exceed this framework and from this reason the municipality can make decisions relatively individually. The activities carried out as delegated competences usually exceed its significance beyond the municipality. To this group belongs the scope of activities that the state plans to influence intensively.



The municipality is an independent self-governing territorial unit of the Slovak Republic, associating citizens who have there a permanent residence. The role of the municipality is to care about the comprehensive development of its territory and the population living in it. The municipality takes its name, cadastral area, the right to own symbols (coat of arms, flag, seal, and anthem); the right to associate with other municipalities.

Each municipality or part of the municipality takes own name. The municipal name is determined or changed by government. The municipal name can be changed only with the approval of the municipality. The names of municipal parts can be changed by Ministry of Interior Affairs based on the proposal of municipality.

The municipality has a well-defined cadastral area. Cadastral area is a land-use unit that forms a closed and registered set of real estate. Cadastral area consists of a large set of plots to spatially identify sites broken down according to their use (arable land, vineyards, meadows, pastures, forests, built-up land, and water areas).

Two or more municipalities may merge into one municipality. The municipality can also be divided into several municipalities. To merge or split the municipality can be realized only on the date of elections to municipal bodies. Merging and splitting of municipalities can only be done based on the results of local referenda.

The municipality may be split only if the new municipalities will have cadastral territory or a set of cadastral areas forming a coherent unit, they will have at least 3,000 inhabitants, have not merged with other urban part of town.

The municipality cannot be split if there were realized investments on which depends the whole municipality.

As a legal entity a municipality is eligible to have rights and obligations as any legal entity. It has its own legal capacity. In practice, this means that a municipality may on its own behalf to establish, modify and cancel the legal relationship. It can buy or sell property. The mayor may negotiate an employment contract with a particular natural person and so on.

The municipality has its own property that can use only in line with law and municipal board decision, in principle, it cannot be given away. It also has their financial funds to finance autonomous tasks defined by law and development programs. Therefore, economic activity may carry out on its own property and financial resources, which the municipality has.

The municipality brings together different groups of people on its territory, which creates conditions for a better quality of life. The resident of municipality is every citizen registered permanent residence on it. Residents can participate in the government in various ways already mentioned. In addition to the above methods residents may require helping with their problems and complain to municipal bodies, as well as asking for help at times of sudden emergency, and ask for protection of persons and property.

The Act on Municipalities obliges to the municipal citizens the power to participate in the governance, but also obligations towards the governance, what means to protect the property of the municipality and to participate in municipal costs (to pay taxes and fees); to participate in protecting and enhancing the environment in the municipality; to help maintaining regulations in the municipality; to provide personal assistance in the aftermath of natural disasters and accidents.

#### Bodies of local municipality

The decisive responsibility for the municipality is based on activities of the municipal bodies. Through the municipal bodies the exercise of self-governing functions is the most intensive. This follows from the competences constituted by the Act on Municipal System.

Therefore, it is important that a person in the elected bodies in the municipality should be a personality generally recognized, professional capable, irreproachable and should prove active approach to public governance.

The basic obligate municipal bodies defined by the Constitution and the Act on Municipal system are: the local council (city council in cities), mayor (mayor of city).

They are elected decision makers, each member of council as well as mayor decide individually without the superiority or inferiority, they are thus mutually equivalent. The rules for the constitution of elected municipal bodies originally defined Act SNR no. 346/1990 Coll. on elections to local government bodies, as amended, but since 2014 it has been replaced by Act no. 180/2014 Coll. on the conditions for exercising the right to vote and the amendment of certain laws.

Self-governance is a diverse, time and content consuming activity. Therefore its performance requires the creation of further organs (derived) performing the executive, control, advisory and proactive functions that are shown in Figure 1.5.

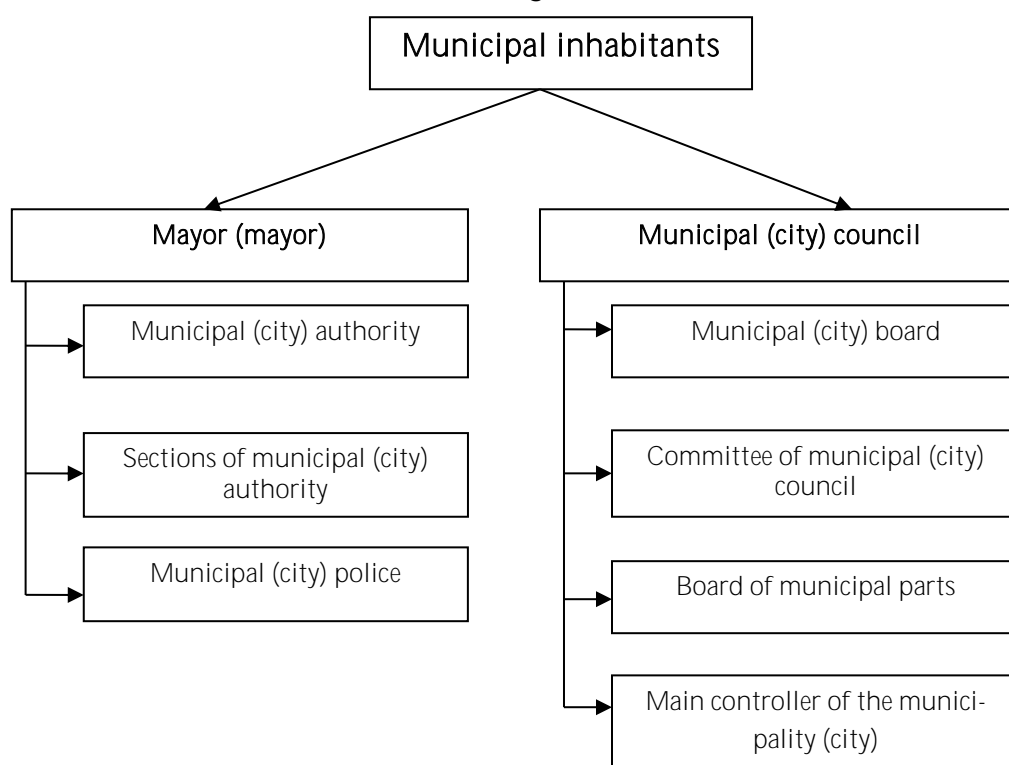


Figure 1.5. Organisation of local municipality

Source: own workmanship.

The power of decision-making is in hands of municipal council. Decision-making power of municipalities is not given only by the Constitution and the Act on Municipalities, as well as by procedure

of their appointment. The members of council and mayor, are elected by the inhabitants of the municipality (town) in direct elections, in difference to the derived bodies, that are set up and are elected by municipal (city) council (the mayor appoints and dismisses the head of local authority).

The municipal council is a representative body of the municipality, composed of members elected in direct elections by the municipal inhabitants for four years. The term of their governing begins by official swearing. At that time it ends the governing period of the current member of municipal board.

By the character a municipal board is a "municipal parliament". The number of members of the municipal council shall be determined by the municipal council operating in the previous governing period. The law defines the number of members differentiated by the number of inhabitants in the range of 3 – 41. The municipality with less than 40 residents are required at least three members of the municipal council.

The competences of both elected bodies are clearly separated and guaranteed by the act on municipalities. The municipal council cannot spread its scope of competences in other internal regulatory standards, such as the status of a municipality or organizational rules. The scope of the municipal council may designate other laws. An example is the Act on municipal property, and others.

The mayor is a representative of the municipality (town) with the highest executive powers. Its function is public. He/she is a statutory body in the municipality and in property relations, in staff labor relations of the municipality. In the administrative-legal relations he/she is an administrative body.

Because of the independent position of each elected municipal body and is not in a relationship of mutual subordination and superiority, the mayor council cannot impose the specific term tasks in the form of commands by its resolutions. To impose an obligation can be only to its subordinate body (municipal board, municipal authority workers, committees, etc.). The Council resolutions that are

related to the mayor can be in a form of "recommendation" or "requirement".

The governing period of mayors begins by official swearing. It lasts four years. The mayor cannot be a citizen who is a member of the municipal council or the municipal employee.

The execution of the council resolution the mayor can suspend in two cases. If it is contrary to the law or it is obviously unreasonable to the village.

The municipal council may adopt the decision about the election of a new mayor if:

- he does not guarantee the performance of his duties more than 6 months (absence, illness, etc.)
- he does not convene a municipal council for more than four months,
- he long-term, grossly and repeatedly neglects duties of mayor, and causes serious harms in the municipal administration (equity, in financial management);
- election of the new mayor requires a petition of inhabitants in number of 30% of eligible voters.

#### Derived - advisory, control and proactive bodies of local municipalities

Deputy Mayor is an optional function. He/she is appointed by the mayor from the members of municipal council, usually for the full elected period. He/she represents the mayor if for some reason the mayor cannot perform his duties. If a municipal board is established in the municipality, Deputy Mayor is a member.

The municipal board is an optional body, which means that it may or may not be established. Its justification is particularly in the municipality with higher number of the members of municipal council. It is composed of members of municipal council. It establishes by the municipal council for the whole elected term. The number of members of the municipal board established is settled by law to a maximum of 1/3 of the total number of members of municipal

council. At its composition it is taken into account the grouping of political parties represented in the municipal council.

The municipal board is a proactive, efficient and control body of municipal council and advisory body to the mayor. It meets as needed, at least once a month. A meeting is convened and chaired by a mayor. It is able to negotiate if there is a majority of all members of the board. The meeting is not public and the board negotiates according to approved negotiating rules. The resolutions are adopted by an absolute majority of all members.

Committees are established by municipal council. They may be established as a permanent or temporary (to solve a specific task). Members of the committees may be members of municipal council, residents (professionals or nominees of political parties). The secretary is usually an employee of the municipality, the number and composition of the committees is determined by a municipal council.

Committees have functions:

- advisory, the preparing the comments on the municipal proposals as a basis for decision-making of local parliament,
- initiative by drawing up concrete proposals and suggestions to resolve common issues of the municipality,
- control that verify compliance with the resolutions of the municipal council, they point to shortcomings for the need of municipal bodies.

The law does not specify that the committee should be established in the municipality. The only exception is the constitutional law of NR SR on incompatibility of functions that imposes to the municipal bodies setting up a committee to protect public interest, the members of this committee may be only members of municipal council. The creation of other committees are usually based on the basic functions of self-governing municipalities. The municipality may establish such committees, for example: finance committee for the administration of municipal property, transport, culture and sport, social services, housing, construction and land-use planning, and public order and others.

The main controller of the municipality implements control of tasks arising from the municipal obligations. Since 2002 it is a compulsory function in the municipality. He/she controls in particular:

- treasury operations,
- management and accounting of municipality,
- management of municipal property,
- prepares the expert opinion on the draft of general budget and the final account.

The main controller is elected by municipal council for a period of six years. For his activities he/she is responsible to the council. It participates in meetings of the municipal council and the municipal board with an advisory vote. The results of inspections are submitted to the municipal council.

The municipal police is also an optional self-governing body. The municipal police has a character of public order department and an executive body for the municipal council. The municipal council determines for the police:

- the organization,
- volume of wages,
- range of technical resources.

Immediate superior of the municipal police chief is a mayor. Functioning and powers of the municipal police are determined by Act of SNR no. 564/1991 Coll the Municipal Police. Details of the activities of the municipal police are defined by the generally binding regulations.

The municipal authority office is an optional mayor's executive body, provides administrative and organizational matters of the municipal council and the mayor, as well as other bodies set up by the municipality. It is made up of municipal employees and its organization is determined by a mayor. The municipal council also provides volume of wages, and extent of the technical means necessary for its operation.

### 1.3. Regional self-government in Slovakia

A representative of the regional self-government in Slovakia is a self-governing region - higher territorial unit, or regional government. Some authors use the historical name - county. The legislation defines the higher territorial unit as a self-governing region. Regional self-government in its present form is established only short time (since 2002) and in the literature no one of the terms is stable. Therefore, these terms are considered as synonyms. For the purpose of this work we use as a basis the Constitution of SR and we will use the term self-government of higher territorial unit, or self-government of HTU.

Self-government of higher territorial unit carries out the duties according to its status and position as a legal person, i.e. manages its own property and its own income, budgeting, taxes and fees. Furthermore, it is responsible for the scope of tasks resulting from its status as a public corporation, fulfil those tasks which cannot be realised individually by municipalities or their provision is more favourable for higher territorial unit, or it has this obligation mandatory given. By this way the HTU influences the socio-economic development of the area, common services for all municipalities in its territory and their inhabitants, acts as an administrative body in the system of public administration in the scope of individually defined by law. It performs the administrative actions arising from his own competence as a territorial unit and from the tasks transferred from the state.

The self-governing region is as part of the spatial structure, economic structure and public administration in the Slovak Republic. An autonomous region as a part of the spatial structure is defined by the Constitution and by the Law no. 302/2001 Coll. on self-government of higher territorial units, as independent territorial, autonomous and administrative unit of the Slovak Republic with its own territory which boundaries follow the boundary of the region (according to the Act no. 221/1996 Coll. on territorial and administrative division of the SR) and with its own residents.



Although, the adoption of the Constitution in 1993 was the first impulse for the formation of regional government, only from April 2000, when the Government approved Resolution no. 230/2000 on the concept of decentralization and modernization of public administration, the regional government began to be a reality (establishment of higher territorial units).

Adoption of Act no. 302/2001 Coll. on self-government of higher territorial units started constitute the regional government in the form of higher territorial units, by the law also named as a self-governing regions. Second level of territorial self-government was established by law, but not by revitalization as in case of the local municipality.

Autonomous self-governing regions were constituted on 1.1.2002. The Act established eight self-governing regions with site in Bratislava, Trnava, Nitra, Trenčín, Žilina, Banská Bystrica, Prešov and Košice. Their establishment was based on the decentralization and modernization of public administration, i.e. to preserve the original separate dual model of public administration from 1990. It is a model in which the local state administration is separated from territorial self-government. At the second level of territorial self-government is a valid rule of identity of the territorial self-governing district with the administrative region. At this stage of public administration reform it has been implemented the Act 221/1996 Coll. the territorial and administrative organization.

Regional self-governments carry out their duties stemming from their status as:

- legal entities, i.e. manages its own property and their own revenues, should administer the taxes, create budget and manage according it. By these tasks the regional governments should ensure their existence and create the material basis for their own work as a public-law corporation and administrative body.
- public corporation, i.e. perform the tasks which cannot provide the municipality individually, or they provide them for larger

territorial units. By its competences the self-governing region supports the socio-economic development in the region and act to reduce disparities in the regional development, provide public services for all municipalities located in its territory.

- administrative body, in the system of the public administration within the limits specified by law it performs acts resulting from their own competence in the autonomous territorial unit - the region and also carry out the functions transferred from the state.

HTU governments have the power:

- standard-setting, they create generally binding regulations,
- decision-making of their own property, spatial development, economic activities,
- control, to organizations which they establish, to the disposition of own property,
- punitive, in the legal measures, in the field of offenses,
- creation ability, establishment of their own initiative, control and executive institutions, own organizations.

Therefore, the most of the principles and legal provisions for government action at the second level are identical to the first level of local government. However, there is no vertical relationship of superiority and subordination as with the local state administration, so the regional government is not superior to the local government.

The law no. 302/2001 Coll. on self-government of higher territorial units is a basic act governing the operation of self-government of higher territorial units. Activities of regional self-government is also influenced by other laws (NR SR Act no. 446/2001 Coll. on the property of HRU, so-called Small Competence Act no. 416/2001 Coll. etc.).

To the territorial self-government as a legal person may be imposed obligations only by the law and by an international treaty (it is not possible for example by the government resolution).

## Bodies of HTU self-government

As well as in the local municipalities, the responsibility for government execution is in hands of bodies of self-governing regions. The bodies of HTU self-government are a council of HTU self-government and a chairman of HTU self-government elected by citizens in general, direct, equal and secret elections.

These are bodies with decisive competence. A council of HTU self-government (obligatory) establishes the mandate committee, financial committee and the committee for the incompatibility of interests.

It may also establish other committees (optional) as permanent or temporary advisory, initiative and control bodies which are shown in Figure 1.6.

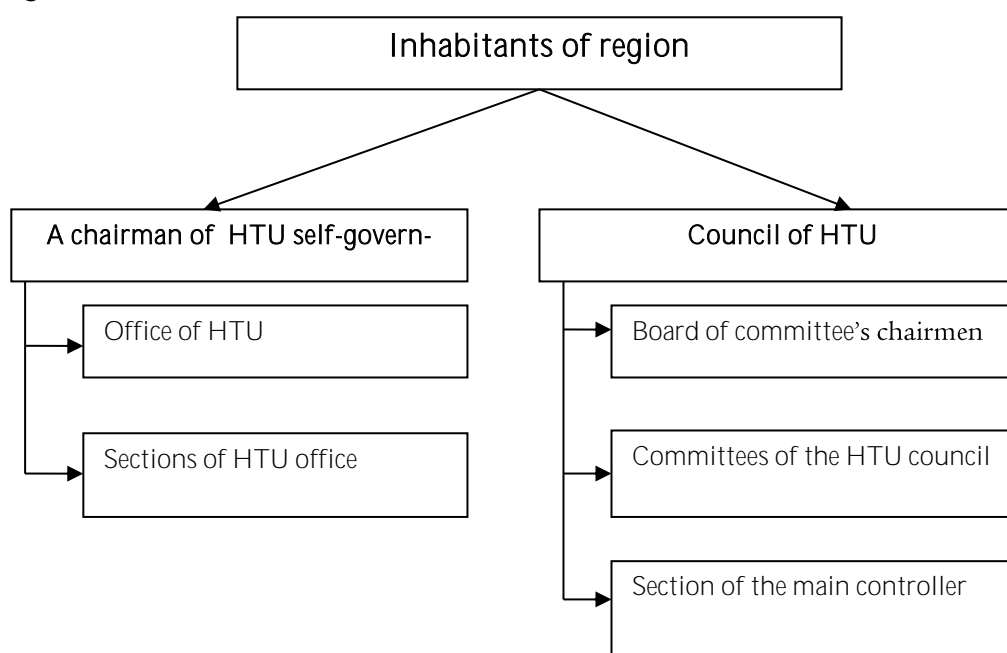


Figure 1.6. Organisation of HTU self-government

Source: own workmanship

A member of the mandate committee and the committee on conflicts of interests can be only a member of HTU council. Other committees consists of members of HTU council and other persons elected by HTU council, and the members of HTU council must constitute more than half of the committee members.

The main controller belongs to an obligatory control bodies of HTU. Regional council elects the main controller for six years. It performs monitoring of HTU performance, monitoring of budget incomes and expenditures, the control of management and disposition of HTU property. It manages also the control unit.

Office of HTU as the administrative apparatus is an executive body of the HTU. It performs administrative and organizational things of a council, a chairman and other bodies. It is made up of HTU's employees. The Office is established by a council that determines the number of employees and the composition of job functions. The work is managed and organized by a chairman of HTU self-government, which is responsible to a chairman of HTU. The organizational structure of HTU is approved by a chairman.

The council of HTU is composed of members of the regional self-government, who are elected in direct election for four years. The number of council deputies is determined by the rule - one deputy for 12 to 15,000 people.

The council decides on fundamental issues of regional self-governing. In particular:

- decides to regulations (VZN);
- determines the principles of management, handling with property,
- approves the budget of self-governing region and its changes, monitors the implementation of the budget and approves the final account of the region,
- decides on borrowing or lending the funds,
- decides on a referendum,
- establishes, dissolves and controls legal entities of region, appoints and dismisses their directors, unless a special law provides other rule, it approves shareholding of self-governing region in a legal person,
- approves the agreement on international cooperation, pooling of resources and activities of self-governing region, regional membership in associations,

- elects and recalls the vice-chairman from the regional deputies on the proposal of the chairman,
- establishes committees and other bodies of council, elects and removes their chairmen and other members,
- elects and removes the main controller for six years and determines his salary and remuneration,
- determines the remuneration of members of committees who are not members of regional parliament,
- establishes an office of HTU.
- approves the rules of procedure of the council.

The council meets as it is necessary, but at least once every two months. It is organized by the Chairman and negotiates as a collective body. The council is able to negotiate and to approve the resolutions, when there is an absolute majority. For the adoption of generally binding regulations it is required the consent of three-fifths majority. The council negotiations are public.

A regional chairman is elected by the people of region for four years in direct elections. He represents the autonomous region outside. He is a statutory body in the property-legal, business and other relationships. He is also a subject to administrative proceedings. In principle, if the self-governing region decides, it is in the hands of a chairman. If the self-governing region approves, it is in the hand of a council.

A chairman of the region, as well as a mayor, has the competence to veto the resolutions of the regional council, which means that if a chairman considers that the resolution is in conflict with the law, or is disadvantageous for the region, within the statutory time he does not sign the resolution.

A self-governing region is obliged to create within its jurisdiction an effective monitoring system to establish the function of the main controller and to elect him. A self-governing region is also obliged to create appropriate organizational, financial, personnel and material conditions for independent control.

A self-governing region in the execution of its competence co-operates with the state administration, other self-governing regions, municipalities and other legal entities. Public authorities provide to the self-governing region necessary data from the registers within the special laws. A self-governing region provides to the state bodies, municipalities and other legal persons information required for their activities within the special laws.

**State bodies' foster cooperation of HTU** with the territorial and administrative units or authorities or with the authorities of other states engaged in regional functions; ensure that the region is informed about the possibilities of cooperation. The HTU notifies the local state administration bodies and municipalities on the weaknesses identified in their activities and in the performance of their duties.

The basis of financial management in the HTU is a budget established for a period of one calendar year. A self-governing region finances its needs mainly from its own revenues, subsidies from the state budget and from other sources. A draft of regional budget must be before its approval at least 15 days publicly accessible in order to collect all comments of regional residents. This also applies to the draft of final regional account.

Many principles and legal provisions for the operation of regional government are consistent with the level of local government. The Act no. 302/2001 Coll. on self-government of higher territorial units (Act on Self-Governing Regions) is a basic act governing the operation of self-government of higher territorial units. Activities of regional self-government is also influenced by other acts (Act on Property of HTU, a little competency Act no. 416/2001 Coll. etc.).

The territory of a self-governing region is consistent with the administrative region - a territorial unit for state administration. Therefore, it is a symmetric model of territorial and administrative organization of public administration. To a self-governing region as a legal person may impose obligations only the law and the international treaty.

## CHAPTER 2.

# **Fiscal space of the state in the context of structural identification in Ukraine**

*Andriy KRYSOVATYY*

### 2.1. Scientific nature of the fiscal space

The geoeconomic space of Ukraine gradually transcends into new stages of civilization development, which give it new features and shape a new worldview. Thus, the system of relations within and outside the country changes through the reform of many institutions of the economic space. The transformational processes have perhaps affected the tax institutes most. They are the main regulators of market economy and the most effective method of accumulating revenues in the state budget, an efficient tool of state influence on the vital functions of society, means to achieve social cohesion and harmony. However, the study of tax institutes has

shown that the expectation of the effects from the introduction of certain components is impossible without analysing the general patterns and trends in the functioning of their environment – fiscal space. It, being a derivative of the fundamental and universal category of "space", is the concept of comprehending an important component of the societal existence in the fiscal field.

The history of philosophical and economic thought confirms that the essence of space, its nature and the mechanisms of development found its interpretation in the writings of practically all the well-known thinkers of the past and present. The great philosopher of antiquity, Aristotle interpreted "space" as the order of the mutual placement of bodies, and "time" - as a procedure of substituting phenomena. The ancient Greek philosophers, Democritus and Epicurus, interpreted space as a certain emptiness, in which atoms form a plurality of physical bodies, reflecting the atomistic understanding of the world, which subsequently was found in the works of D. Bruno, G. Galileo, R. Descartes, and I. Newton, embodied in understanding space as a universal body movement system.

Significant explanation of the economic space was given in the work of the German theorist Friedrich Ratzel, who in his book *Political Geography* (1897) substantiated the organic theory of the state as a living organism. His ideas were furthered by another Western theorist R. Kjellén in his treatise *The State as a Living Form*. He argued that "... States are born, grow, and die, that is, they are forms of life. Their existence obeys the general law of struggle for survival - the struggle for space"<sup>1</sup>. Hence, according to the thinker, a state is a defined form of economy characterized by physical, geographical and spatial attributes.

Fiscal space as a component of the economic space contains a number of properties, the schematic representation of which is given in Figure 2.1.

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<sup>1</sup> Снимщикова Н. К. Некоторые вопросы теории экономического пространства / Н. К. Снимщикова // Теория и практика общественного развития. – 2012. – № 7. – С. 274. – (Серия : Экономические науки).



<p><i>Ability to self-reproduce</i> The ability of the system to maintain a balance of spatial structure by optimally combining formal and informal components.</p>	<p><i>Cyclicity</i> The course of development, distribution and collapse of space in accordance with the phases of the life cycle (economic, political, social, civilization, institutional changes).</p>	
<p><i>Heterogeneity</i> The existence of nonlinear processes that occur in the economic space, or determine the different degree of fiscal subjects' involvement in the system of interactions and their concentration.</p>	<p>PROPERTIES OF FISCAL SPACE</p>	<p><i>Fractality</i> The ability of one space to act as an independent unit and simultaneously enter other forms of space and accommodate the smaller ones within themselves, thus providing spatial unity.</p>
<p><i>Synchronous correction</i> The ongoing process of coordinating the individual and common interests of fiscal space participants with the interests of its other actors, followed by behavioural correction based on the assessment of the level of transaction costs, time and effort expended for meeting needs, access to wealth and resources.</p>	<p><i>Hierarchy</i> The property of the fiscal space, reflecting the complexity and multi-level nature of its structure, where a higher hierarchical level has regulatory and corrective influence on the lower levels in accordance with the common principles of organization and functioning.</p>	

Figure 2.1. Properties of fiscal space.

It should be noted that professional literature offers a sufficiently wide range of interpretations of the economic space and its varieties. In our opinion, their concepts can be classified in this way:

- *geographic-geopolitical* – defines economic space in geographical terms, therefore, has the right to exist, however seems superficial, since it restricts its consideration to geographical boundaries, which does not encourage multifaceted interpretation. Russian scientist Ye. Kochetov expanded this concept. He considered the economic space a ternary – geopolitical, geo-economic and geostrategic – substance;

- *informational and communicational* concept that has evolved over the last decade without sufficiently clear methodological outlines. It interprets the economic space through the information component of economic processes and communications. Proponents of this conceptual approach believe that the economic space is defined by information flows that determine its boundaries, circulating between economic actors;

– *resource*, which devotes a special role to the issue of limited resources in the consideration of economic space. The apologist for the resource concept V. Radaev noted: “...*economic phenomena can occur wherever people make a sustainable choice about using limited resources*”<sup>2</sup>. According to a more detailed interpretation of this concept, space is created by: “**a**) *individuals and legal entities (actors) who enter into economic relations in order to realize their economic needs and interests expressing these needs; б*) *physical and non-physical objects that are the source of economic interests and economic relations*”<sup>3</sup>. It should be noted that the resource concept of the economic space is only partial in the methodological sense, as it focuses only on the redistribution of resources that economic entities have access to, thus leaving out the economic process itself.

Unfortunately, the resource concept is dominant in the interpretation of the fiscal space, since it is based on the approaches outlined in the reports of the European Bank for Reconstruction and Development<sup>4</sup> and World Bank<sup>5</sup>, which provided a methodology that for determining the amount or absence of budgetary reserves in the medium and long term in order to attract additional funds to promote economic development.

As a result, the interpretation that duplicated the approach developed by the experts of the International Monetary Fund and the World Bank, defining the fiscal space “...*as the room for undertaking discretionary fiscal policy relative to existing plans without endangering market access and debt sustainability*”<sup>6</sup> became especially popular. This concept of fiscal space is widely used by international

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<sup>2</sup> Радаев В. В. Экономическая социология: курс лекций / В. В. Радаев. – М. : Аспект-Пресс, 1997. – С. 32–33.

<sup>3</sup> Чекмарев В. В. К теории экономического пространства / В. В. Чекмарев // Известия Санкт-Петербургского университета экономики и финансов. – 2001. – № 3. – С. 27.

<sup>4</sup> Налогово-бюджетная политика и экономический рост. Уроки для Восточной Европы и Центральной Азии / под ред. Ш. Грей, Т. Лейн, А. Варудакиса ; The international Bank of for reconstruction and development; the World bank. – 2007. – 391 с.

<sup>5</sup> Створення фіскального простору для економічного зростання. Огляд державних фінансів України : док. Світового банку / Підрозділ з питань подолання бідності та економічного розвитку ; Регіон Європи і Середньої Азії. – 14 верес. 2006 р. – Звіт № 36671 –UA.

<sup>6</sup> Хеллер П. Фискальное пространство – что это такое и как его получить? / П. Хеллер // Финансы и развитие. – 2009. – Июнь. – С. 32.

financial institutions in making decisions about countries in need of financial assistance. As P. Heller points out, the government can create fiscal space by increasing tax revenues, obtaining external grants and credit resources, both internal and external, as well as reducing less priority spending, if there is no probable damage for both macroeconomic stability and budgetary sustainability with the possibility of financing state expenditures. In this case, the fundamental factors that can affect its scale are:

- *changing spending priorities* by reducing unproductive costs, which may include reducing subsidies, military allocations, wage cuts. At the same time, special attention is paid to productive costs, the reduction of which can have negative social consequences associated with unjustified weakening of a specific sector of the economy and the need to invest significant resources to restore it;

- *increasing the efficiency* of program implementation, reducing corruption and improving the quality of management, reducing administrative burden and improving cost coordination;

- *increasing revenues* by expanding the tax base and improving the tax administration system. However, an acceptable level of tax revenue for low-income countries is considered to be 15% of GDP;

- *increasing the amount of loans*, which requires an assessment of the social and economic return on investment;

- *monetary expansion*, the use of which is the most undesirable measure because of the likely inflationary consequences. The functions of the state policy in the field of monetary policy should include the creation of sufficient liquidity to support real economic development;

- *receiving large amounts of external grants* is a powerful tool for helping developing countries from the world community. They are usually characterized by more favourable and acceptable conditions than loans;

– *establishing a well-balanced macroeconomic policy* is an additional stimulus to economic development. On the contrary, the inability of governments to implement relevant macroeconomic measures reduces the number of possible IMF support programs.

Investigation of the institutional essence of taxation proves that it is one of the oldest social institutions, which, having arisen in the early stages of the social development, is an indicator of the level of the organizational evolution. It depends on the objective and subjective economic, political and ideological preconditions, formed under the influence of a set of formal, informal norms and rules of conduct between participants of interactions.

We understand the “**formal taxation institute**” as the system of legal norms that regulate the behaviour of its carriers (participants in public relations) and its implementation mechanisms regarding the transaction of taxpayers' income to different levels of centralized funds of the state's financial resources to ensure satisfaction of the interests of various social groups. **Meanwhile, the “informal tax institution” manifests on the individual and social levels.** At the level of the individual, it is formed in the form of basic patterns (habits, values, interests, preferences, traditions, decision-making mechanisms, motivations and mental characteristics that determine the type of interaction and its resulting effect). The participation of the individual as the carrier of the institute is determined by the interaction of a certain type which, influenced by the system of statuses and roles, manifests at the social level in the tax behaviour and culture of the corresponding type.

It is the geographical approach that views *tax institutes as norms* and reiterates the full and indivisible right of each country, its parts or alliances of countries to establish and apply relevant tax laws and norms within the designated borders. The principles of taxation, the structure of the tax system and the mechanisms for implementing the tax policy are determined by the state (its part or alliances of states) independently and are mandatory in the defined territory.

Establishing tax institutes throughout the territory of a state is possible due to tax jurisdiction, tax sovereignty and tax immunity of the state.

The *tax jurisdiction* of the state is based on the sovereign, full and indivisible right of the state to impose taxes and apply the tax legislation regarding entities that carry out economic activities and receive income within the single economic space of the state in order to form the revenue part of the budget.

The right of the state to use measures of economic and non-economic coercion in the accumulation of tax payments may extend only within the territorial space of the state to resident taxpayers, who carry out their activities outside the state.

The interpretation of *tax institutions as a behavioural stereotype* corresponds to a social approach. It is based on the fact that a citizen - a taxpayer and at the same time a recipient of public goods - interacts daily with other citizens and various social groups. Being a member of many social groups, he has an appropriate standing in them, conditional to the degree of inclusion in different groups, as well as the situation, which is substantiated by concepts of social status and social roles.

Social status is determined by the position of the individual or group in the social system, which has features specific for this particular system. Social role is a model of individual behaviour, objectively defined by the social position of the individual in the system of social, public and interpersonal relations. In other words, the social role is the behaviour that is expected from a person who has a certain social status.

The political approach presents *tax institutions as rules of the game*. It pays particular attention to the components of the implementing tax policy and tax doctrine within a specific fiscal space, specifically at the level of state, its territory (provided that the territorial authorities are empowered to establish and implement their own tax policy) and association of states.

According to this approach, fiscal space is understood as:

- 1) **space of economic entities' interaction;**
- 2) space structured by the status of economic agents, their groups and the order of priority of their social standings;
- 3) locale of economic actors, designed for their interactions and struggle for access to the benefits and resources contained within the space;
- 4) set of relations (links, interactions) in which the individual, groups of individuals and society as a whole enters, the type of which determines the parameters of expansion or collapse of the fiscal space.

Interpretation of *taxation institutes as regulators of transaction exchange* is largely consistent with the strategic approach. Transaction exchange is determined by transaction costs and transaction losses. Transaction costs reflect the necessary amount of financial resources paid by economic agents to ensure the functioning of the tax institution, as a result of which citizens receive transaction benefits - social and public goods, the monetary system, guarantees of property rights, personal security, etc. from the state.

Transaction losses are the amount of losses incurred by economic agents due to the existence of institutional dysfunctions in all their forms and varieties. These include losses caused by the ineffectiveness of adopting legislative decisions on taxation, drawing up unrealistic forecasts for future tax revenues, inconsistent functioning of the fiscal bodies, ineffective protection of transactions and means of their implementation by one of the agents, refusal to participate in them (for example, due to significant corruption), due to a conflict of interests, etc. When assessing the effectiveness of a particular fiscal space, tax entities analyse not only the level of transaction costs, but also probable transaction losses due to the dysfunction of certain public institutions, including tax institutions.

According to the transactional approach, the subjects are constantly in the process of assessing the "benefit-loss" ratio. This allows us to form an alternative understanding of the institutional

transformation processes, to justify the choice of evolutionary alternative ways of development based on the characteristics of the choosing the most effective social standards and norms of interaction. This approach as a methodological embodiment of the principle of the "invisible hand" that can justify the presence of seemingly unrelated processes, based on the same pattern. Its essence can be summed to the existence of fiscal space, which "conditionally guarantees" minimum transaction costs, time expenditures and applied efforts. Thus, it establishes the benefits in realizing the goods and interests of entities there and guarantees a conscious flow of economic, personnel, and social potential, as well as income and resources from some levels and fields of space to others, similar to processes of diffusion in chemical or physical systems.

Of course, any action to ensure the functioning of fiscal space is a difficult challenge, even for countries with a developed market economy. Support for the development of the fiscal continuum processes necessitates considering a large number of factors and continuous monitoring of probable risks and threats, analysis of the effectiveness level of implementing measures of influence, and assessment of the correspondence of formal institutions to socio-economic development trends. Therefore, the system of measures to expand fiscal space should be aimed at qualitative improvement of fiscal interactions and include a system of measures to minimize transaction costs and losses of entities, whose ownership rights to assets being realized will ensure the growth of national wealth, positive dynamics of macroeconomic indicators and increase the level the competitiveness of public institutions.

## 2.2. Institutional transformation of the fiscal space in the context of globalization and business incorporation

Over the past twenty years, there has been an urgent debate on the construction of a social market state. Politicians, economists, and financiers work with different categories of redistribution -

budget, tax, fiscal, monetary, financial policy, financial and tax system, etc. Such variety of categorical tools raises the problem of institutional transformation of the theory of Ukrainian fiscal policy, since when using different instruments of economic development regulation, most scholars and practitioners take into account only their legal essence, ignoring the economic, social, cultural and political aspects.

In the modern world, the conditions for national governments will not be dictated by capital, but by developed bureaucratic machines that manipulate the thoughts of millions. However, this does not mean that we are heading towards communism. Private property will remain at the foundation of society. However, capital alone can neither deal with illegal immigration or global warming, nor even stabilize the situation on the stock exchanges. Solving macro-problems that affect everyone requires some limitation of individual freedom. In this sense, humanity will take a step back, moving away from the liberal dream of absolute freedom.

The collapse of the US neoliberal theory is not a proof, but a confirmation of its ineffectiveness. Back in the late twentieth century, economists have argued that the highest rates of development are displayed by the countries that first departed from the neoliberal model - Japan, South Korea and China, where the state rigidly manages the economy. In the period of 1973-2008, the average annual growth rate of real GDP in China was 6.7%, in South Korea it was 8.3%, in Japan it was 3.8%, whereas in the United States it was 2.4%, in the United Kingdom it was 1.6%.

Neo-Keynesian theories, such as Harrod-Domar model, may be replacing modern neoliberal ideals. Their essence lies in two main postulates: the state must regulate the economy, but stimulation of demand is not carried out at the expense of bloated social programs, but through state capital investments. Additionally, there are alternative theories, such as the "theory of expectations" (the market responds to expectations, so the state can regulate the economy



through official statements) or "supply economics" (managing business by lowering taxes to stimulate production, instead of increasing them as Keynes). However, it should be noted that all these ideas are in one way or another being used even now.

After the end of the global crisis, the question at hand will not even be about the role of the state in managing the economy, but about solving the classical task of market economy: how the rich should share with the poor. After all, each time, the beginning of a systemic crisis was connected to redistribution or creating the visibility of redistribution of goods. Roosevelt's New Deal, which recovered the US economy after the Great Depression, provided for a redistribution of state benefits: increased taxes and social programs made it possible to select part of the profits from large companies and direct them to the most vulnerable groups of the population. At the same time, the world saw a sharp decline in profits; companies with hundred percent profitability disappeared, and in the US the share of total wealth belonging to 1% of the wealthiest households fell from 35% in the 1940s to 16% in 1976. The rejection of Keynesianism has helped large enterprises regain the status quo: the aforementioned figure in 2005 has grown to 38%. The arrival of neoliberalism has created the appearance of redistribution of wealth - joint stock companies. Due to stagnation of real wages, hired workers were offered a compromise in the form of a distribution of shares as bonuses to wages. It is also allowed to bind workers to shares in big business. This model, with increasing consumption, could have provoked the crisis decades ago. Immediately after the realization of a possible threat, the United States in the mid-1990s used loans, as a result of which a number of benefits were provided to the population and reduction in business profits was avoided. However, this turned out to be just a temporary solution to the problem.

Today, the world is on the verge of a new stage in the development of a socially-market state. Soon the role of the state in managing the economy will increase. However, large corporations will not be willing to provide financial support to workers around the world, even though

stable increase in demand is the basis of a market economy and without growth in real incomes increasing consumption is impossible. Thus, we need either new technologies to help maintain profit and salary growth simultaneously, or a new "social tax agreement," which will still force big corporations to adapt to the new conditions of redistribution.

The emergence of new crisis phenomena in the Ukrainian economy, which coincided with the deepening global economic crisis, once again exacerbated the problem of taxation of large corporations and enterprises and the search for effective fiscal instruments to overcome the negative trends in socio-economic development. With the help of fiscal policy, the state can, on the one hand, adjust the flows of market capitalization, and on the other hand, initiate the necessary socio-economic shifts by forming financial support for certain budget expenditures. It need only balance the interests of all participants in redistributive relations in such a way as to ensure maximum tax revenues with minimal negative impact of fiscal phenomena on the economic activity of taxpayers. However, this is not easy to implement in practice, even in a well-developed market economy, not to mention the complexity of tax optimization in emerging market economies.

Fiscal policy in Ukraine should differ from tax policy in the Western countries, if only because during the market transformation of the socio-economic system a number of structural problems require an urgent solution. Developed countries, as a rule, did not face these problems, since their socioeconomic systems changed gradually, responding to the challenges of improving the efficiency of management, and did not acquire significant disparities. By contrast, Ukraine inherited an inefficient economy and a hypertrophied social sector, and even at the beginning of the market transformation was forced to develop the fiscal sphere in conditions of significant structural distortions. Many of them have only deepened today, so the main task of fiscal policy in Ukraine should be promoting a systemic shift, rather than maintaining a stable functioning of the relatively optimal socio-economic system, as was the case in the West.

At the same time, it is important for Ukraine to develop fiscal space based on those taxes and tax payments that provide the lion's share of tax revenues in developed market economies, and in particular in the EU, meaning the latest fiscal technologies for tax administration by large payers. The introduction of some unique national fiscal forms or archaic taxes (for example, a turnover tax) can solve individual economic and fiscal problems, but will weaken Ukraine's positions in the globalized world and nullify all its aspirations to participate in European integration. Moreover, the current taxation of countries with a developed market economy is the standard to which Ukrainian taxation should be brought closer in the future. The main objective is to find the optimal combination of progressive tax instruments and review them from time to time according to the changes in economic, social and institutional conditions. This is a difficult task, since Ukraine will have to transform fiscal processes on the principle of systemic reform for the first time.

From the second half of the 1990's until 2005, the tax policy in Ukraine was aimed at reducing the level of taxation. At the same time, changes in tax legislation were based on the considerations that any liberal tax reform is a pledge to improve the dynamics of economic development. There was a reduction in tax rates and adjusting of mechanisms for their collection, the abolition of individual tax payments, as well as large-scale provision of sectoral and territorial tax privileges. The first successful fiscal transformations (lowering VAT rates and income tax) helped lobbyists to initiate tax preferences, while macroeconomic stabilization (later GDP growth) allowed supporters of the "omnipotence" of market self-regulation to implement a large number of fiscal experiments without any concern for their scientific rationale. Why go deep into the theory and carry out complex mathematical calculations, if such reforms in general have been tested successfully (without much loss to the budget) by neighbouring countries, and the whole world is fascinated by the ideas of tax liberalization?

In 2005, when it became apparent that many rushed tax transformations significantly distorted the competitive environment and led to significant fiscal losses, without solving macroeconomic problems, a review of tax policy guidelines was initiated. The main objective of the fiscal reform was to eliminate all imbalances in taxation and to direct the extra tax revenues attracted to the budget to finance social expenditures. It provided for the abolition of territorial and most sectoral tax breaks, as well as adjustment of VAT collection mechanisms (complication of the compensation procedure) and income tax collection mechanisms (expansion of gross expenditures). At the same time, attempts were made to increase the efficiency of tax control, sharply increase wages of the state employees, pensions and other social payments. However, such a radical "restoration of justice" disorientated most of the market actors<sup>7</sup>, led to a decrease in GDP growth and investment growth, led to a significant increase in imports<sup>8</sup> and once again shook the citizens' confidence in the state as the initiator of progressive socio-economic changes in the interests of the whole society<sup>9</sup>.

Before 2005, the government promoted any tax initiatives aimed at directing additional financial resources into the real economy sector and budget financing of only urgent (minimum) social expenditures; after 2005, the role of redistributive processes for expanding the social component of the functioning of the state significantly increased. In other words, at first fiscal policy contributed to the "preservation" of a suboptimal socio-economic system, and later, without taking into account the needs of structural reforms, it became an instrument for building a "social miracle" in an import-oriented economy. Even the partial departure from social populism in 2006-2007, accompanied by a return to the previous practice of adopting fiscal decisions, did not push for the development of a new,

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<sup>7</sup> Expectations for further sharp deterioration of the tax environment of the economy have spread.

<sup>8</sup> The domestic supply could not keep up with the rapid growth of domestic demand, while the demand for goods not manufactured in Ukraine increased.

<sup>9</sup> Even an increase in pensions, which has outpaced the growth rate of wages in the real economy, was not always perceived positively by individual social groups.

scientifically based model of tax policy. In 2008-2009, there were two extreme options: the market "in service" of the wealthy one-percenters and pipe dreams of immediate social justice, the latter of which won out.

Today Ukraine has to build its fiscal strategy in extremely difficult conditions. The EU announced projected average deficits for the EU budget - 8.5% of GDP in 2015 and 7.9% of GDP in 2016 (against 0.8% of GDP in 2008) and the expected increase in the debt burden on the integrated economy from 58.7% of GDP in 2010 to 83.7% in 2016. They suggest that significant flows of recession-limited, low-cost borrowed resources of the world capital market will be directed to the public sector within the Eurozone, in addition to satisfying the considerable borrowing "requests" of the USA and other highly developed countries. Moreover, at the highest level of the EU there are open discussions of the fact that individual countries cannot avoid increasing the fiscal burden on big business for much longer. It is possible, of course, to optimize (reduce and revise the structure) of budget expenditures, but everyone understands that such decisions in their radical version (requiring significant adjustments in spending volumes) are politically risky.

**It is obvious that Ukraine can't really count on external loans,** except for the cheap (in comparison with other debt instruments) IMF loans. However, the IMF will not continue to "pour" money into the Ukrainian economy indefinitely (if it decides to resume lending at all). The IMF is not a charity, but a financial institution meant to support the countries that are "catching up" to the highly developed ones in their implementation of structural reforms and attempts to prevent the "collapse" of their currencies. Therefore, today Ukraine simply must reduce unproductive budget expenditures and increase its "development expenditures", as well as pay special attention to improving the efficiency of the tax system in terms of its implementation of both fiscal functions and regulatory tasks.

What should the institutional paradigm of modern, effective fiscal space look like?

First, in order to ensure positive results, the fiscal space and the economic policy as a whole must be based on a clear vision, free of illusions. Without a vision, fiscal policies (and those who implement them) suffer from incompleteness, indecision and, of course, weakness. It resembles a journey without a destination. The long-term vision must be ambitious and realistic at the same time, serving as the indicator of the right direction of societal development and the way of realizing its aspirations. This vision should stimulate their formation, but at the same time restrict expectations with reasonable limits so that they can be met over time<sup>10</sup>. If the lack of such a vision is in practice obscured by the declarative illusions of "positive shocks" or "civilizational leaps" and hastily drawn pictures of a cloudless future on the eve of the election, then the prospects for economic growth and increased efficiency of the redistributive processes are not promising.

Second, fiscal space should be based on a theory that explains the mechanisms of the economy and its growth under the influence of the redistributive levers. A bad theory can only serve as a basis for a bad policy. An effective fiscal policy can be formed and implemented only on the basis of scientifically substantiated economic doctrine. Successful implementation of the tax policy entails conducting purposeful and meaningful influence on the subjects of GDP redistribution in order to achieve development goals. Thus, better satisfaction of the social needs through increased competitiveness of enterprises and the effective servicing of individual and corporate agents requires fundamental knowledge.

The attempts to combine the left-wing ideas of the Social-Democratic direction with the elements of the neo-liberal economy are particularly destructive in the post-socialist reality, as they are pulled out of the theoretical context of a completely different world of highly developed capitalism<sup>11</sup>. Such attempts impede the country's

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<sup>10</sup> Колодко Г. Институты, политика и экономический рост // Вопросы экономики. – 2004. – № 7. – С. 46.

<sup>11</sup> North D. Understanding Economic Change and Economic Growth // Distinguished Lectures. – 2002. – No 7.

approach to potentially possible economic growth and, more importantly, do not allow maintaining the long-term dynamics achieved with significant efforts.

It is also important for Ukraine to form fiscal space, taking into account the current development trends of world and European taxation. Among them are: a) strengthening the fiscal position of consumption taxes - the "insurance" budget tool in the worsening market conditions; b) review of "burdensome" for the entrepreneurial sector and public finances West European social doctrine; c) strengthening the fiscal position of environmental taxation as an instrument for solving global environmental problems; d) liquidation of tax havens to prevent "undermining" the financial basis of the "welfare state"; e) **introduction of a transaction tax as a constraint on the further uncontrolled growth of the financial sector (to minimize the risk of a recurrence of the current world crisis in the future).**

Third, a variety of approaches hides a large number of interests. One needs to follow the configuration of conflicts of interest even more carefully than the changes in theory in order to understand why a particular approach is the best. In fact, it is different interests, rather than views that are important. In this context, the interests are primary, and the views are of secondary importance. The latter are often traded or even intellectually corrupted.

Fourth, effective implementation of an effective fiscal policy requires decisiveness and political will. Decision makers need to know what they want; we really need to know "what we are fighting for and where we are going". Without this knowledge, even the best theory will not help, because very few people will understand how to use it. Correct answers will be of little use if decision makers do not know the questions.

Fifth, fiscal policy is an art of coordination. The complex nature of economic activity determines the need to simultaneously deal with a wide variety of issues. Of course, some of them are more important and relevant than others. The ability to identify what is really

important and relevant and to distinguish fundamental and strategic issues from ordinary everyday problems is a special gift that not everyone involved in the formation and implementation of fiscal policy has. On the one hand, fiscal policy can be compared to managing a large company or organization, where it is necessary to instantly adopt a variety of solutions (sometimes in a crisis) often based on incomplete information and with external pressure. On the other hand, it is a strategic activity that requires a breadth of perspectives, forward thinking and the ability to consider problems in depth. It is also necessary to interact creatively with intellectual supporters and experts, foreign and, most importantly, social partners. If it is possible to achieve coordination of all these components, minimize "information noise" and friction in the mechanisms of making fiscal decisions, then the political machine works. Consequently, decisions do not contradict each other; positive feedback channels operate successfully; obstacles on the way to desirable outcomes are eliminated, and gradually the long-awaited results begin to appear - the economy grows with an accompanying increase in tax revenues.

Finally, sixth, politics in all areas, including fiscal, is the art of compromise. One should always seek creative consensus which combines the necessary and the possible, balances conflicting interests of the society, resolves conflicts between short-and long-term interests of specific social groups, between the fiscal needs of the centre and regions, between taxpayers and recipients of budget funds, between consumers and producers. If potential conflicts are not mitigated by political instruments, reaching a compromise will be that much harder. Moreover, everyone or almost everyone should be satisfied with the achieved results (GDP redistribution) to approximately the same extent. Only such a compromise can serve as the foundation for building a qualitatively new, long-term social structure.

All this should be taken into account when choosing strategy vectors and tactics of forming an effective fiscal space of the state.

### 2.3. Divergence of fiscal policy in the welfare state



The cyclical nature of social development leads to the fact that socio-economic changes are constantly occurring in society. All this leads to the need for a constant adjustment of the strategy and tactics of public administration. That is why fiscal policy as an undeniable attribute of the state should be mobile and elastic. The state may use a number of instruments to resolve conflicts that arise in society. However, the state policy in the field of taxation is chief among them.

On the one hand, fiscal policy provides the financial base of the state, and on the other hand, is the main instrument for implementing its economic policy. The state fiscal policy serves as the main instrument of state regulation of the economy, a means of generating budget revenues and stimulating scientific and technological progress, of limiting the growth of prices and inflation.

Fiscal policy ensures guaranteed and stable revenue of the budget, as well as gives the state the opportunity to influence all aspects of social and economic development. That is why the state manipulates the fiscal sphere, depending on the situations that occur in society, affecting the various aspects of taxpayers' activities. At the same time, fiscal policy is constantly under pressure from large taxpayers who are interested in reducing the tax burden, since they primarily view taxes as a means of reducing their personal income. Without balancing the interests of the state and taxpayers with the help of a well-established and well-balanced tax policy, it is impossible to maintain a stable and balanced existence of the state itself.

Changing the strategy and tactics of tax policy provides a much wider range of opportunities for the tools of state economic policy than any other means of public administration. In fact, taxation changes are generally the most acceptable public finance tool because governments are more likely and quick to pursue such actions than to shift budget expenditures or use monetary policy instruments. Any state interference in the socio-economic life involves changes in aggregate demand, which serves as a macroeconomic indicator of the practical implementation of the tax policy strategy and tactics. Like changes in public spending, changes in tax policy tactics

indirectly shift the aggregate demand curve. Increasing the tax burden reduces the purchasing power of households, while lowering the level of taxation increases purchasing power.

There are two important differences between tax policy and government spending. The first difference is that the tax policy works in the opposite direction. Increasing public spending will shift the aggregate demand curve to the right, while raising the level of taxation will reduce aggregate demand (shifting the curve to the left).

The second difference is that changes in tax policy have less impact on aggregate demand than changes in government spending. In other words, an increase in government expenditures by 10 million hryvnias will shift the aggregate demand to the right by 10 million hryvnias. Lowering the level of taxation for the same amount will increase aggregate demand by less than UAH 10 million, as consumers are more likely to save part of the income from lowering the tax burden. If buyers decide to save 20% of this amount, then the effect will be equal to the increase in aggregate demand by 8 instead of UAH 10 million (Figure 2.2).

The overall tax policy strategy covers the priority objectives related to the functioning of the taxation system and the methods of their achievement today. This allows for the implementation of other measures in the future.

The representatives of the political and economic elite believe in the need for a tax reform. The main objectives of the tax reform as one of the most important parts of the strategy of economic growth are optimization of tax burden, increased tax control of production costs, minimization of costs for the implementation of tax legislation and administration of taxes. The taxation system should be extremely simplified, which will allow to expand the tax base, reduce the costs of document circulation and the maintenance of the tax service. Thus, it will increase the amount of budget revenues without

raising (or even lowering) tax rates. It is necessary to increase the taxation of non-productive activities: entertainment business, some types of mediation, etc.<sup>12</sup>

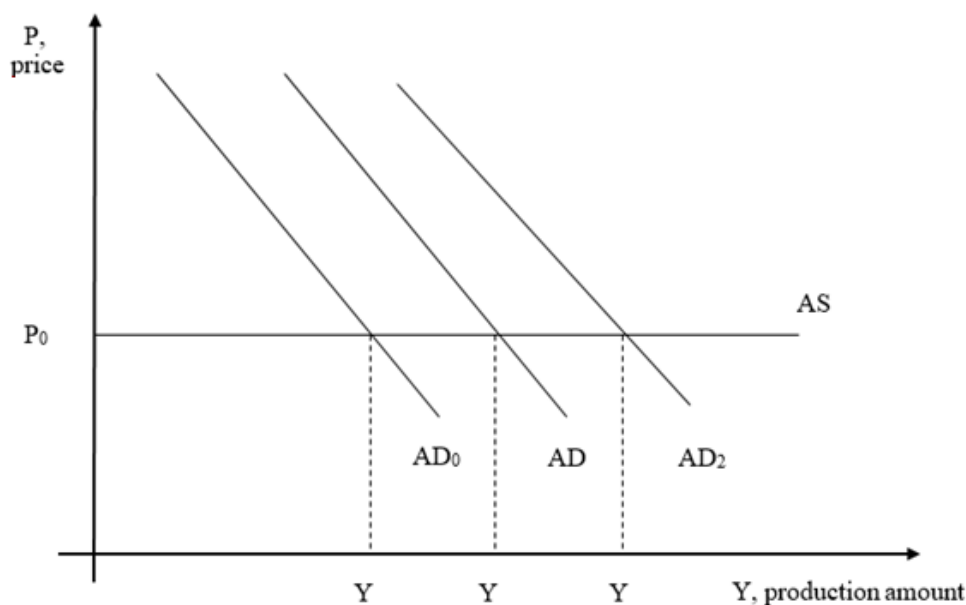


Figure 2.2. **Effect of taxes and expenditures on aggregate demand**

Source: Крисоватий А., Луцик А. Податки і фіскальна політика: Навч. посіб. – Тернопіль, 2003. – 312 с.

In the transition to a market economy, the tax system, as well as the methods of accrual and payment of taxes, and, accordingly, the order of their administration should change. At the same time, it's best to avoid blind copying of the experience of individual countries on the issues of creating and implementing tax policy. We cannot impose a tax system of any country on Ukrainian reality. Any innovations in tax legislation should only be introduced after an in-depth study of the existing problem and experience of the individual elements of the taxation system of the market economies, a thorough

<sup>12</sup> One of the main goals of creating an effective tax policy is to improve the financial standing of enterprises of all ownership types, especially from priority areas of production. On the one hand, taxes must provide a stable financial base of the state, and on the other hand - leave sufficient funds to enterprises and citizens in order to keep them interested in the results of economic activities. The regulation of new economic relations requires a flexible tax policy that would enable the state interests to be optimally linked to the interests of ordinary taxpayers.

analysis of the need for such a change and the possibility of its application in the tax legislation of our country.

Since a country cannot set an excessively high level of taxation, because it is opposed by society, it is forced to use state borrowings to cover public expenditures. This situation cannot be definitively evaluated. Everything depends on the specific moment of socio-economic development of the society. The main thing here is that state borrowing must be returned eventually, and can be returned only at the expense of additional revenues of the said taxes, fees and other mandatory payments.

Thus, government borrowing is nothing but deferred taxes, fees, and compulsory payments.

The problem of ideal tax policy can be put thusly: which of the ways - taxes or borrowings (rather like deferred taxes for the future) – are better for reaching the highest goals of community development, providing optimal distribution of available and limited resources between the state and the private sector. Like taxes, fees and compulsory payments, borrowing separately or in combination affect the socio-economic situation in the country, public wealth and personal well-being of citizens.

The goals of tax policy, and hence, the guiding principles of the tax policy strategy in Ukraine should be:

- stimulating the dynamic development of the economy on the principles of economic growth;
- ensuring optimal budget coverage and stability in the field of public finances;
- restructuring of the economy, promotion of investment and innovation activities;
- stimulating employment and self-employment;
- improving welfare and ensuring the development of human capital.

In order to achieve the declared goals of tax policy, we must remember that the tactical reduction in tax burden should not be ac-

accompanied by a reduction in budget revenues. Otherwise, such a reduction will result in the reduction of expenditures (hence, in mitigating the effectiveness of tax policy), or in attempts to finance the deficit by issuing currency (inflation) or borrowing funds. That is why the tax policy tactics must always contain stimulating components that will directly contribute to the revitalization of economic growth and compensation of tax revenue losses through expanding the tax base at the very first stages of the tax policy implementation.

It should be noted that in Ukraine there are forms of stimulating entrepreneurship using transfer payments, rather than through taxation. Thus, unemployment benefits may be paid once for the organization of entrepreneurial activity to unemployed persons who cannot find employment because of the absence of corresponding vacancies on the labour market.

The automatic dependence of tax revenues (net taxes) on GDP is an important factor in stabilizing the economy. The stabilization function of net taxes is caused by the fact that they represent a withdrawal from the economy, that is, the loss of its purchasing power. If these taxes increase, then GDP decreases, and vice versa. This means that, in terms of economic stability, it is desirable to increase the magnitude of such withdrawals in periods when the economy is heading towards inflation, and vice versa, to reduce their magnitude when there is a tendency to curtail production. As the dynamics of automatic taxes meets these requirements, they were named “built-in stabilizers”.

Although automatic net taxes perform a stabilization function even without special government decisions, their effectiveness ultimately also depends on the state. However, the role of the state lies in the fact that it employs, i.e. introduces a certain system of taxes and transfer payments into the economy. If changes are made to this system, the stabilization efficiency will change. Thus, a non-discretionary (automatic) tax policy is a policy that, by establishing a certain system of taxes, tax payments and transfers, provides them with

an opportunity to perform a stabilization function in the economy automatically<sup>13</sup>.

The graph in Figure 2.3 shows how the tax system creates built-in stability. Public expenditures are fixed and considered not to be dependent on GDP. Tax revenues vary with GDP changes. The relationship between tax revenues and GDP is reflected by the ascending T-line.

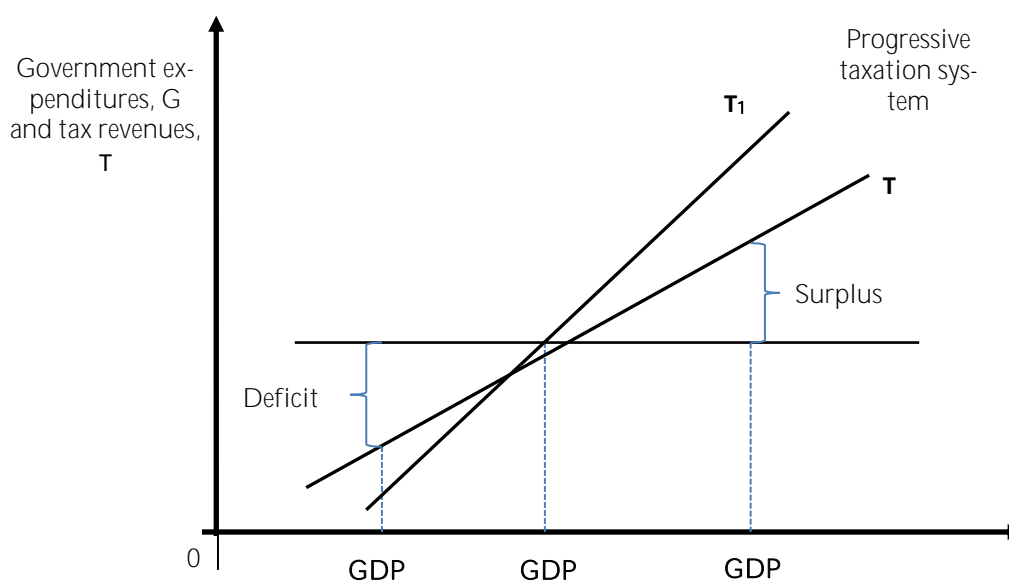


Figure 2.3. Built-in stability of the economy

Source: Крисоватий А., Луцик А. Податки і фіскальна політика: Навч. посіб. – Тернопіль, 2003. – 312 с.

Economic sense of the dependence between tax revenues and GDP is evident taking into account these two aspects:

- taxes reduce costs and aggregate demand;
- in order to maintain stability, it is desirable to reduce expenditures when the economy is approaching inflation and to increase them during the recession.

When in the phase of rising GDP, tax revenue increases automatically, and as it reduces spending, the economic growth is constrained. In other words, if the economic trends move toward a larger GDP, then tax revenues automatically increase, causing changes in the

<sup>13</sup> Опарін В. М. Фінанси (загальна теорія): Навч. посіб. – К.: КНЕУ, 1999. – С. 164.

budget from deficit towards surplus, and reducing the total amount of expenditures.

Conversely, when GDP decreases in the downturn phase, tax revenues are automatically reduced, which increases spending and mitigates the recession. With a decrease in GDP, tax revenues decline, and the budget moves from surplus towards deficit. In fig. 1.3.2, low GDP1 will automatically trigger a fiscal deficit; high and likely inflationary rate of GDP3 will automatically induce a restraining budget surplus.

It is clear from the graph that the scale of automatic budget deficits or surpluses, and consequently, the built-in stability depends on the correspondence of changes in taxation to changes in GDP. If tax revenues change dramatically in line with GDP changes, then the slope of the T-line on the graph will be steep and the vertical distance between T and G - deficits or surpluses - significant. Conversely, if tax revenues do not change significantly with changes in GDP, then the slope will be flat, and the built-in stability will be insignificant.

Angle of inclination of T-line in fig. 1.3.2 depends on the current tax system. If it is progressive, then the T-line will be more steep than in the case of a proportional tax system (line T1 represents a progressive tax system). Under the proportional tax system, the average tax rate does not change with GDP growth. Tax revenues will increase with the increase of GDP in progressive and proportional tax systems and may increase, decrease or not change at all with the growth of GDP in the regression system. It should be understood that the more progressive the tax system, the higher the built-in stability of the economy.

Built-in stability allows us to reduce the depth of fluctuations in business activity. However, built-in stabilizers can only weaken, but not adjust the serious changes in equilibrium GDP. In order to correct inflation or recession, discretionary tax policies is often required, that is changes in tax mechanisms and tax administration.

The construction of an optimal model of fiscal policy requires studying the conceptual foundations, specific forms, and methods of

long-term and short-term impact of taxes on the development of society. The latter must be consistent with the social and economic problems of the state, the possibilities of their solution through the policy of tax revenues and the policy of tax regulation and focus on historical, national, cultural characteristics, the degree of state participation in economic processes and the development of market relations. Unfortunately, today such focus of discretionary and non-discretionary state regulation through the strategy and tactics of tax policy only awaits its implementation.

#### 2.4. Fiscal imperatives of redistributive processes

The problem of aligning the interests of the state and economic agents is very old, so it is difficult to find a person whose mentality does not reflect a certain attitude to the actions of a public state institution. In relation to an individual, the state acts as coercive institution that declares social goals, but seeks to reach them at the expense of the individual, forcing him to pay taxes on the maintenance of the apparatus of coercion and social sphere itself. As each person welcomes income in any form and negatively reacts to its loss (unless it is related to satisfying of their needs), payments in favour of the state in any amount do not bring the individual pleasure.

The desire of the state to mobilize additional resources at the expense of legalizing shadow capital is quite understandable, but at the same time, the relations regarding their legalization between the respective state bodies and economic agents should be equivalent. If an economic agent hides a part of his funds from the state, then it may not be enough for him to hear that the state promises there will be no persecution in the case of voluntary legalization of shadow revenues. **The voluntary legalization of the business entity's income from the secondary economy (economy that does not pay taxes - "shadow" economy) is a deliberate publicizing of unlawful actions, which is very difficult to do from the psychological point of view.** Therefore, it is necessary to take into account the way in which economic agents are informed about the state's intentions regarding the



legalization of incomes, especially if the state's cannot or will not offer persons legalizing their income certain benefits for doing so. Exemption from taxes, confidentiality of information, guarantee that state will not confiscate the declared capital - all of this may be of interest to the economic agent and form a psychological basis for declaring their illegal income.

The budget of Ukraine is overloaded with a large amount of expenditures that were "inherited" from the administrative-command system of the economy, characterized by excessive centralization and **putting numerous obligations "on the state's shoulders"**. It should be noted that the structure of public expenditures must be continuously improved, although it is difficult to say exactly what it should look like. The main criterion is that this structure should correspond to the realities of economic life and the priorities of social development. In our opinion, budget expenditures on public administration are unjustifiably high (little has changed since 2004, when they amounted to 7.01% of the total expenditures).

In such circumstances, there is no doubt about the tax overload of the economy. However, this leads us to the search for the root causes of the false idea of a huge tax burden on business entities, especially large taxpayers. Such reasons, in our opinion, include an extremely low discipline making tax payments and uneven distribution of tax burden between individual groups and types of taxpayers. The conclusion about the need to change priorities in spending policy is also undisputable. The content of these changes should lie in reorienting spending of budget funds only on the types of expenses that are impossible or inappropriate to carry out at the expense of other sources. This will also facilitate the reorientation of taxes from an exclusively fiscal instrument to a means of actively regulating the economy.

In our opinion, it is necessary to take into account the scientific and pragmatic aspects related to the time lags of implementing the results of the strategy and tactics of such a policy, when studying the effectiveness and efficiency of fiscal policy. Problems of time needed

for the practical implementation of fiscal policy should be considered taking into account such lags: recognition lag, administrative lag, and operational lag.

*Recognition lag.* Recognition lag is the time between the beginning of a recession or economic growth and the moment when the public realize that it is happening. It is very difficult to predict the future dynamics of business activity accurately. Although forecasting tools provide information on the direction of change in the economy, it can be in a state of decline for 4-6 months before the relevant statistics register it.

*Administrative lag.* Mechanisms of a democratic state work slowly. There is usually a significant lag between the time when the need for tax policy measures is determined and the time when the appropriate measures are taken. For example, the legislature of the state often takes so much time to correct the tactics of tax policy that the economic situation has time to change to the opposite, and therefore, measures of this policy are no longer needed.

*Operational lag.* At the same time, there will be a lag between the time when fiscal policy is adopted by the parliament and when these measures will affect the size of budget revenues and output, employment or price levels. Although changes in tax rates can be introduced quickly, government investment spending (aimed at increasing employment and production - road construction, etc.) requires lengthy planning periods and even longer periods for executing investment projects. The usefulness of such expenditures during short recession periods of six to eighteen months is questionable. With this in mind, discretionary fiscal policy is increasingly often being based on changes in taxation.

The existence of the indicated lags leads to some generalizations regarding the Ukrainian realities of functioning fiscal policy. Undoubtedly, a sharp decrease in tax burden will increase the availability of funds at the disposal of enterprises, but on the other hand, it will significantly reduce budget revenues at least in the short term and hence the possibility of state influence on reforming the economic system and society

in general. According to our calculations, the time lag from the moment of changing the tax policy to the beginning of real growth of budget revenues will constitute up to 2 years. Changes in the rates of economic growth will happen even later. The calculations conducted by the OECD countries for the 35-year period showed that a reduction in the tax burden by 10 percent leads to an increase in GDP by 0.5-1 percent per year<sup>14</sup>. These data suggest that the reduction of tax rates in itself will not lead to an increase of the tax base sufficient to offset this reduction for the budget.

As the recent years have shown, the decrease in the maximum rate of personal income tax does not lead to tangible "de-shadowing" of revenues, since a large share of them consists of the wages pushed into the "shadow" not only by the personal tax, but also by charges on the wage fund. Their reduction is not included in the immediate plans of the government and requires large-scale changes in the introduction of pension and health insurance.

Reducing the tax rate from 25% to 20% or 15% would be notable for a developed market economy that is sensitive to the smallest changes, but not for Ukrainian business entities who have long used different methods of artificially increasing gross expenditures. As a result, the growth of tax revenues will not offset their reduction due to lower rates, which will result in a gross reduction in budget revenues.

Undoubtedly, in Ukraine, the expected positive effect from the tax reform can encompass much more than in developed countries with a stable economy. Thus, the easing tax burden on the resources of enterprises aimed at development will be an impetus for the activation of investment growth factors. Simplifying the tax system will reduce the transaction costs associated with tax administration. However, the tax reduction should be conducted gradually and in stages and must be offset by simultaneous expansion of the tax base. Exces-

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<sup>14</sup> *Mabry R., Ulbrich H. Introduction to economic principles. – New York: McGraw – Hill Company, 1989.*

sive tax burden can pull the Ukrainian economy into a spiral of lowering effectiveness of fiscal policy and slowing down economic growth.

Fiscal policy is formed in the political arena, which greatly complicates the efficiency and effectiveness of its use to stabilize the economic situation. Paradoxically, budget deficits have the potential to be politically attractive, and surpluses are perceived badly in the political context. In other words, there may be a political inclination to deficits, that is, fiscal policy can embody a tendency to stimulate the economy and inflation. Reducing the fiscal burden is politically popular, as is increasing government spending, especially if it allows voters to take advantage of it. On the contrary, raising the level of taxation does not attract voters, and the reduction of public expenditures is a political risk.

Some economists point out that the goals of politicians are not necessarily in line with the national economy interests, but more likely, the desire for re-election<sup>15</sup>. Politicians can consciously use elements of fiscal policy to maximize voter support even when their fiscal decisions destabilize the economy. According to this point of view, fiscal policy can be used with a selfish political aim and cause economic fluctuations.

Let us now turn from the practical problems of implementing fiscal policy to the main criticisms on the topic. The essence of *the crowding out effect* is that stimulating fiscal policy leads to a reduction in tax burden, increases interest rates, and reduces investment costs. It weakens or even eliminates incentives for fiscal policy.

Let's suppose that the economy is in recession and the government is using discretionary fiscal policy, by resorting to raising public expenditures without increasing the tax burden. The government is entering the borrowing market to finance the deficit. This increase in demand for money raises interest rates - the price paid for receiving money on a loan. Since investment costs are inversely proportional to

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<sup>15</sup> Кемпбел Р. Макконелл, Стенлі Л. Брю. Аналітична економіка: принципи, проблеми і політика. Макроекономіка. Ч. 1. – Львів, 1997.

the interest rate, part of the investment will be oversold. However, although few people question the described logical scheme, economists still have not agreed on the crowding out effect<sup>16</sup>. The rationale is that under the recession conditions, incentives created by increased government spending and lack of change in tax policy tactics will likely improve the expectations of profitability of market actors, which are an important determinant of investment. Consequently, investment expenditures will not decrease, and may even grow, because tax changes must be taken into consideration in the fiscal policy strategy.

Most economists are sceptical about the impact reducing the tax burden would have on the supply; in particular given the cut in US tax rates in the 1980s to stimulate supply<sup>17</sup>. Firstly, these experts argue that the expected positive effects of tax liberalization on incentives for labour, savings, investment and risk are not as significant as supply-side supporters convince us. Secondly, any movement of the aggregate supply curve to the right will take place over a long time, while the effect on aggregate demand will be felt much earlier.

The rigid fiscal policy persists in the Ukrainian economy today and will continue to be maintained in the event of a gradual implementation of the tax reform over a long period of time. It greatly enhances the responsibility of the state to use the resources withdrawn from the budget in a way that will maximally stimulate economic development and investment processes. Thus, the strategy and tactics of fiscal policy should be made in conjunction with an increase in the effectiveness of the fiscal policy itself. The policy of adjusting the budget to production and falling revenues is unpredictable. During the years of market transformation in Ukraine, due to the reduction of tax burden, there was a significant reduction of state expenditures for funding institutions of science, culture, and the social sector. In view of this, further reduction of aggregate expenditures is unacceptable, since it would cause the Ukrainian society to fall behind the

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<sup>16</sup> Ibid.

<sup>17</sup> *Mabry R., Ulbrich H. Introduction to economic principles.* – New York: McGraw – Hill Company, 1989.

progress of the global civilization, increase the social tensions, and cause disillusionment in the market reforms and the state independence. There is a certain optimal size of the budget, which determines its effectiveness as a macroeconomic regulator, below which the use of fiscal policy by state is inevitable.

However, under the conditions of a market economy, tax claims of the state are objectively limited. This limitation of the development of the fiscal sphere and the volume of tax revenues is determined by the dynamic interaction of market and political forces, which is an inherent characteristic of capitalism. At a certain level fiscal claims become contrary to economic needs, socially and psychologically inappropriate. Followers of fiscal sociology especially emphasize the fact that the expansion of the state sector of the economy at the expense of private one leads to the curtailment of entrepreneurial activity. Productive growth of the economy is slowed down by increasing the state's withdrawal of resources as a non-market and non-competitive force. As J. Schumpeter warned about in the early post-war years: it is impossible to manipulate parameters of economic activity: wages, prices, and material interest with impunity. His prediction was fulfilled completely and in the countries of Western and especially Eastern Europe<sup>18</sup>. Life has confirmed – adopting political decisions on the conditions and results of economic activities by the majority vote only increases its inefficiency.

Reduced economic potential also imposes restrictions on the state's ability to adequately meet the demand of the society for the services of government institutions, including the stimulus measures for the economy. This is a vicious circle. Fiscal sociology reveals simple but irrefutable truths: the financial base of the legal, and hence, the tax administration collapses with the decline in the efficiency and profitability of production. In such a situation, business perceives attempts to increase the tax burden as punishment. The morale of taxpayers, which is instrumental for the continuous declaration of incomes, suffers.

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<sup>18</sup> Шумпетер Й. Капитализм, социализм и демократия. – М.: Экономика, 1995. – С.456.

The fiscal component of the theory of choice is of particular importance. After all, taxation as a process of implementing a fiscal policy affects all social and personal interests, without exception. Fiscal policy plays an important role in regulating the economy and managing the state. In a market economy, it often replaces planned, price, and administrative methods of managing socio-economic processes. Such a policy can fall victim to a false but dominant public opinion, obvious or hidden pressures on legislators, especially from the big oligarchic groups representing big business. The solution to this situation is quite simple. A normal democratic process has to evolve alongside cognitive development, along with the ripening of citizens' sense of justice as voters and taxpayers. Then society can find and adopt the necessary "fiscal preferences", while large payers and government officials, will be guided not by egoistic instincts but by rational expectations dictated by civic responsibility and duty. Unfortunately, the lessons of democracy, which have long been understood in the West, still have to be mastered in Ukraine. At the same time, we have to establish partnerships in fiscal policy between the state, big business and other actors of the fiscal space.





CHAPTER 3.

**Typology of welfare state, institutions  
and environmental benefits of Visegrad countries in the context of  
global and regional processes**

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3.1. Types of welfare states: the role of institutional quality  
or the extent of redistribution

**D**ue to the growing demand for a clean environment and awareness of the destructive environmental footprint, the role of ecology in assessing the welfare of society and of the individual has radically changed. Sustainability and inclusiveness are becoming increasingly important for measuring the effectiveness of governance; the latter is increasingly being determined by the quality

of institutions. The triad of "quality institutions and good governance - inclusiveness - environmental factors of welfare" becomes a reason for reshaping the traditional views on the welfare state, which can no longer be exclusively associated with the amount of social transfers, redistribution or extended scope of market process regulation. Sustainability as a manifestation of inclusiveness has another important dimension - collective action. One can hardly imagine an effective environmental policy without it. The effectiveness of collective action is largely based on institutional characteristics. Conceptually, this emphasizes that the review of the traditional typology of welfare states requires taking into account its environmental dimension, as well as how the quality of institutions improves the effectiveness of governance. This is a very important issue for the CEE countries, considering the ongoing process of functional convergence with the EU and the conflict between global competitiveness and real convergence, in which the quality of institutions comes to the forefront.

The emergence of the welfare state is due to the transition of the western countries to the model of social state in the early twentieth century. Increasing the role of the human factor in the economy has led to the need for a much wider spectrum of human needs, recognition of social rights and fulfilment of social functions by the state. This created a need to recognize the new quality of the state with its "social profile", reflected in the concept of "welfare state", introduced by F. Roosevelt in the early 1930's.

Notably, there is no unanimous view on the economic nature of the state of welfare. On the one hand, it is associated with the activities of the government, which assumes responsibility for ensuring the basic social needs of citizens. On the other hand, it serves as a reflection of the concept that society is able to provide a relatively high standard of living for all its citizens (considering the level of economic development, science, and technology). The main idea of such an approach is to establish the possibilities for a radical trans-

formation of society in distribution of property and income, organization of the management system, and the role of state in the interests of its citizens. Usually, “the welfare state” involves maximizing the social efficiency of the market economy through the state income, employment, price policies, and the use of direct and indirect regulators of social processes whilst implementing social programs in science, culture, education, and health.

According to the Swedish economist A. Elmer, we cannot equate the state of welfare to the existence of a social group with high income<sup>19</sup>. Given that large public investments are required to ensure high incomes by all citizens, the label of “welfare state” can only be used if the whole society is responsible for the welfare of its citizens. English scientist R. Titmuss focused on the fact that the functioning of the welfare state is subordinated to the sole purpose of meeting the needs of people, increasing their well-being and living conditions<sup>20</sup>. According to A. Briggs, a “welfare state” is a state in which organized power is deliberately used (through politics and administration) in an effort to modify the play of market forces in at least three directions: first, by guaranteeing individuals and families a minimum income irrespective of the market value of their work or their property; second, by narrowing the extent of insecurity by **enabling individuals and families to meet certain “social contingencies”** (for example, sickness, old age and unemployment) which lead otherwise to individual and family crises; and third, by ensuring that all citizens without distinction of status or class are offered the best standards available in relation to a certain agreed range of social services<sup>21</sup>. D. Winch proposed that welfare economics is a study of the material well-being of all members of society, to the extent that it is

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<sup>19</sup> Elmer, A., Blomberg S., Harrisson L., Petersson D., 1988. *Svensk Socialpolitik*. – Lund : Sweden.

<sup>20</sup> Titmuss, R.M., 1976. *Essays on the Welfare State*. – London : Allen & Unwin.

<sup>21</sup> Briggs, A., 1961. The welfare state in historical perspective. *European Journal of Sociology / Archives Européennes de Sociologie / Europäisches Archiv für Soziologie*. Vol. 2, No. 2, pp. 221-258.

influenced by decisions and actions of individuals and state institutions, depending on changes in the economic environment<sup>22</sup>. This means that welfare economics provides social welfare, taking into account market imperfections and the need for state intervention. According to Professor D. Hyman, welfare economics represents a normative analysis of economic interactions in order to determine the conditions for the efficient use of resources in the structure of public finances (through taxes and subsidies)<sup>23</sup>. Swedish economists K. Wicksell<sup>24</sup> and E. Lindahl<sup>25</sup> theorized some financial components of the welfare economy, such as fair taxation and the size and structure of public spending in terms of efficient allocation of resources between the private and public sectors. Hence, the welfare economy uses public finances as an instrument for allocating resources, distributing and redistributing income, as well as a source of funding for public goods and social transfers. The general definition of the welfare state emphasizes that it is a social system in which the government is responsible for the economic and social well-being of its citizens through the implementation of policies providing certain social guarantees – free medical care, unemployment benefits, etc. Table 3.1 shows a number of other welfare state concepts.

The welfare state generally functions in two main areas: 1) provision of "social services" (social protection, social assistance, housing assistance, education, penitentiary services) in cases where individuals and their families face life difficulties or find themselves in special circumstances; 2) state regulation of private activity, which directly changes the living conditions of individual social groups (tax policy, protection of consumption, introduction of educational programs, ensuring the implementation of environmental programs). In

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<sup>22</sup> Winch, D.M., 1971. *Analytical Welfare Economics*. – Harmondsworth : Penguin Books.

<sup>23</sup> Hyman, D.N., 1990. *Public Finance. A Contemporary Application of Theory to Policy*. – Chicago : The Dryden Press.

<sup>24</sup> Wicksell, K., 1967. "A New Principle of Just Taxation", in Musgrave, R. and Peacock, A.(Eds), *Classics in the Theory of Public Finance*, St Martin's Press, New York, NY, pp. 72-118.

<sup>25</sup> Lindahl, E., 1967. "Just Taxation – A Positive Solution", in Musgrave, R. and Peacock, A.(Eds), *Classics in the Theory of Public Finance*, St Martin's Press, New York, NY, pp. 168-176.

this context, the concept of a welfare state is primarily based on the idea of welfarism - the conviction that the government, in its function, is obligated to assume responsibility for the material provision of citizens who cannot independently provide an adequate level of their own existence ("privatization of poverty")<sup>26</sup>. However, budget financing of state programs that provide free consumption of basic public goods inevitably leads to a significant expansion of state functions and budget expenditures, which contradicts the principle of "natural order" and the requirements of a liberal economy.

Table 3.1. Concepts of the Welfare State<sup>27</sup>

Concepts	Creators	Characteristics of the concept
1. Moral Economy	<i>P. Swenson, W. Thompson</i>	Institutes of developed industrial capitalism create an idea of justice, morality and establish their own order of distribution of material goods in society. These orders are historically formed as consequences of a "mutual game" between the elite and the lower class. Moral economy is a central social institution that forms new relationships between individuals and authorities through welfare policy (election procedure, family law, insurance system).
2. Risk Society	<i>U. Beck, R. Baldwin</i>	Conflict factors of modern society have changed significantly compared to those of the industrial one, (nuclear disasters, chemicals, destruction of protective mechanisms of the earth). Alongside technical modernization, the social conflicts of a society that distributes wealth become conflicts of a society that distributes risks that have no national or class boundaries.
3. Universal Welfare Society	<i>T. Marshall, R. Titmuss</i>	Radical change in the concept of "citizenship" in connection with the successes of the welfare state - for the first time in the modern civil history, the population is so protected by social rights that the welfare of people no longer depends on the position on the labour market. Category "citizenship" covers: civil (freedom of thought, the right to property, and equality before the law), political (the right to vote and participate in political parties) and social (housing policy, social security, free education) rights.

At the turn of the twenty-first century, during the fiscal crises in welfare states, caused by the unsustainable funding of excessive

<sup>26</sup> Андрущенко, В.Л., 2000. Фінансова думка Заходу в ХХ столітті: Теоретична концептуалізація і наукова проблематика державних фінансів: монограф. / В.Л. Андрущенко. – Львів : Каменяр. – 303 с.

<sup>27</sup> Based on: Церкасевиц, Л.В., 2004. Трансформация концепции социальной политики в странах Западной Европы // Известия Санкт-Петербургского университета экономики и финансов. – №2 (32). – С.5-17.

social standards (even in the richest countries), environmental conflicts and the globalization of social life in all its manifestations resulted in a transformation of ideas about the role of the welfare state<sup>28</sup>. Today, most countries of the world are facing the need to restructure the power and financial resources between the central government and local self-government bodies in favour of the latter. This is evidenced by the Western democracies that are a complex of structural-adaptive entities, which include subsystems (states, lands, cantons, departments, etc.), which, in turn, include smaller self-regulated administrative-territorial units. The role of central government and management is usually limited to three main functions: 1) to satisfy the private and public needs that are disadvantageous to business entities; 2) to create conditions for effective entrepreneurship, guaranteeing legitimacy and property protection; 3) protection of personality, society, and state<sup>29</sup>. The balance between opportunities and the "fiasco" of the market and the state, the optimal balance between centralization and decentralization of budget resources objectively contribute to the formation of a "welfare mix" system. According to the American political scientist F. Fukuyama, the model of a "universal state", which is not unilaterally oriented to either market forces or government power, has long been operating in Western countries<sup>30</sup>. While it is advisable to limit the bureaucratic influence of official institutions in economics in order to stimulate private initiative, the state has no alternative when it comes to ensuring rights and freedoms, social guarantees, national security, legal protection of property.

It should be noted that the costs for the implementation of socio-economic objectives are not fully reflected in prices, and, there-

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<sup>28</sup> Гелд, Д., Мак-Грю, Е., 2004. Глобалізація. Антиглобалізація. –К. : К.І.С. – 180 с.; Дікон, Б., Халс, М., Стабс, П., 1999. Глобальна соціальна політика. Міжнародні організації й майбутнє соціального добробуту. – К. : Основи. – 346 с.

<sup>29</sup> Андрущенко, В.Л., 2000. Фінансова думка Заходу в ХХ столітті: Теоретична концептуалізація і наукова проблематика державних фінансів: монограф. / В.Л. Андрущенко. – Львів : Каменяр. – 303 с.

<sup>30</sup> Fukuyama, F., 2004. State-Building: Governance and World Order in the Twenty-First Century, Cornell University Press, 137 p.

fore, are financed through the budget mechanism and taxes. The fiscal and budgetary structure of the state of welfare is based on redistributive financial processes, which help solve problems of stimulating production efficiency, curbing inflation, maintaining employment rates, financial support for certain sectors of the economy and vulnerable population groups. Thus, a functioning "welfare mix" leads to serious macroeconomic consequences. State activity thus generates an important problem of the objective impossibility of providing the expected volume and quality of services due to the limited budget resources (excessive growth of the "welfare state" can lead to the ruin of its economic basis). Therefore, in recent years, the functions of the welfare state have been significantly modified, reducing the scale of redistributive processes through the application of market-based approaches by the public sector. Based on the data in Table 3.2, we should concentrate on the manifestation of the polar trend in the dynamics of the government expenditures to GDP ratio.

Table 3.2. Amount of government expenditures to GDP, %

Countries	2006	2008	2010	2012	2014	2016
Finland	53,3	53,6	53,0	54,3	55,1	55,3
Denmark	56,8	54,9	54,8	55,1	55,9	54,4
Norway	58,2	58,4	56,0	56,9	55,3	53,4
Sweden	54,9	53,9	52,3	51,4	51,2	51,0
Developed countries	37,2	37,2	35,6	36,2	37,7	37,9
Emerging markets	26,9	28,6	29,6	29,9	29,5	28,2
Low income countries	23,5	24,5	25,0	26,0	26,4	26,2

Scandinavian countries are showing a tendency towards a certain (albeit not substantial) reduction of state pressure, which most likely serves as a reflection of optimization and improvement of the efficiency of public administration. Developed countries are likely to maintain a status quo in the long run. In countries with emerging markets and low-income countries there are clearly long-term trends towards rising public spending, but only to a certain extent, after which it will slow down or even recede. However, the aggregated

data presented do not allow us to conclusively determine to what extent the increase in public expenditure to GDP reflects the implementation of the traditional welfare state philosophy.

In modern practice, the quality of institutions is of great importance to the functioning of the welfare state in terms of ensuring economic growth. For the first time, the attention to institutions as a factor of economic growth, and, therefore, of the general welfare in the state, was given within the framework of the New Institutional Economics, a neo-institutional theory by D. North. In the book *The Rise of the Western World: A New Economic History* (1973), D. North and R. Thomas criticized the dominant view of the time that described institutions as a “side-endogenous product of the economic growth process”. According to scientists, on the contrary, “innovation, scale, education, investment, etc. were not factors of growth, but actually growth itself”<sup>31</sup>. Within this approach, an alternative hypothesis has been developed, according to which differences between countries in terms of economic growth lie in differences of quality in their institutions.

Data in Table 3 demonstrate that the quality of institutions, in particular, in Ukraine, Bulgaria, and Greece, is not commensurate with the quality of the institutional environment in traditional Scandinavian countries. However, as the quality of institutions is a key factor in competitiveness, the interest in improving it will increase due to the strengthening of real convergence. This can be proved by the example of Scandinavian countries known for massive tax burdens. However, while in those countries high taxes are offset by the quality of institutions, in Ukraine the trend towards higher quality will resonate with the tendency to increase consumer capacity in order to create a neutral effect of real convergence on global competitiveness. As the investments in the quality of institutions cannot be solely market-based, the definition of welfare cannot be restricted to the extent of redistribution.

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<sup>31</sup> North, Douglass C. and Robert Paul Thomas, *The Rise of the Western World: A New Economic History*. New York : Cambridge University Press, 1973. – P. 2.



Table 3.3. Quality of institutes in some countries<sup>32</sup>

Countries	Governance Legatum Sub-Index	Social Capital Legatum Sub-Index	Institutional Quality Global Competitiveness Sub-Index
Finland	3,70	3,59	6,0
Denmark	3,87	4,31	5,4
Norway	3,67	4,47	5,7
Sweden	3,77	2,93	5,7
USA	3,53	2,88	4,6
Germany	2,59	1,87	5,3
Greece	0,11	-1,37	3,4
Bulgaria	-0,80	-0,94	3,4
Brazil	-0,08	-0,12	3,8
China	-0,49	0,82	4,2
Russia	-2,11	-0,33	3,1
Ukraine	-2,17	-0,03	3,1

It is generally accepted that stable and effective institutions create the basic preconditions for investment and entrepreneurship development. Ineffective protection of property rights leads to a reduction in the share of investment in GDP, compared to an economic system that is secured by property rights. If the latter are not secured, the firms choose direction and scale of capital investment that are not optimal in terms of growth prospects<sup>33</sup>. The poor quality of the institutional environment is a major obstacle to the development of a welfare state model, especially for emerging markets.

It is empirically confirmed that countries with higher quality institutions are less vulnerable to external shocks. This effect was clarified by D. Rodrik on the example of the connection between the quality of institutions and countries successfully overcoming the consequences of the "oil shock" in the 1970's.<sup>34</sup> According to a scientist's research, crisis management strategies succeeded in countries with effective institutions and unified communities. Underde-

<sup>32</sup> Based on reports of the Legatum Institute and the Davos Forum.

<sup>33</sup> Lindner, I. Strulik, H. Property Rights and Growth, 1999. – 25 p. [WWW. resource]. – Available at: <http://eale2002.phs.uoa.gr/papers/Lindner%20&%20Strulik.pdf>

<sup>34</sup> Rodrik, D., 1999. "Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses," *Journal of Economic Growth*, Springer, vol. 4(4), pp. 385-412, December [WWW. resource]. – Available at: <http://www.nber.org/papers/w6350.pdf>

veloped institutions and the presence of internal social conflicts, on the contrary, made it difficult to overcome the economic crisis<sup>35</sup>.

Low stability of countries with weak institutions was investigated in the studies of D. Acemoglu, S. Johnson, J. Robinson and J. Thaicharoen<sup>36</sup>. In particular, the negative effects of destabilizing macroeconomic policies are less pronounced in the economies with more stable institutions. The integral index of institutional development was key in the research of W. Easterly and R. Levine. It takes into account six institutional characteristics that reflect interstate differences in institution quality for a large sample of countries according to the following parameters: 1) accountability (measure of civil liberties, political rights and independence of the press); 2) political stability and violence (probability that a national government can be unconstitutionally eliminated); 3) the effectiveness of governance (quality of public services, competence of civil servants, degree of politicization of civil service); 4) regulatory burden (the measure of government intervention in commodity markets and the banking system, the degree of administrative control in opening a new business, control over private sector operations and foreign trade activities); 5) law enforcement (protection of individuals and property from violence and theft, independence and efficiency of courts, degree of execution of agreements); 6) corruption (use of state power in private interests).

The quality of institutions can be likened to universal benefits similar to public ones, which generate significant positive externalities. The quality of institutions is a significant determinant of the business climate (attraction of investments, attractiveness for inflow of foreign capital, etc.), the scope and range of public services, involvement of citizens in governance, and social capital. Therefore, the welfare state should not be limited solely to the extent of redis-

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<sup>35</sup> Rodrik, D., 1999. "Where Did All the Growth Go?".

<sup>36</sup> Acemoglu, Daron, Johnson, Simon, Robinson, James, Thaicharoen, Yunyong, 2003. Institutional causes, macroeconomic symptoms: volatility, crises and growth. *Journal of Monetary Economics*. – № 50, pp. 49-123 [WWW. resource]. – Available at: <https://economics.mit.edu/files/4434>

tribution. Moreover, the quality of institutions does not always require a significant redistribution of GDP through the budget.

On the other hand, investments in the quality of institutions may require considerable resources. Social capital and the construction of mechanisms for correction of social behaviour can influence the formation of quality institutions irrespective of the level of redistribution, while ineffective governance can create inadequate redistributive initiatives that will be a form of exploitation, rather than social welfare. This creates a special precondition for the identification of welfare state forms using new parameters – the extent of redistribution and the quality of institutions. Creating such an approach is also beneficial in terms of expanding the analysis into the welfare state through studying ecologization of its activity and, thus, **expanding the very concept of “welfare” due to the environmental factor.**

To identify the risks of distorting the links between the redistribution of GDP through the budget and government efficiency, it is necessary to conduct a theoretical analysis of options, which combine the high and low values of the relevant indicators. Table 3.4 demonstrates a theoretical explication of correspondence between the "size of state" and the efficiency of the government.

It is natural to assume that the Table 4 maxims do not take into account the wide range of intermediate options, so even countries with similar "burden of the state" and institutional quality can show sufficient differences in terms of both economic growth and adaptation to global competitive pressure. For example, for post-socialist countries it is extremely important for analysing transformational processes.

It is theoretically suggested that, even with the increasing diversity of fiscal strategies of the CEE countries, their paths of institutional development should be convergent, since EU membership requires appropriate reforms and compliance with standards, even if **it doesn't exclude sufficient institutional differences. In other words,**

since the EU itself is sufficiently varied in terms of institutional quality and, consequently, the efficiency of governance, the CEE countries can maintain the soft institutional convergence for a long time, the result of which will vary more than a set of political and economic steps within the framework of institutional convergence.

Table 3.4. Combinations of the "size of state" and the government efficiency: theoretical analysis

		Government effectiveness	
		Low	High
Expenditures of general government to GDP	Low	A typical example of a "poor country", in which the ability to collect taxes is low, and access to borrowing markets is limited. Significant institutional weakness holds back the possibility of increasing welfare in the aspects of public finances and improving government efficiency. The potential for economic growth is low and will rely on traditional exports	A typical example of a liberal economy with strong institutions. The combination of low taxation, moderate "state burden" with government efficiency creates the preconditions for building up the potential of economic growth and welfare
	High	Typically reflects the clan-redistributive state. A significant tax burden is upon the social class that cannot minimize it and is intended to finance significant expenditures that are a source of rent seeking satisfaction. Institutional weakness is combined with the "privatization of institutions", where the latter acquires a repressive character. The potential for growth can be high (as the country has a significant tax capacity), but depressed and shifted towards traditional exports.	A typical example of a welfare state, in which the high level of "state burden" is compensated by the quality of institutions. Government effectiveness is a direct source of citizens' well-being and their satisfaction with life in the light of significant redistribution of GDP through the budget. The potential for economic growth is moderate in high-income countries

Incidentally, this explains the fact that new EU members do not make the latter more homogeneous institutionally, as shown in empirical studies<sup>37</sup>. The same applies to the environmental factor of the welfare state and the quality of institutions.

Thus, the modern welfare state is distinguished not only by the scale of redistribution, but also by the quality of institutions that provide effective market-based allocation with the lowest transaction

<sup>37</sup> Rozmahel P., Kouba L., Grochova L., Najman N. Integration of Central and Eastern European Countries : Increasing EU Heterogeneity? // WWW for Europe. – 2013. – №9. – P. 1-47.

costs. The quality of institutions determines the public choice and direction of public policy. Achieving a high level of institutional development is impossible without significant investment in human capital, social capital, public administration, the search for optimal forms of interaction between the various mechanisms of coordinating economic agents, the provision of property rights guarantees, investor protection, and fair administration of justice. We can conclude that welfare is derived from an institutional choice, within which the level of public spending becomes a private case of expressing consumer preferences.

### 3.2. CEE countries: fiscal challenges, institutional convergence and governance

CEE countries are at the stage of real, functional, and institutional convergence. The institutional convergence can be understood as the process of approximation with the formal and informal **regulators of social actors' behaviour in the EU. At the same time,** it has an empirical manifestation - the convergence of the institutional quality, which covers a wide range of issues: from the manifestation of preferences for interference and redistribution to protection of rights and effectiveness of the authorities whose activities should adhere to democratic principles. Thus, institutional convergence is essential.

However, the CEE countries are below average in the institutional quality among the EU countries, but are close to the average indicator of GDP expenditure and debt to GDP. The difference in wages will allow for a faster growth rate than that of the developed countries for a while, but stable real convergence will require additional efforts. In the event that the fiscal stimulus for real convergence in the form of low state burden is gradually exhausted, and the growth of public debt creates risks of sovereign solvency, the CEE countries will be in a difficult situation. Either real convergence should be more gradual, or institutional convergence should be more accelerated. However, the theory does not fully elucidate the

question of whether improving the quality of institutions is sensitive to fiscal limits, and whether it is endogenous. If the answer is yes, then institutional convergence becomes limited by the ability to collect taxes and the fiscal space. If not, it becomes extremely sensitive to social capital. In both cases, higher volume of state burden makes economic development more sensitive to the degree by which the allocation efficiency of state consumption is conditioned by the quality of institutions and, more exactly, by the efficiency of government expenditures.

Thus, there is an extremely important link between the effectiveness of public spending or, in the broader sense, the effectiveness of governance and the "size of the state". It can be assumed that the effectiveness of governance may not be related to the scale of the state burden, as the latter represents a typological sign of the welfare state. However, it is critical in the case of the CEE countries.

First, for reasons of competition between systems and international tax competition, the attractiveness of production factors will shift to the countries that can combine high quality institutions and, consequently, high efficiency of the government with low state burdens. Naturally, this is a theoretical maxim and it does not mean that countries with a high level of budgetary GDP redistribution are at immediate disadvantage. The quality of institutions compensates for the tax burden. In addition, usually such countries are characterized by a number of specific features. The Nordic Model phenomenon is a striking example of this<sup>38</sup>. However, countries that are at the stage of institutional convergence and have not yet reached the level of institutional quality of their neighbouring countries lack such a compensator and require either a slowdown in GDP per capita growth (gradual real convergence), or a downward deviation of the rate from the PPP, which is unlikely given the continued inflow of capital and the introduction of the euro in some of them.

Second, considering the post-socialist experience, we can hardly expect the increase in the institutional quality to be exclu-

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<sup>38</sup> The Nordic Way: Equality, Individuality and Social Trust. – Swedish Institute, 2012. 50 p.

sively endogenous and a result of the growth in the social capital value. In other words, quality institutions require investment. Since the increase in the efficiency of governance in countries with real convergence is impossible without additional pressure on the expansion of government spending, the slowdown of the "expansion of the state" and institutional convergence may be contradictory goals. The pressure to increase spending seems logical when combined with the significant need for infrastructure overhaul and the worsening age structure of the population. If we take into account the increasing debt in most CEE countries, then these trends can be characterized as temporal optimization: raising the "quality of the state" today (in particular, in debt) for the sake of higher efficiency of the state (and, therefore, solvency) tomorrow. However, the more the fiscal strategy will resemble such an optimization, the more sensitive the future growth and global competitiveness will be to success in institutional convergence. Taking into account the risk of populism and fiscal opportunism, the political environment cannot guarantee the expected change towards an "effective state", except in the cases with high social capital costs, which manifest into a clear awareness of the necessity for the conscious decision to improve governance.

Third, the membership of the CEE countries in the EU affects the choice of the institutional convergence profile, at least on the grounds that the so-called "common policies", "common values" and so on, require additional expenditures that will compete with investments into the quality of institutions. That is, induced increase in investments into the quality of institutions and an increase in the government efficiency may be rather limited, both because of tighter budgetary constraints, and because of social capital constraints, at least in terms of its responsibility for eliminating "institutionally incorrect behaviour" of the authorities. The high level of openness within the EU also affects the choice of the optimal trajectory for the "expansion of the state" in the new member states. EU membership does not eliminate global competitive pressure, but rather intensifies it. Achievement of higher quality institutions and lower levels of

"state burden" in such conditions could be considered an adequate compensation of global competitive pressure. However, EU membership, on the one hand, accelerates positive institutional developments and, on the other hand, complicates the political and economic choice of combining functional, institutional and real convergence at a later stage with the lower "state expansion" trajectory if compared to the older EU members.

Fourthly, the effectiveness of governance is the citizens' satisfaction with the socio-political continuum within which they exist. There is a direct link between the government efficiency and the level of democracy, the fundamental consequence of which is political stability and social trust. The level of social trust in CEE countries is only half as high as in the Nordic Model countries and  $\frac{3}{4}$  of what it is in the countries of the continental EU<sup>39</sup>. In addition to the level of social trust having a direct economic correlation - the cumulative magnitude of transaction costs in the economy, it directly determines the degree of satisfaction with corporate institutions, as well as political and administrative institutions of democracy. When the "state burden" is the highest, the dissatisfaction with the government and the political model leads to the marginalization of society, which significantly narrows the social pool for forming political coalitions focused on responsible reforms. In the case of CEE countries in which "democracies qualify as young", the lack of social consensus caused by the dissonance in the perception of government efficiency and the size of the tax burden, may worsen the chances of pursuing long-term reforms.

Based on the empirical analysis of the changes in the link between the scale of redistribution and the effectiveness of governance, we can conclude that for most countries there is a certain slight improvement in the quality of institutions. In the case of CEE countries, the roughly identical pattern of connection between public

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<sup>39</sup> The Nordic Way: Equality, Individuality and Social Trust. – Swedish Institute, 2012. – P. 18.



spending and governance efficiency is apparent. The same is true for a wider sample of countries, but with a number of differences<sup>40</sup>.

Firstly, from 2006 to 2014 there was no unambiguous change towards improvement in governance of all countries. At the same time, countries experienced convergence in terms of government efficiency, especially those for which this indicator was above average. This equally applies to the whole sample and post-socialist countries.

Secondly, analysis of the whole sample shows that there is some correspondence between the increase in the "scale of the state" and the increase in the governance efficiency, indicating the overall institutional progress in the most developed countries. Additionally, it demonstrates that countries with expenditure to GDP below the trend line derived using the regression function also exhibit bias towards higher government efficiency. It follows that the heterogeneity with regard to the typological features of the state (on the principle of opposing a welfare state and a liberal state), measured by the level of public expenditures, is maintained, if not increased, and the homogeneity regarding the desire for better institutions and more effective governance is increased. This pattern can be explained by the growing importance of securing a unit of government spending efficiency under the pressure of international tax competition and globalization. That is, some societies can agree to a "bigger state" in exchange for its effectiveness, while other societies seek to ensure the combination of a "small state" and quality institutions.

Thirdly, post-socialist countries do not demonstrate radical changes in the transition from one quadrant of the link between the "scale of state" and the quality of governance to another, except for Estonia and the Czech Republic, which have changed places (see Table 5), and, in essence, show a clear division between leaders and outsiders. Unfortunately, Ukraine represents a situation where public spending is higher than the trend, and the quality of governance is

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<sup>40</sup>For more details see.: Козюк В.В. Інституційні компенсатори відкритості та фіскальної експансії в країнах Центрально-Східної Європи // Журнал Європейської економіки. – 2016. – Том 15(№1). – С. 3-34.

the worst. Moreover, for the period from 2006 to 2013, the latter indicator has worsened. At the same time, most of the new EU members were able to improve the quality of governance and slow the growth of the budgetary redistribution of GDP. Notably, the connection ceases to be direct. This means that overwhelmingly the CEE countries seek to combine higher quality institutions with the "scales of the state" that are at least non-growing. It is clear that the division of post-socialist countries into outsiders (Ukraine, Russia, Bulgaria, and Romania) and leaders (Estonia, Lithuania, Latvia, Poland, Hungary, Czech Republic, Slovenia, and Slovakia) conceals the tendency of outsiders to stay heterogeneous, while leaders tend to be homogeneous. Even then, in only one country among the outsiders (Ukraine) the level of public expenditures to GDP is above average, while the government efficiency is below the corresponding average index. In the other three countries, the first indicator is below the average value. In conditions of general convergence regarding the quality of governance, the leaders are almost equally divided into countries where higher than average values of the index of government efficiency correspond to either higher or lower than the trend values of the "scale of the state". However, increasing homogeneity among the leaders and a number of positive developments in Romania and Bulgaria do not mean that the correspondence will be based on direct relationship between the increase in government efficiency and the amount of expenditures at its disposal. The problem is precisely that the change in both indicators is as likely to be divergent, as unidirectional.

Fourth, as shown in Table 3.5, the speed of European integration should be qualified as a powerful driver of institutional reform, which clearly affects the general tendency to increase government efficiency. The data clearly indicate that there is a much more significant gap between the post-socialist countries of the first wave of accession to the EU and the rest regarding the government's efficiency index, rather than the "state burden" indicators. That is, post-socialist countries redistribute approximately the same amount of GDP,

which makes them different from the developed countries where the variability of this indicator is much higher. The former, however, also show a significant difference in the effectiveness of governance. The speed of accession to the EU is a compelling criterion for differentiation. In addition, with the exception of Poland and Bulgaria, we can see that the level of globalization affects the differences in government efficiency levels: more globalized countries have a better corresponding index.

Table 3.5. Post-socialist countries grouped according to combinations of "size of the state" and the governance effectiveness<sup>41</sup>

		Governance Effectiveness Index, 2006		Governance Effectiveness Index, 2013			
		Lower than average (<60)	Above the average (>60)	Lower than average (<60)	Above the average (>60)		
Overall government expenditures, % of GDP, 2006	Lower than average (<40%)	Russia, Romania, Bulgaria	Estonia, Latvia, Lithuania, Slovakia	Russia, Romania, Bulgaria	Czech Republic, Latvia, Lithuania, Slovakia	Lower than average (<40%)	Overall government expenditures, % of GDP, 2014
	Above the average (>40%)	Ukraine	Hungary, Poland, Czech Republic, Slovenia	Ukraine	Estonia, Hungary, Poland, Slovenia	Above the average (>40%)	

Fifth, the stage of real convergence and the scale of the economy create pressure towards a higher level of "burden of the state", even if the change in the position of Estonia and the Czech Republic is difficult to explain based on this presumption. The small economies choosing lower levels of "state burden" can only be explained by their higher vulnerability to global shocks and international tax competition, which is an additional factor in their desire to improve the quality of institutions. Higher levels of spending in larger countries can be explained by the fact that the market capacity allows them to maintain higher levels of tax collection, and the depth of the financial sector - to look more fiscally stable to lenders. This is why these countries may find themselves entrapped by the gap between

<sup>41</sup> Based on: IMF Fiscal Monitor ([www.imf.org](http://www.imf.org)), World Bank ([www.worldbank.org](http://www.worldbank.org)).

the institutional quality and "consumption scale" unlike their Western neighbours. The convergence phase is also important. The highest level of governance efficiency occurs in countries with higher levels of GDP per capita, irrespective of which group they fall into in terms of the size of the "burden of the state". However, when a "poor country" seeks to spend a lot of public funds for poor governance, the result will look extremely negative compared to the more prosperous countries with better institutions and less burdensome "burdens of the state". It can clearly be argued that the combination of significant "size of state" and low government efficiency results in low levels of GDP per capita. This combination is nothing more than a clan-redistributive model of the oligarchic economy that reproduces an uneven distribution of incomes, minimizes the role of democratic institutions in ensuring political and economic progress, and thus makes it impossible to increase the efficiency of governance, since the authorities are "privatized" within the framework of rent-oriented behaviour and the shifting tax burden. Meanwhile countries seeking the best institutions provide a higher level of welfare, which in the future becomes the basis for subsequent investment in improving institutional quality. In such countries, "the size of state" will increasingly be determined by social preferences, albeit with restrictions, the nature of which is associated with vulnerability to globalization.

To summarize, we note the specific conditions in which post-socialist countries existed: real convergence, expenditures related to membership in the EU, vulnerability to global shocks, the gap between their governance effectiveness and that of the old members of the EU, while the levels of "burden of the state" are comparable, etc. Because of these, focusing on the further increase in the share of GDP redistribution through the system of public expenditures looks risky. The pursuit of rigid EU membership requirements and global competitive pressure increase the need for compensators for the growing redistributive activities of the state so that real convergence could happen in conditions of gradual exhaustion of benefits in the

form of cheaper labour. Improving the quality of institutions and the effectiveness of governance is one such compensator. The choice in favour of "greater state activity" is theoretically possible if it is combined with the high government efficiency. However, in the case of the CEE countries, there is a gap in the quality of institutions compared with their major trading partners. Therefore, even an increase in the governance efficiency should not be accompanied by an increase in the relative values of public expenditures, considering the need to activate the compensators for globalization pressure on the processes of real convergence. The growth of public debt in many CEE countries is an indirect indication of how difficult it is to maintain moderate taxation with growing "investments in the institutional quality". On the other hand, the endogenous improvement of institutional quality based on the value of social capital should be considered a priority for improving government efficiency.

### 3.3. Ecological dimension of Visegrad Group countries using the «scale of redistribution–government effectiveness» indicators in a European framework

The criterion of the ecological state should be considered an informative complement of the classical indicators of the welfare state. In view of this, we have compared and classified the Central European countries, including the Visegrad Four, and the CIS countries by the indicators that are included in the set of criteria of the welfare state, and made a special emphasis on the assessment of the ecological criterion. Another important task we set concerned the samples of the CEE and CIS countries. The objective was to determine the form, direction and tightness of the relationship between the three factors that can be used to assess the country's compliance with the criteria of the welfare state, namely: 1) quality (efficiency) of governance; 2) the share of expenditures of state institutions in GDP and 3) the state of the country's environment. To form the initial analytical matrix, we used:

– ranking of countries according to the Environmental Performance Index developed by the Yale Center for Environmental Law and Policy and the Center for International Earth Science Information Network (USA) (scale of 0-100 points)<sup>42</sup>.

– Government Effectiveness Index (GEI) data, which is an integral part of the Worldwide Governance Indicator (0-100% scale)<sup>43</sup>;

– Central Government Finances indicator (in % of GDP), which is included in the "Economics" indicator in the World Bank "World Development Indicators"<sup>44</sup>.

The matrices used during the analysis are based on the synchronized data for 2014 for the CEE countries (including the Visegrad group) and (with a comparative purpose) for other CIS countries (Table 3.6).

As seen in the Table 3.6, the Visegrad countries occupy the top positions in the rating lists according to the Environmental Performance Index and the Government Effectiveness Index. The highest values for the EPI and GEI belong to the Czech Republic (81.47 and 80.8 respectively). Slovakia, Hungary and Poland have somewhat lower values of these indices (Figure 3.1).

The share of public expenditure was highest in Hungary (44.9%), while in other countries of the Visegrad Group it was about one third of their GDP. Ukraine is similar to the analysed countries in the share of government expenditures, but it needs to significantly improve the governance efficiency and has significant potential for improving the environmental performance.

It should be noted that in the global ERI ranking the Visegrad Four in 2014 were in the top thirty (Czech Republic – 5<sup>th</sup>, Slovakia – 21<sup>st</sup>, Hungary – 28<sup>th</sup>, Poland – 30<sup>th</sup> place). The government effectiveness of these countries is rather high, as evidenced by their placement near the top of the list based on the GEI indicator: Czech Republic –

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<sup>42</sup> 2014 Environmental Performance Index. Full Report and Analysis: [http://epi.yale.edu/sites/default/files/2014\\_epi\\_report.pdf](http://epi.yale.edu/sites/default/files/2014_epi_report.pdf)

<sup>43</sup> World Development Indicators: Central government finances: <http://wdi.worldbank.org/table/4.12>

<sup>44</sup> The Worldwide Governance Indicators (WGI) project: Interactive data access: <http://info.worldbank.org/governance/wgi/#reports>

33<sup>rd</sup>, Slovakia – 40<sup>th</sup>, Poland – 41<sup>st</sup>, Hungary - 45<sup>th</sup> place. The share of public finances in the GDP of the Visegrad countries significantly exceeds the world average of 26.9%.

Table 3.6. Environmental performance, government effectiveness and share of government expenditures in Visegrad Four, CEE and CIS countries

Country	EPI	GEI	ExpGov
Czech Republic	81,47	80,8	33,8
Slovenia	76,43	79,8	44,0
Estonia	74,66	80,3	2,2
Slovakia	74,45	75,0	39,8
Hungary	70,28	72,1	44,9
Poland	69,53	74,5	34,81
Serbia	69,13	58,2	39,2
Belarus	67,69	57,7	27,4
Latvia	64,05	78,4	43,8
Bulgaria	64,01	57,71	30,11
Croatia	62,23	73,1	39,0
Armenia	61,67	45,7	24,0
Lithuania	61,26	78,8	9,6
Montenegro	55,52	63,5	n/a
Azerbaijan	55,47	41,8	22,1
Albania	54,73	50,0	24,41
Russia	53,45	48,6	26,4
Moldova	53,36	38,9	34,6
Kazakhstan	51,07	53,4	15,3
Romania	50,52	54,8	31,9
Macedonia	50,41	59,6	29,4
Ukraine	49,01	39,9	43,5
Georgia	47,23	71,6	25,7
Bosnia and Herzegovina	45,79	36,5	40,0
Turkmenistan	45,07	18,8	n/a
Uzbekistan	43,23	27,4	n/a
Kyrgyzstan	40,63	17,8	21,0
Tajikistan	31,34	22,1	n/a

Among the CEE countries Slovenia, Serbia, Latvia and Croatia are close to the Visegrad Four values of the analysed indicators. The CIS countries are characterized by significant differentiation in indicators of the ecological performance, governance efficiency and level

of public expenditures. A number of CIS countries (Belarus, Armenia, Azerbaijan), in spite of certain problems with democratic transformations in them, form the median group for these three indicators. The countries of Central Asia, with the exception of Kazakhstan, occupy the outsider positions among the analysed group of countries.

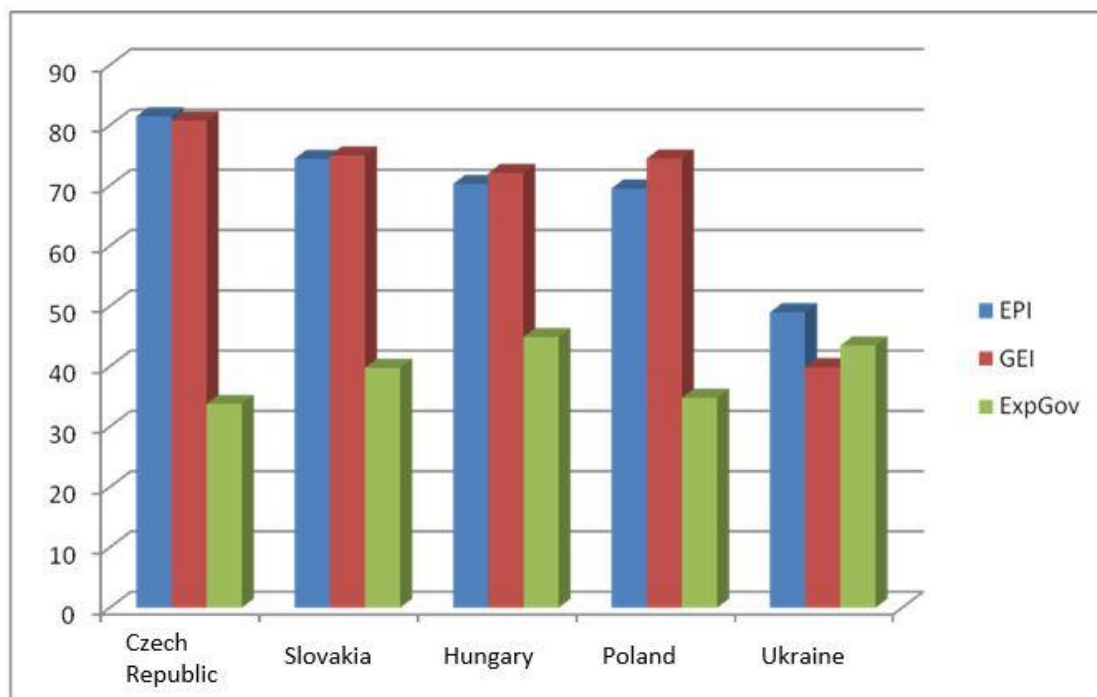


Figure 3.1. Environmental performance, government effectiveness and government expenditures in Visegrad countries and Ukraine

Accounting for the ecological situation in the country is definitely a necessary attribute of the welfare state. Therefore, the current scientific task now remains identification of factors (predictors) that affect the state of the environment at the global, national, regional and local levels. We have created two samples of countries, one of which includes only the countries of the Visegrad Four and the CEE, and the other one is supplemented by other CIS countries. Thus, we tried to assess the causal relationship between the indicators of governance efficiency and the share of public finances as regressors and the environmental performance as regressand.



Correlation analysis of both samples revealed significant and similar in nature and direction linear relationships between the indicators that characterize the environmental performance and the governance efficiency in the country (Table 3.7). For the remaining pairs of indicators, the correlation coefficients are insignificant and illustrate the weakness of the interconnection between them.

Table 3.7. The matrix of pair correlation coefficients between the EPI, GEI and ExpGov of the Visegrad Four countries, CEE and the CIS\*

Indicators	EPI	GEI	ExpGov
EPI	1,000	0,803	-0,055
GEI	0,756	1,000	-0,193
ExpGov	0,164	0,070	1,000

\*Notes: 1) the upper part of the matrix above the main diagonal contains the coefficients of correlation for the sample Visegrad Four + other CEE countries; 2) the lower part of the matrix under the main diagonal contains the coefficients of correlation for the sample Visegrad Four + other CEE countries + other CIS countries; 3) in bold are the correlation coefficients, significant at  $p < 0.001$ .

As a result of the regression analysis, we obtained two-factor regression models, the main parameters of which are given in Table 3.8.

In both models a significant portion (58-66%) of the variation in the EPI is caused by the variation of regressors. Both models are statistically significant at  $p < 0.001$ . However, among the parameters of the models, the independent variables and regression coefficients of the index of the government effectiveness were significant. The regression coefficients of the ExpGov predictor were insignificant in both models. The comparison of standardized regression coefficients ( $b^*$ ) indicates that the GEI predictor is significantly more important when forecasting the environmental performance index (0.748 and 0.748 against 0, 103 and 0.111).

The same ranking of explanatory variables on the degree of their influence on the explained variable was obtained during the analysis of partial correlation coefficients (Table 3.9).

A significantly larger partial correlation coefficient between GEI and EPI informs about the tangible impact of the first variable on the second.

Table 3.8. Results of multifactorial linear regression analysis: regressand - the environmental performance, regressors – the government effectiveness and the level of public expenditures in GDP\*

Model 1: R <sup>2</sup> = 0,655, F(2,15)=14,219 p<0,0003						
	b*	Std.Err. - of b*	b	Std.Err. - of b	t(15)	p-value
Intercept			23,83	9,11	2,61	0,0195
GEI	0,823	0,155	0,57	0,11	5,32	0,0001
ExpGov	0,103	0,155	0,10	0,14	0,67	0,5139
Model 2: R <sup>2</sup> = 0,583, F(2,21)=14,684 p<0,0001						
	b*	Std.Err. - of b*	b	Std.Err. - of b	t(21)	p-value
Intercept			28,68	6,76	4,25	0,0004
GEI	0,748	0,141	0,48	0,09	5,29	0,0000
ExpGov	0,111	0,141	0,11	0,14	0,79	0,4401

\*Notes: 1) Model 1 is based on the sample of Visegrad Four + other CEE countries; 2) Model 2 is based on the sample of Visegrad Four + other CEE countries + other CIS countries.

However, the simultaneous high semi-partial correlation between the GEI predictor and the EPI response shows that this predictor does not play an independent part in explaining the variability of the dependent variable. That is, one should not ignore the probable mutual influence of both predictors on the state of the environmental performance. The latter statement is in some way confirmed by the graphic ordination of the studied countries in the coordinate system "GEI - ExpGov" (Figure 3.2).

Table 3.9. Partial and semi-partial coefficients of correlation between predictors and response in multiple linear regression models

Models	Model predictors	Partial correlation coefficients	Semi-partial correlation coefficients	t	p- level
Model 1	GEI	0,808	0,807	5,32	0,0000
	ExpGov	0,170	0,101	0,67	0,5139
Model 2	GEI	0,756	0,746	5,29	0,0000
	ExpGov	0,169	0,111	0,79	0,4401

In order to classify the Visegrad Four and other CEE countries, their cluster analysis by k-means method was performed depending on the environmental performance, government effectiveness and the share of public finances. As a result of the analysis, 4 clusters of

countries (Table 3.10) were distinguished by the variation (by minimizing intragroup dispersion and maximizing the intergroup dispersion).

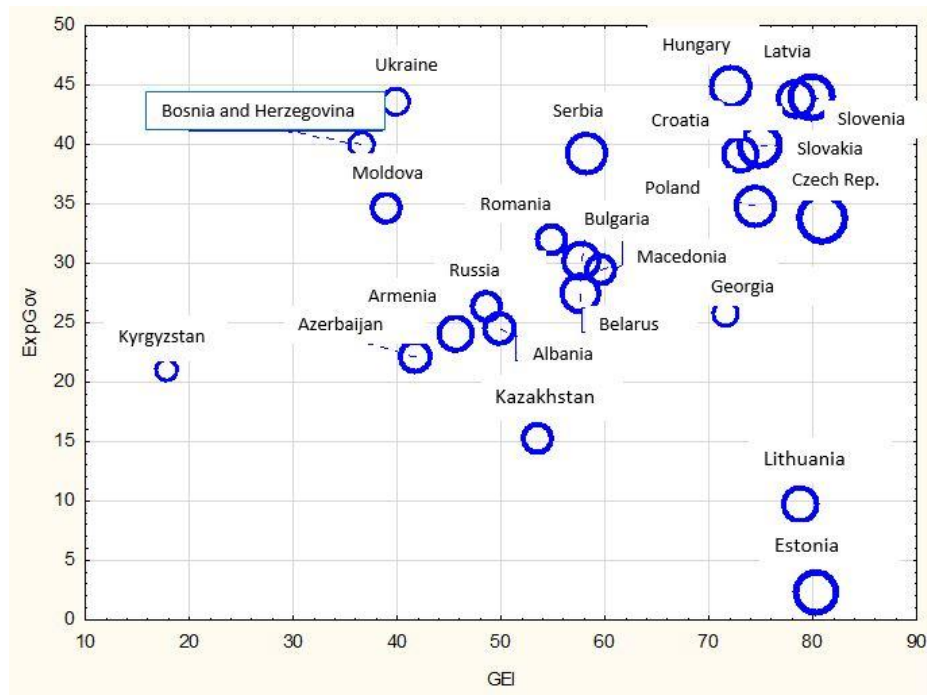


Figure 3.2. The dispersal diagram of the Visegrad Four and other CEE and CIS countries depending on the government effectiveness and the share of government expenditure in GDP (diameter of the bubble illustrates the country's environmental performance on the scale "bigger diameter - better condition")

The first cluster combines the countries of the Visegrad Four, as well as Slovenia, Latvia and Croatia. This group of countries is characterized by a rather good environmental performance, a relatively high level of governance efficiency and a significant share of public expenditure in the structure of GDP. It should be emphasized that this group of countries, in our opinion, in recent years has made the most progress towards shaping the main features of the welfare state.

The second cluster is the smallest, including only two Baltic countries. Estonia and Lithuania are similar to the first cluster countries in the first two indicators. The specific features of the second cluster should include a small share of public finances in GDP.

Table 3.10. Composition and average values of clusters of CEE countries on the environmental performance, government effectiveness and the share of government expenditure in GDP

Cluster	Country	Number of countries	Indicators		
			EPI	GEI	ExpGov
1	Poland, Czech Republic, Hungary, Slovakia, Slovenia, Lithuania, Croatia	7	71,21	76,24	40,06
2	Estonia, Lithuania	2	67,96	79,55	5,90
3	Serbia, Belarus, Bulgaria, Albania, Romania, Macedonia	6	59,41	56,34	30,40
4	Moldova, Ukraine, Bosnia and Herzegovina	3	49,39	38,43	39,37

The third cluster includes six countries with a satisfactory environmental performance, an average level of governance and an average share of public expenditure in GDP.

The last, fourth cluster includes countries with a very unfavourable environment, a significant share of public finances in the GDP and low efficiency of public institutions. Agglomerate tree-like hierarchical clustering confirmed the classification methodology of the CEE countries obtained using the previous method. This is clear from the dendrogram on which these four clusters are identified at the threshold level of the Euclidean distance of 32 (Figure 3.3).

Ordination of CEE countries within established clusters is shown in Figure 3.4, where they are located in the two-dimensional coordinate system "latent variable 1-latent variable 2". A solid red line conventionally indicates the boundaries of clusters. This placement of countries allowed us to identify Dimension 1 as a latent variable reflecting the variation in the performance of state institutions and institutions responsible for the environmental situation in the country. Interpretation of Dimension 2 is simpler, since this variable most likely illustrates the fluctuations in the share of public finances in the structure of GDP.

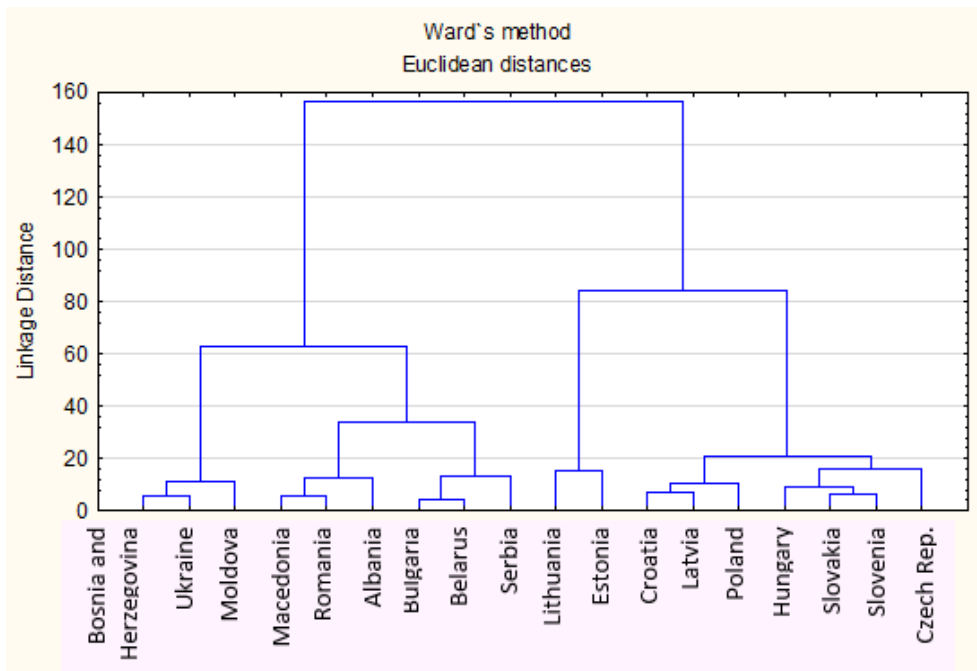


Figure 3.3. Dendrogram of cluster analysis of CEE countries according to EPI, GEI and ExpGov indicators

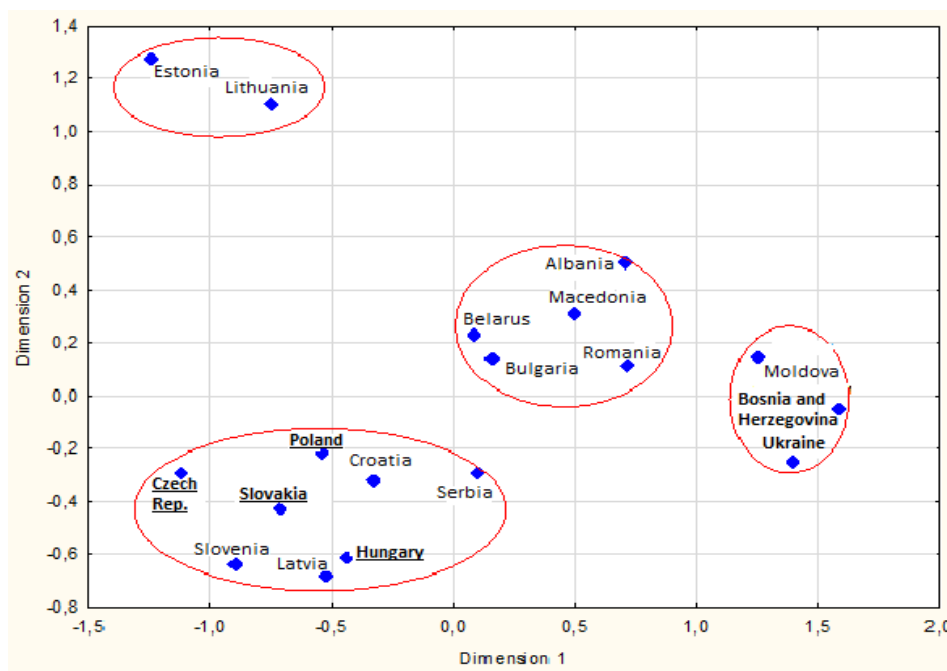


Figure 3.4. 2-D Ordination of the CEE countries using the method of multidimensional scaling (the Visegrad Four countries are in bold and underlined)

Inclusion of other CIS countries in the multidimensional scaling analysis did not significantly change the configuration of pre-es

established clusters, except for the expansion of the boundaries and the representation of the third cluster, as well as the emergence of the fifth cluster represented by Kyrgyzstan (Figure 3.5).

Thus, Azerbaijan, Russia, Armenia, Georgia and Kazakhstan additionally entered the third cluster. Kyrgyzstan forms a separate cluster characterized by the lowest estimates of environmental performance and government effectiveness.

Thus, a comprehensive statistical analysis of data that characterizes the environmental performance, government effectiveness and government expenditure of the CEE and CIS countries has shown a strong direct correlation between the first two indicators. **However, one mustn't ignore the likely interaction between the effectiveness of public administration and the share of public finances on the environmental performance of the country.**

The results of the classification of the studied countries obtained by alternative methods (k-means methods of clustering, hierarchical agglomeration cluster analysis, multidimensional scaling) indicate the possibility of using EPI, GEI and ExpGov indices, taking into account their different statistical significance, as complementary features to the classical criteria of the welfare state.

Taken together, empirical evidence suggests that eco-friendliness in CEE countries is largely determined by the effectiveness of governance, rather than a formal attribute of the welfare state such as the scale of GDP redistribution through the budget. This situation can be described as the absence of irrefutable consequences of the direct relationship between the level of income and the quality of environmental goods. In a broader sense, this confirms our hypothesis that environmental benefits, as an attribute of the modern understanding of the welfare state, are created not by the quantitative parameters of such a state, but rather by the qualitative ones. Confirmation of this is fundamentally important in the case of the CEE countries that are currently at the stage of real convergence.

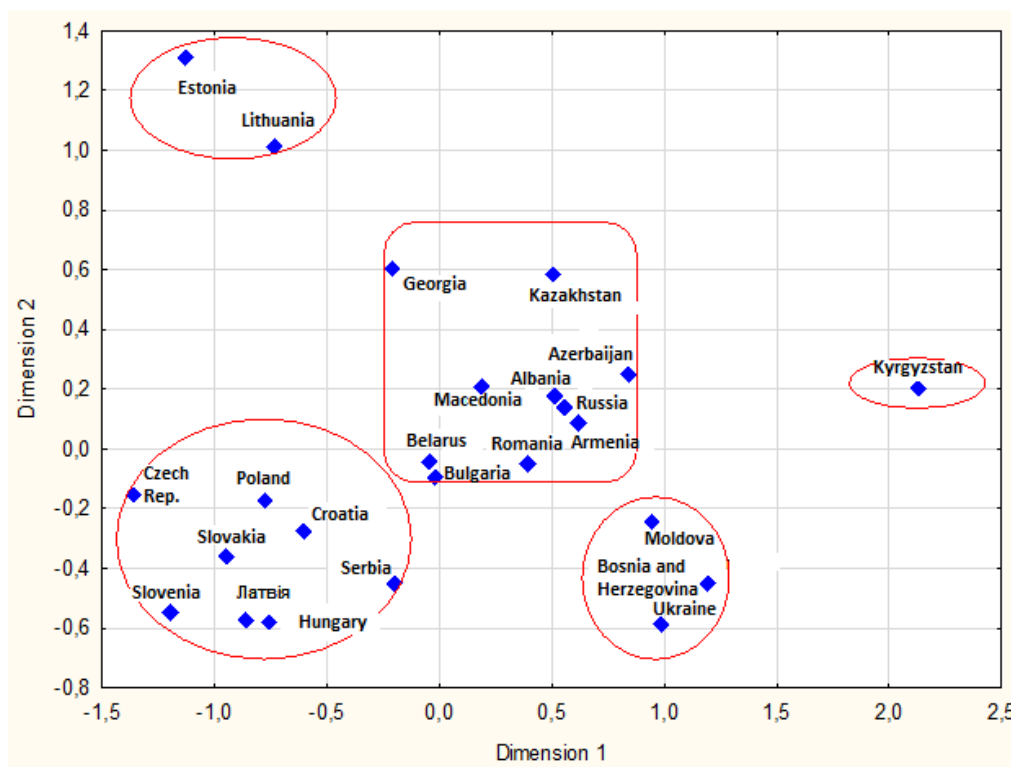


Figure 3.5. 2-D Ordination of the CEE and CIS countries using the method of multidimensional scaling

Detected dependencies confirm that environmental friendliness as a manifestation of a modern, effective inclusive state is not exclusive to the extremely wealthy countries. In other words, the more the society will put emphasis on the institutional quality, the more likely it will be to improve the quality of governance, which will result in the improvement of the environmental performance. Moreover, it will be coherent with a modern understanding of what social welfare and individual well-being are. In the case of the CEE countries, one should not reject the idea that institutional convergence with the EU (convergence in the quality of institutions) has a significant impact on the public choice regarding better ecology, the individual perception of ecology as a good and collective action generating the relevant policy. It is precisely because of this that the quality of governance is critically important for environmental benefits beyond the quantitative scale of redistribution.





CHAPTER 4.

**Backgrounds for local production systems' forming in Visegrad Group and Ukraine**

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Introduction

The economic crisis and consequent numerous social, economic and political problems had increased regional disparities in all countries, without exception, and require for the search of possible ways of their neutralizing. The main task of modern public policy should be launching of innovative development of the national economy. In this regard, creation of innovative local productive systems could be considered as the suitable instrument in terms of selecting the proper strategy for socio-economic development and

balanced government support, that will successfully adapt the stakeholders to the new market conditions.

Thus, the main purpose of current paper is to conduct the comparative analysis of local productive systems' preconditions and activities in the countries of Eastern Europe. In the theoretical paragraph, the concept and structure of LPS will be considered and their role for innovative advancing is discussed. The paper will illustrate the preconditions for LPS development according to the 3-star approach of European Cluster Observatory. The peculiarities of national LPS-supporting policies will be compared also for Eastern European countries. Besides the LPS initiatives in the selected countries (Poland, Slovakia, Ukraine) will be investigated more detailly.

#### 4.1. Theoretical backgrounds

Local production systems (LPS) could be defined as the territorial agglomerations of economic, political and social agents focusing on a specific set of the economic activities, mutually connected, albeit incipient and with general innovative orientation (Lishchynskyy, 2016).

Thus, LPS are structures, which combine the best features of agglomeration economies acting globally. However, it should be noted that "LPS" is not a canonical term – in Eastern European countries it's different analogues are used, most common of them is "cluster" (see Table 4.1).

Regardless from the tittle, the LPS are exploiting the general benefits of territorial concentration, in particular the lower transport costs, the scale effects in production, the proximity of firms engaged into similar or interconnected activities and other gravity forces that leads to the formation of the agglomeration. But in spite of traditional forms of agglomeration (such as metropolitan areas or industrial districts), the LPS have clear cooperation links (along with competition) between its members and innovative focus.

Table 4.1. Terms or phrases used to describe local production systems in some Eastern European states

Country	Terms or phrases used to describe LPS
Bulgaria	Клъстери, Свързани производства, Гроздове, Промислени
Czech Republic	Klastr
Latvia	Klāsteris, puduris
Lithuania	Klasteris, Žinių ekonomikos branduolys, Integruotas
Poland	Klaster, grono, sieć współpracy/sieć współpracy pomiędzy sektorem nauki, samorządami i przedsiębiorcami, lokalny system produkcji, kompleks przemysłowy
Romania	Entitati din infrastructura de inovare si transfer
Slovakia	Klahsteln
Slovenia	Mreže, grozdi
Ukraine	Кластери, локальні виробничі системи, територіальні виробничі комплекси

Source: authors' modification of Europe INNOVA (2008)

The traditional forms of agglomeration are gradually losing their comparative advantages. Being rather "clumsy" structures, they are not always able to response on the rapid changes in the global environment, especially in light of the recent crisis events. The later unfavorable situation at the energy market has led to the suspension of the huge number of industrial facilities which set the poverty line population of many monoindustrial mining or steel cities.

Therefore, during the last decades the new alliances emerge. Such kind of knowledge generating centers may have various structures, as LPS include not only manufacturing structures, but also a wide range of social, scientific research, financial institutions, infrastructure, etc. (see Figure 4.1) that create a complex essential for the socio-economic development of the region.

In addition to the stakeholders indicated in Figure 1, various supporting institutions are often created with the main task to promote the emerging new agglomerative formations (including typical local production systems) and the establishment of cooperation within the existing ones (the so-called facilitators).

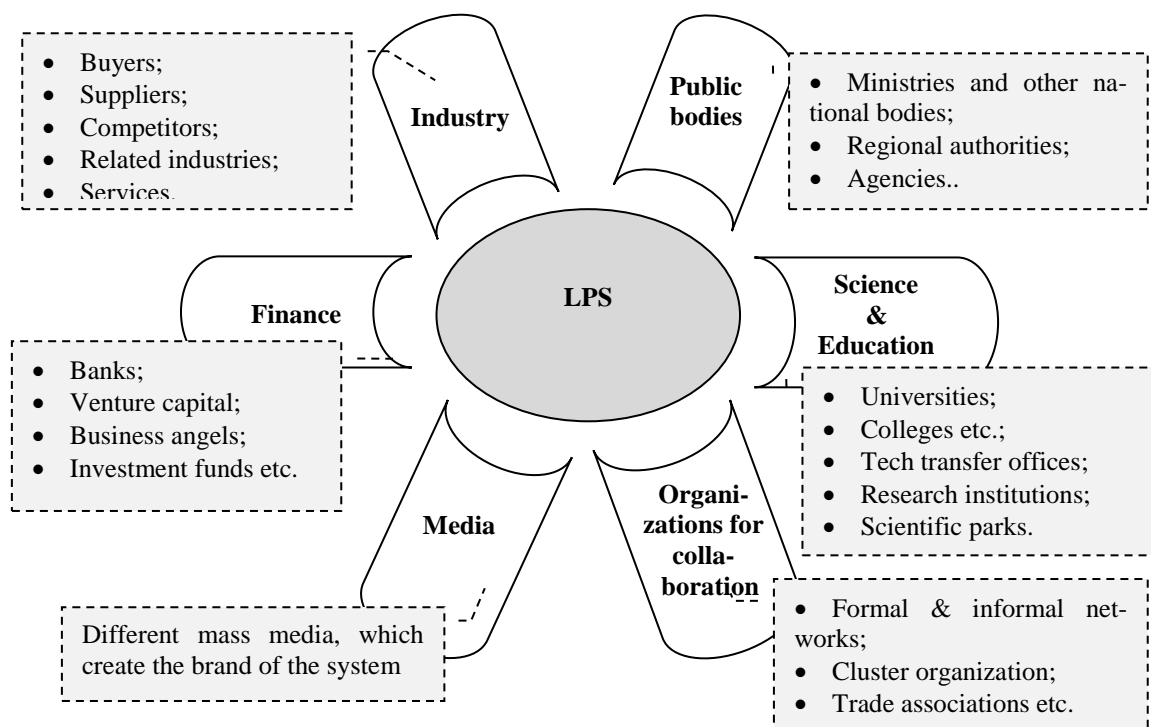


Figure 4.1. Environment of LPS

Source: author's modification of Sölvell (2009)

As marked in Lyzun (2015), Savelyev et al. (2015), the technological parks play rather often the role of facilitator. Indeed, the local production systems based on technological parks have a number of advantages, the main of them can be classified into three groups (Figure 4.2): generation of innovation, productivity growth, the creation of new start-ups and new manufacturers.

The innovations generated by the technological parks are often not related to the main activity of the local production system, leading to the creation of the new technological departments or even companies. Newly established firms may have the form of joint ventures and belong to the parent company, but often they became the independent competitors towards their initiators.

The innovations affect the localization of production because they stimulate the economic and social growth. Florida (2002) argues that firms and workers tend to migrate to the centers of the knowledge creation. There is also an inverse relationship – the local-

ization due to the territorial proximity of the cluster's members, creates the favorable conditions for the transfer of knowledge (close professional contacts, "kitchen effect" etc.) that influence on the innovation intensity.

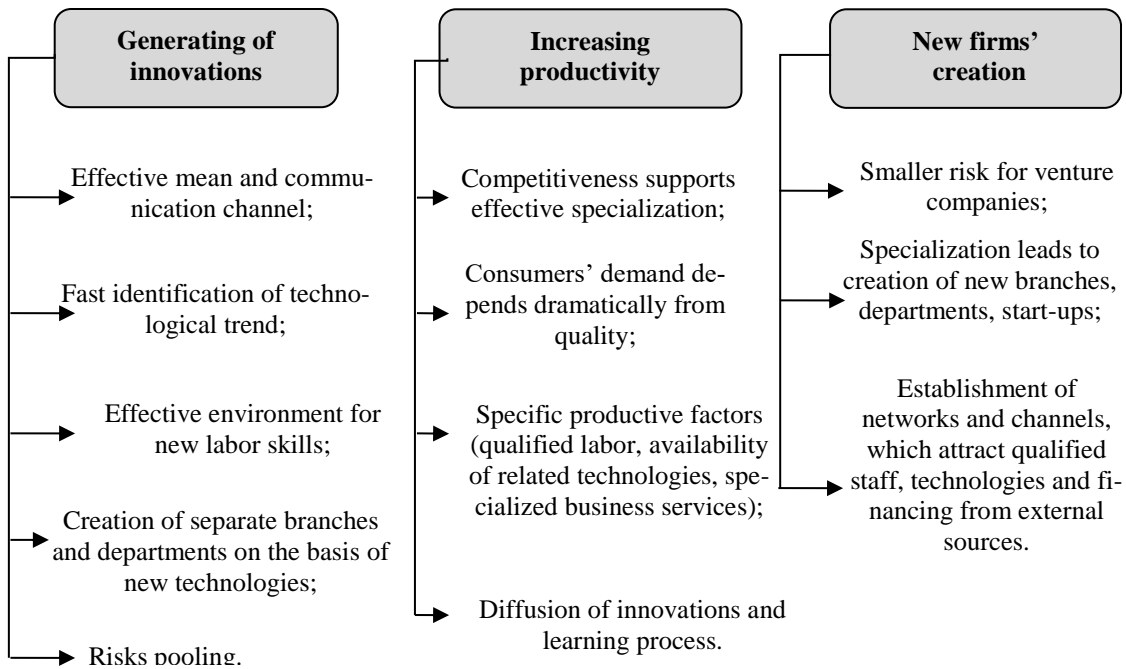


Figure 4.2. **Advantages of LPS built on the technoparks' basis**

Source: Lyzun (2015)

The localization is a prerequisite for the further diversification by means of the economy of scale. In less populated areas there is usually a closer relationship between the social and economic elements resulting in the considerable homogeneity of the system. In contrast, the effect of the love of variety always attracts the new producers and consumers by expanding the boundaries of these local production systems.

#### 4.2. Preconditions and LPS-supporting policy in Eastern Europe

The concept of the LPS development is relatively new for Eastern Europe. However, at the period of socialism rather similar idea of "spatial manufacturing complex" was popular, the theoretical basis of which was developed by M. Koloskovskiy in the 1930s (Go-likov,

2009: 28). According to his definition, a spatial manufacturing complex “is an economically integrated, interconnected and interdependent association of various sectors of the economy that emerged and developed in a particular area”. Thus, it is rather a Marshallian type of agglomeration’s definition.

Indeed, economic policy of the Soviet Union in the mid- 1960s, which included planning of the economic development based on the spatial principle, has got many points in common with modern cluster approach. For example, the Office of Tractor and Agricultural Machinery of Kharkiv public farm complex, in addition to traditional vertically integrated production, includes also technical schools, colleges, and specialized design institutes. Similar associations were observed in chemical, textile, paper and wood processing, construction materials industries, etc. However, it is not correct to equate a LPS and a SMC, because the second one is much broader term, which covers both LPS and industrial districts, which are common regional concentrations of certain industry without any clear innovation and cooperation focus. Besides, implementation in the conditions of centralized economy is rather different from the market one.

The preconditions for LPS development we would assess in this paper using the 3-star approach of European Cluster Observatory. According to the methodology a number perspectives are important to evaluate whether the presence of employment in specific industries belonging to a cluster category within a given region reaches sufficient ‘specialized critical mass’ to develop the type of spill-overs and linkages that create positive economic effects. The evaluation criteria (the ‘stars’) are: size (more than 15,000 employees at a location); specialization (a region is more specialized in a specific LPS category than the overall economy across all regions, i.e. specialization quotient of more than 1.75) and dominance (a LPS accounts for a larger share of a region’s overall employment – 7% or more).

According to the analysis conducted by Ketels and Sölvell (2006) to find out the number of regional LPS that have gained stars

across all NUTS-2 regions of Eastern Europe, Warsaw (Poland) tops the list, gaining stars from 16 regional LPS while Ostrava (Czech Republic) comes at the bottom with just 2 regional LPS meeting any of the star benchmarks (Figure 4.3). The average number of stars achieved by any of these regional LPS gives a sense of the level of concentration in a region's economy activity. Prague City (Czech Republic), Székestehérvár (Hungary), Košice (Slovak Republic), Prague Region (Czech Republic), and Łódź (Poland) register the highest number of stars per LPS for regions with at least five clusters meeting one of the star benchmarks, indicating a relatively high concentration of cluster activity within a few regional LPS.

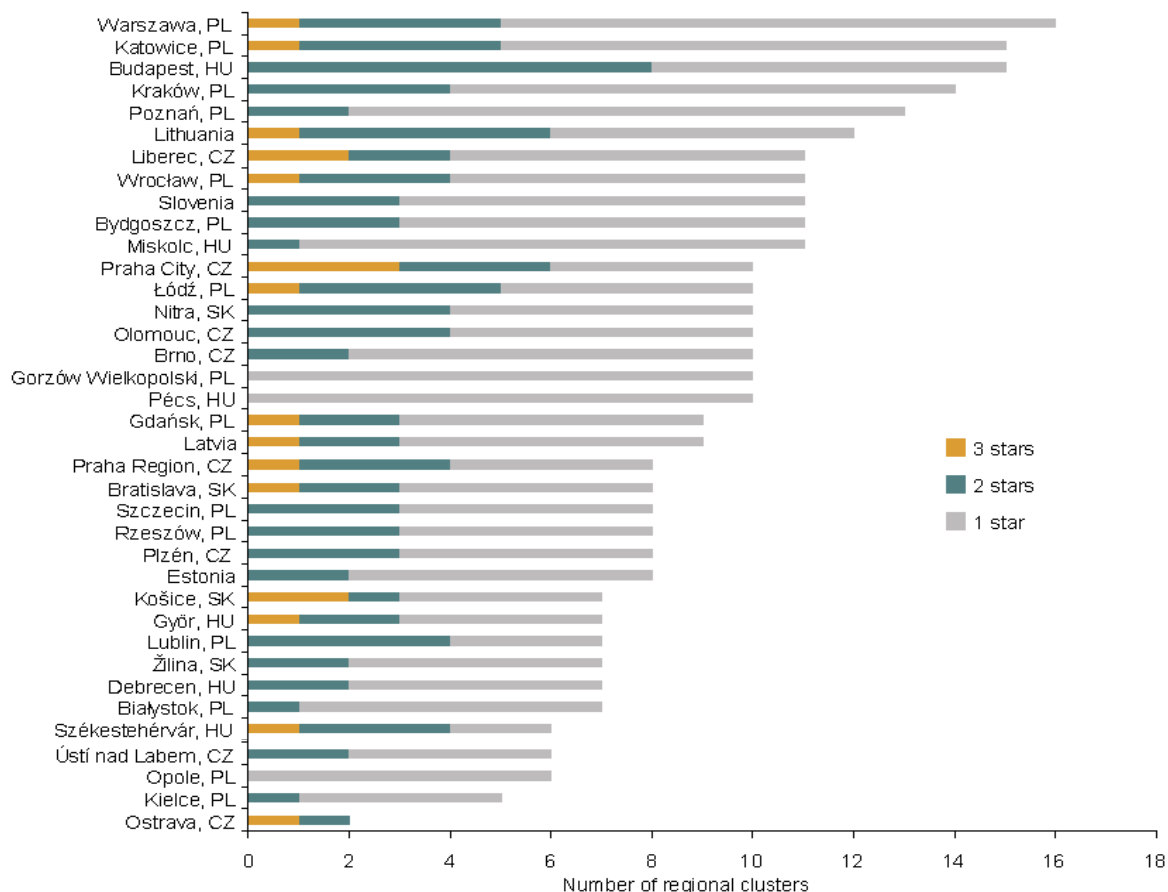


Figure 4.3. LPS portfolio strength across Eastern Europe

Source: European Cluster Observatory

Eastern European countries are having different national policies and institutions relevant for LPS development, adding further context to the data on actual LPS presence and LPS-relevant business

environment conditions. Some of them (not all) have official explicit national LPS-supporting policy that could be implemented at national or regional levels using top-down or bottom-up approaches or their combination. Table 4.2 aims to summarize existing political strategies among the Eastern European countries.

### 4.3. LPS initiatives in selected Eastern European countries

#### Republic of Poland

As it was marked in the Table above, cluster policy in Poland is part of the national Reform Programme 2020, issued by the Ministry of Economy. Cluster references were first made at the policy level in the country in the “**Strategy for Increasing the Innovativeness of the Economy, 2007-2013**” in 2006, with goals of supporting joint networking activities in order to build-up and strengthen the innovation infrastructure in the country.

There is a huge interest in the government to link cluster policy with “**Special Economic Zones**” development policy. It is believed that with this linkage, a stronger framework for innovation will be put in place, with an infrastructure that will enable better regional competitiveness and innovation. At the national level, cluster policies are rather implicit with some instruments (mainly funding instruments) applied by the national government which promote the establishment of clusters in all the Polish regions (Barsoumian et al., 2011).

At the end of 2015 Polish Agency for Enterprise Development (PARP) identified more than 130 LPS in Poland, which are defined as specific collaboration forms involving geographically concentrated institutions and organizations, mainly enterprises operating in the same or related industries.



Table 4.2. Comparative analysis of LPS-supported policies in Eastern Europe

Country	Year of launching	Precision	Level of implementation	Type	Responsible institution
Bulgaria	2004	Not explicit	National	Sectoral	Ministry of Economy
Czech Republic	2005	Explicit (in the frames of innovation policy)	National	Horizontal	Ministry of Industry and Trade
Estonia	2006	Explicit (in the frames of innovation policy)	National	Horizontal	Ministry of Economic affairs and Communication
Hungary	2007	Explicit	National	Horizontal	Ministry of Economy
Latvia	2005	Explicit	National	Sectoral	Ministry of Economy
Lithuania	2008	Explicit (in the frames of innovation policy)	National	Sectoral	Ministry of Economy
Poland	2006	Explicit (part of Reform Programme 2020)	National / Regional	Horizontal	Ministry of Economy
Romania	2010	Not explicit (integrated within industrial policy)	National	Bottom up	Ministry of Economy Trade and Business Environment
Slovakia	2005-2009	Not explicit	N/A	N/A	N/A
Slovenia	1999 No longer in place	Not explicit now	National	Sectoral	Ministry of Economy
Ukraine	N/A	Not explicit	N/A	Bottom up	N/A

Source: authors' compilation based on Barsoumian et al. (2011), European Cluster Observatory

All identified LPS have in total almost 6,000 participating entities of which enterprises account for 78%. The largest number of LPS are active in the following sectors: ICT, energy/renewable energy and construction, as well as in healthcare. Significant number of clusters represent metal industry, production technologies, tourism and business services.

In order to achieve the goals of LPS policy outlined by the Polish Cluster Policy Group (in Polish legislation LPS are mainly named as “clusters”, though term “LPS” is rather common in research papers), in 2014 the PARP, in collaboration with the Ministry of Economy and external experts, developed a set of criteria and drafted procedures for appointing Key National Clusters. The methodology was based on the desk research of available national and international sources to propose criteria and validation requirements which eventually underwent consultation with ministries, institutions and the general public.

The profile of a Key National Cluster resulted from combination of expectations towards the best clusters in different states, especially European, and the actual performance of Polish clusters.

Criteria address the following aspects: (1) Cluster size and structure (number of participants, especially SME and large companies); (2) Employment; (3) Joint activities of cluster participants and internal collaboration; (4) Geographical concentration of cluster participants; (5) Cluster specialization; (6) R&D; (7) Innovation performance; (8) Resources (physical, human, financial, etc.); (9) Presence of the cluster and its companies in foreign markets; (10) National and international visibility of the cluster; (11) Cluster coordination services and management (Source: Polish Innovation Portal).

Despite the fact that Poland's interest in the implementation of cluster initiatives and cluster formation constantly and dynamically grow, today there are barriers connected with the clustering of Economy of Poland. They are: low level of confidence among entrepreneurs and the lack of desire to create cooperation between firms that is connected with the probability that the ideas can be stolen; lack of regional and local policies to support industrial clusters; financial barriers (including high taxes on association); lack of traditions of dynamic entrepreneurship.

## Slovak Republic

There is no explicit LPS policy in Slovakia. However, there are references to LPS formation in other types of policies. LPS are mentioned as important policy instruments to increase competitiveness and innovation of enterprises in the Slovak economy. These can be found in the Innovation Strategy for the Slovak Republic for years 2007 – 2013 for example (Barsoumian et al., 2011).

The LPS in Slovakia have been formed either spontaneously using specific features, potential or sources of regions or have been formed around multinational firms (usually they also represent the most important source of FDI for the hosting region, as well for the Slovak economy as a whole), which decided to do investments in Slovakia (e.g. automotive LPS in Trnava, Bratislava and **Žilina region**). Their business activities have attracted a lot of other firms, especially sub-contractors firms, as a part of their own value chain.

Most of LPS have character of technological, tourism or knowledge alliances. In the recent years, a formation of LPS in the creative industries has been observed, too. In the case of these LPS, Bratislava region takes an important role. It is one of the leading European regions from the point of view of concentration of employment in the creative industry. Approximately more than 5% of workers are employed in this sector that indicates a significant specialization. In addition, about 46% of all businesses in the creative industries are located in Bratislava region and approximately 91% directly in Bratislava. Currently, as the most perspective sectors of the creative industry are considered design and software programming (Ministerstvo hospodárstva Slovenskej republiky, 2013, p. 27).

LPS, unlike other associations in Slovakia, may not be formally established (as a legal form) and they are also able to operate on an informal basis. In case of Slovakia, the special legislation on business alliances does not exist, even the Slovak legislation does not know the term “LPS” or “cluster”. Thereby the LPS in Slovakia, if the firms engaged want to organize themselves formally, have to choose their

legal forms within the already existing legislation. Based on it, the LPS organizations have a form of *interest association of legal persons* or *civil association*, which are registered in the *Register of Interest Associations of Legal Persons* or in the *Evidence of Civil Association* and they govern priority by the Civil Code and by the Act on the association of citizens. However, the legislation of these associations is general and does not take into account any specifics of LPS initiatives (Kramárová et al., 2014).

The legally existing cluster organizations in Slovakia (including both active and inactive acting initiatives) are listed in the table below.

Mainly, they operate in the fields of automotive industry, IT technologies, electronic industry, energetic industry (the most important industries from the point of view of FDI of the Slovak Republic, logically for the hosting region, too) and tourism.

#### Ukraine

In spite of absolute absence of political support<sup>45</sup>, some LPS still managed to be developed in Ukraine. The first attempts to create the clusters began in 1998. Nowadays there are above two dozen of LPS at the territory of Ukraine. The main of them are presented in Table 4.4. As it is seen, the area of their location is rather limited – the lion's share of all clusters function in 3 regions (Khmelnyskyi, Ivano-Frankivsk and Kharkiv), which necessitates the active development of the regional economic policy in this area.

The first efforts to create LPS in Ukraine (in national practice they are traditionally called “clusters”) were made by enthusiasts of science and business in the mid-1990s. They had created in Khmelnytskyi region the Association “Podillia Pershyi” (“Podillia the First”) headed by the rector of the Podillia National University Radomir Silin.

The “Godfather” of Khmelnytskyi cluster project was an American businessperson Wolfgang Price, who was in Ukraine as a volun

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<sup>45</sup> There is no even legal definition of LPS, though the term is used in several laws (in national practice, the LPS are named as “clusters”)

teer of "Peace Corps". He managed not only to spark with his idea the working group of local economists and managers, but also to involve technical assistance of the World Bank.

Table 4.3. LPS initiatives in Slovakia

Official name of cluster (in Slovak)	Region	Year of foundation
BITERAP	Kosice	2004
Automobilovy klaster Slovensko	Trnava	2007
Kosice IT Valley	Kosice	2007
ABC - Academic Business Cluster	Bratislava	2007
Z@aict	Zilina	2008
Zdruzenie cestovneho ruchu Balnea	Banska Bystrica	2008
1. slovensky strojarsky klaster	Banska Bystrica	2008
Elektrotechnicky klaster - zapadne Slovensko	Trnava	2008
Klaster cestovneho ruchu - zapadne Slovensko	Trnava	2008
Klaster LIPTOV - zdruzenie cestovneho ruchu	Zilina	2008
Energeticky klaster - zapadne Slovensko	Trnava	2009
Klaster TURIEC - zdruzenie cestovneho ruchu	Zilina	2009
Slovensky plastikarsky klaster	Nitra	2009
Klaster ORAVA	Zilina	2009
Dunajsky vedomostny klaster	Bratislava	2010
Energeticky klaster CENTROPE	Trnava	2010
Klaster AT+R	Kosice	2010
Klaster pohranicnych hradov	Banska Bystrica	2010
Klaster Smolenice	Trnava	2010
Klaster cestovneho ruchu Kosice Turizmus	Kosice	2010
Stavebnicky klaster Slovenska	Trnava	2010
Klaster HOREHRONIE - zdruzenie cestovneho ruchu	Banska Bystrica	2011
Energeticky klaster Presovskeho kraja	Presov	2012
Klaster pre podporu inovativnych a zelenych technology	Trnava	2012
Klaster TOPOECANY	Nitra	2012
Narodny energeticky klaster NEK	Bratislava	2012
KITech klaster inovacnych technology pre nakladanie s prasnymi anorganickymi odpadmi	Trencin	2012
Klaster MONOCRYSTAL	Zilina	2013
Slovak IT klaster	Trencin	2013
Trnavsko-myjavsky strojarsky klaster	Trnava	2013
Klaster pre akumulacie energie z OZE	Nitra	2013
1. spissky klaster	Kosice	2014
Klaster Huculska magistrala	Banska Bystrica	2014
EMOCITY - Klaster pre elektromobilitu a smart city	Bratislava	2014
Potravinarsky klaster	Nitra	2014
Zeleznicny dopravný klaster	Presov	2014

Source: Kramárová et al. (2014). The Cluster Initiatives (No. 0902966). International Institute of Social and Economic Sciences.

By 2005 the Association contributed to the formation of five clusters: construction, clothing and food – in Khmelnytskyi, food and tourism – in Kamianets-Podilskyi. In addition, a green tourism business network was created based on several small businesses in the village Hrytsiv (PPA official website; Borseková et al., 2016).

Table 4.4. The main LPS in Ukraine

Region	LPS title and sector
Khmelnytskyi	<ul style="list-style-type: none"> <li>❖ Khmelnytskyi construction cluster;</li> <li>❖ Khmelnytskyi sewing cluster;</li> <li>❖ Khmelnytskyi touristic cluster;</li> <li>❖ Kamianets-Podilsk touristic cluster;</li> <li>❖ Cluster of the eco-agrotourism in Grytsive, Shepetivka district “Amulet”;</li> <li>❖ Fruit cluster «Podilsk apple».</li> </ul>
Ivano-Frankivsk	<ul style="list-style-type: none"> <li>❖ Cluster “Suziria” (manufacturing of souvenirs) ;</li> <li>❖ Cluster “Manufacturing of ethnic products Prykarpattia” (manufacture products from sheep's wool) .</li> </ul>
Kharkiv	<ul style="list-style-type: none"> <li>❖ Cluster of swine breeding and meat products;</li> <li>❖ Cluster in the Euroregion “Slobozhanshchyna”</li> </ul>
Cherkasy	<ul style="list-style-type: none"> <li>❖ Cluster of green tourism and ethnic products</li> </ul>
Rivne	<ul style="list-style-type: none"> <li>❖ Cluster of wood Rokytno district</li> </ul>
Kyiv	<ul style="list-style-type: none"> <li>❖ Cluster “Slavutych” (attending Chornobyl nuclear station area)</li> </ul>
Kherson	<ul style="list-style-type: none"> <li>❖ Transport-logistics cluster «Southern gateway of Ukraine»</li> </ul>
Poltava	<ul style="list-style-type: none"> <li>❖ Cluster of ecological clean baby food based on organic farming</li> </ul>
Odesa	<ul style="list-style-type: none"> <li>❖ Cluster of organic farming and green tourism in Danube region</li> </ul>
Poltava	<ul style="list-style-type: none"> <li>❖ Cluster “Gogol’s places in Poltava”</li> </ul>

Source: Lishchynskyy (2016)

Summarizing the above mentioned it should be noted that the various agglomerative and innovative structures in Ukraine are at the early stages of its formation and their effectiveness is far from optimal. Particularly the challenging is regulatory and legal framework, which should create favorable conditions for cooperation of business, government, science, education, civil society groups within the LPS. The term “LPS”/“cluster” is rather common in a variety of the government programs, but still there is no even legal definition of it.

The Laws of Ukraine "On the innovation activity", "On scientific and technical activity", "On priority directions of the innovative activity in Ukraine", "On special investment and innovation of technology parks" should be adapted in accordance with the practice of European Union.

The first steps towards the development of the cluster strategies have already being done by the national Government. In October 19, 2010 the Ministry of Economy of Ukraine has developed a decree "On the establishment of the Working Group on the cluster development in Ukraine." However, the proposed initiatives of the created working group, unfortunately, have not found a real support at the national level yet.

## Conclusions

Benchmarking of world practices and the development of regional growth strategy on the basis of LPS can guarantee not only the survival of traditional heavy industrial centers in Eastern Europe, but also ensure favorable conditions for emerging small and medium enterprises, which can be competitive in national and world markets.

In general, it should be noted that various agglomeration and innovation structures in Eastern Europe are at the early stages of their formation and their effectiveness is usually far from optimal. Particularly, one of the biggest challenges is the improvement of the regulatory and legal framework for most of the considered countries. It should create favorable conditions for the cooperation of businesses, government, science, education, and civil society groups within the clusters.

The LPS processes in the Eastern Europe evolve primarily in these sectors: agriculture, tourism, business services, construction, food technology, IT and financial services. The most adapted to the clustering of the economy among the considered countries is Hungary. At the moment 150 industrial LPS operate there that unite more than 2,000 companies. Industrial parks have some privileges: infrastructure, reduced tax. Thus, the clusters of Hungary provided

57% of workplaces, 40% of GDP and 18% of the country's exports. The experience of socio-economic transformations in countries of Central and Eastern Europe and in some republics of the former USSR, the practice of implementing cluster initiatives attracts attention in Ukraine.



CHAPTER 5.  
**Clustering in the formation  
of a creative economy:  
European vectors, Visegrad Four,  
Ukraine**

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5.1. Theoretical approaches to the creation  
of cluster systems

Economic thought of the past evolved mainly point-wise. Researchers focused on certain forms and methods of economic relations, dismissing the processes beyond them. The latter could be ignored as they did not have a decisive impact on the subject and object of research. In a similar way the concept of clusters evolved during the last decades of the 20<sup>th</sup> century, when it became

obvious that ignoring the place of location of production was detrimental to competitive struggle and economic growth. This has become particularly evident after appearance in 1990 of the theory of national, regional and local competitiveness introduced by Porter.<sup>46</sup> This theory focused on the cluster-based model of production, leading to the development of spatial economic systems.

Today, it is hard to explain why, but the concept of Porter produced the largest impact on economic theory and especially practice. In our opinion, in the conditions of dominating global solutions and «repressed» role of regions which leads to accumulation of numerous problems of local nature, cluster-based approaches were welcomed by local elites as «a magic wand». It seemed that nearly all tasks of accelerated or, at least, catching-up development could be solved by setting up clusters. This vision was quickly adopted by Ukrainian specialists as well. Thus, one of the first Ukrainian fundamental publications on clustering, which was authored by Sokolenko,<sup>47</sup> states: «The time for network economy has come, uniting technologies, enterprises, large, medium and small structures into networks. Networks unite people, attracting their skills, knowledge and intellect. In practice, it becomes possible to integrate into a network any sphere of human activity – industry, science, education, agriculture, transport, healthcare, recreation industry, and other areas».

The beginnings of any new successful tendency are accompanied by a somewhat exaggerated perception of its significance for the overall process. This was true for clusters as well. By this time, however, there has been enough experience accumulated to allow for systemic analysis of the content of cluster-based forms of industrial organisation and their place in the processes of social division of labour at various levels of the world, national and regional economies.

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<sup>46</sup> Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14 (1), pp. 15–34.

<sup>47</sup> Kvit, S. (2014, July 9). Ukrainian IT industry should crowd out metallurgy. [Interview of Serhiy Kvit, Minister of Education and Science, to Forbes web-portal. Retrieved from <http://www.mon.gov.ua/ua/comments/34944-sergiy-kvit-ukrayinska-it-galuz-povinna-vitisniti-metallurgiyu> (in Ukrainian).

The nature of modern globalisation processes is characterised by inclusion of absolutely all processes, their subordination to global laws, regularities and tendencies. However, this does not mean that global economic structures are all built to one design. Modern economies exhibit striking processes which can well fit into the philosophical category of «negation of the negation».

During earlier centuries, world economy consisted mainly of the economies of duchies, tsardoms and imperia. From the second half of the 20<sup>th</sup> century, it has started to acquire the features of globalisation at an increasing pace. This was expressed in the growing volumes of international activity, leading to creation of new forms of international political, economic, financial, and socio-cultural relations.

Nevertheless, the global economic space has not become a big «caserne» for enterprises obliged to follow the same rules set for everyone. Globalisation intensified the development of spatial shifts that strengthened the processes of regionalisation, which have acquired global attributes. At that, regions are not secondary, insignificant entities. According to Ohmae<sup>48</sup>, in the conditions of globalisation, it becomes obvious that regions are true sources for economic energy. In view of this, it would be logical to conclude that regions in a broad sense (both international and intra-national) dismiss national political and economic units, whose role is declining. In Ohmae's opinion<sup>49</sup>, the leading role in the world economy will be played not by the nation states, but by transnational companies.

Thus, spatial components of economic activity are of different scale and territorial characteristics. Their administrative-territorial components are manifest in global and regional entities. Transnational companies grow to organise global production of goods and services. Regional organisational units function within different

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<sup>48</sup> Ohmae, K. (1985). *Triad power. The coming shape of global competitions*. New York, Free Press.

<sup>49</sup> Ohmae, K. (1990). *The borderless world: Power and strategy in the interlinked economy*. New York, Harper Business.

kinds of international economic unions, agglomerations and clusters. Their role and popularity in the world economy are constantly changing. However, within the existing regional entities, clusters are most widespread. They absorb the advantages of international economic organisations, transnational companies, international economic unions, national economies, agglomerations, and territorial-administrative structures. On the other hand, clusters can make up the deficiencies of traditional structures, i. e. take over the functions which were ineffectively performed by other entities. Among them are innovations, inter-industry development, development of peripheral and depressive economies, settlement of social problems in administrative-territorial districts, etc.

When determining the place of clusters in overall architecture of the world economy, it should primarily be noted that, today, they **are a new element of the world's spatial economy.**

In spite of their novelty and proliferation, clusters did not crowd out other forms of industrial organisation. On the contrary, they complemented and enhanced the existing production entities. This is true for Euro-regions, national regions and agglomerations. Finally, clusters serve as a form of national and global economic development and as a mobile element of globalisation processes and regionalisation. In the system of global economic architecture, clusters have not become a superstructure that would be a burden to organisations. They evolved as a quality of the linkage structure, which enhances the overall economic architecture (Figure 5.1).

The internal structure of clusters in its classical version consists of groups of interconnected companies. Legally, they operate independently and can have different forms of ownership. Economically, a network of cluster participants mirrors the process of reproduction, including production, distribution, exchange, and consumption of material goods and services. However, companies participating in a cluster do not duplicate separate stages of this process, but take responsibility only for certain operations as per division of labour. On the market, they act as a single competitor, which induces

each company's individual leadership with similar companies outside the cluster, as well as mutual support in achieving higher results compared with external competitors.

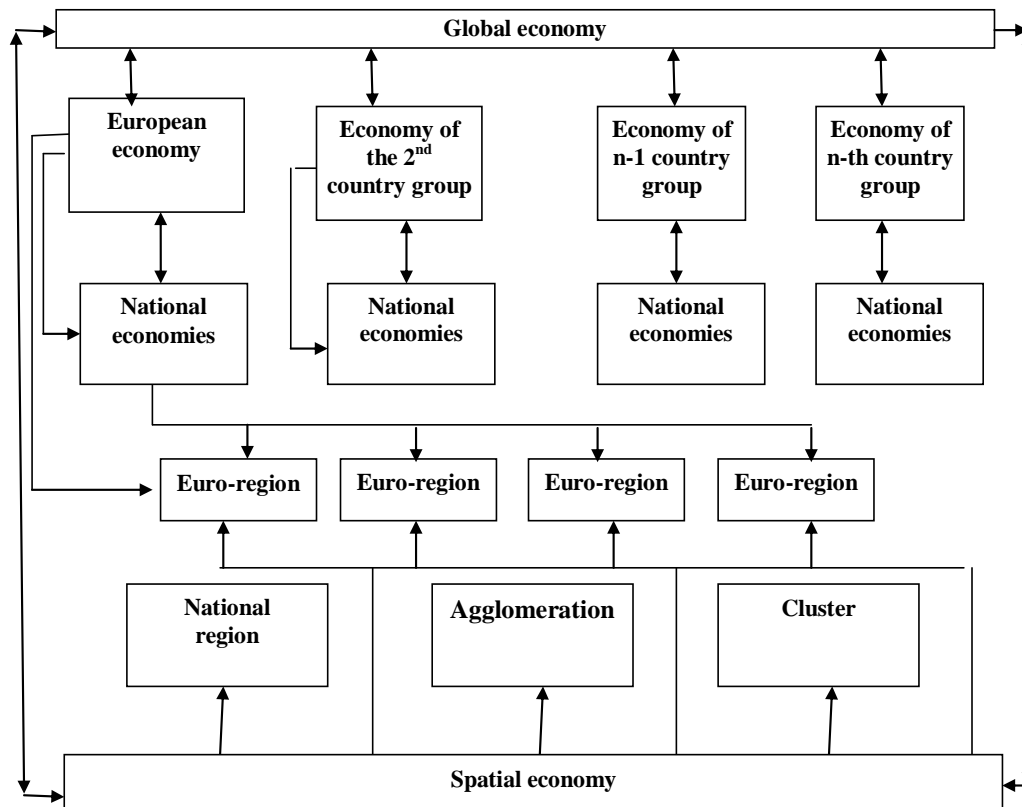


Figure 5.1. Architecture of the world spatial economy

Source: Developed by the author

When considering clusters as networks of companies and organisations, it should be noted that networks are kept together by the availability of common markets and final customers. However, each member of the cluster, being a legally independent participant, can simultaneously operate in other market niches, which do not fall within the circle of interests of the cluster. This type of cluster involvement is particularly typical of research centres, universities, financial institutions, and intermediary firms. Similarly, public authorities, which participate in clusters, do not reduce their activity in other spheres. They participate in clusters mainly to lobby the interests of their regions by providing assistance to clusters in matters of organisation, lands and resources.

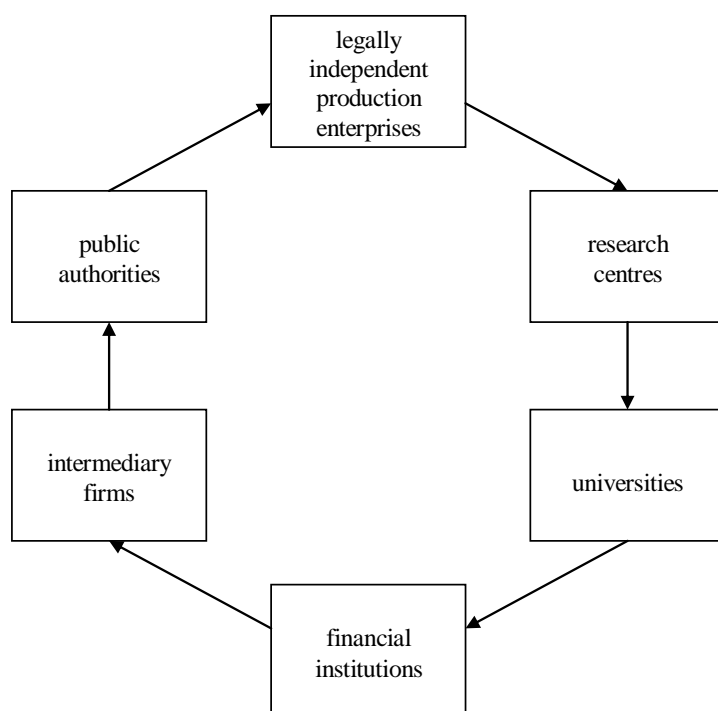


Figure 5.2. Internal structure of the cluster

**Source:** Developed by the author based on analysis of Porter, M. (2003). *Competition*. Moscow, Williams Publishing. (in Russian); Porter, M. (1993). *International competition*. Moscow, Mezhdunarodnye Otnosheniya. (in Russian); Yamawaki, H. (2002). *The Evolution and Structure of Industrial Clusters in Japan*. *Small Business Economics*, 18, pp. 121–140.

The economic literature usually ignores certain aspects of the relationship between clusters and agglomerations (Figure 5.2). However, both of them achieve synergy effects. The agglomeration effect was limited mostly to formation of conglomerates, which has become more or less evident in conditions of intensifying economic activity in the 20<sup>th</sup> century. Having developed within the agglomeration structures, clusters initially generated synergy effects thanks to better realisation of the benefits of industrial concentration based on spatial concentration and division of production processes. Networks are traditionally represented by such territorially concentrated industries as auto industry in the USA, Germany and Japan, production of watches in Switzerland, flower industry in the Netherlands, etc. Typical examples from the sphere of services include Hollywood industry and financial centres in London and New York.

The biggest impact on economic development produce clusters that emerge in line with the continuing proliferation of knowledge-based economy in the world and national economies. Some of them have already acquired classical forms and become the role models. Well recognised are such clusters as the Silicon Valley in the USA; mobile telecommunications clusters in Stockholm, Tokyo and Helsinki.

In conditions of the knowledge economy, it becomes typical to set up international clusters, which allow to realise competitive advantages related to internationalisation of production. Their models can be presented on the example of clusters that exist in biotechnology and natural sciences, for example, Biovalley within the French-German-Swiss border<sup>50</sup> and Medicon Valley of Denmark and Sweden.<sup>51</sup> To tell the truth, the creation of knowledge-based entities can hardly be imitated, which has been proven by failure to create a copy of the Silicon Valley in the Russian town of Skolkovo. The development of clusters in the knowledge-based economy seems to require not as much of the imitation, but rather the creation of entities based on fundamentally new ideas – be they organisational or purely scientific in nature.

Analysis of the evolution of modern network-based systems of local industrial organisation shows that they tend to shift towards acquiring new contents in response to changes in the processes of globalisation. In view of the broad proliferation of cluster-based systems, it is worth to acknowledge that in new forms of fragmentation are developing in the global economy, with integration processes intensifying within them. At first, they encompassed groups of national economies and found most expression in the creation of the European Union, where foreign economic relations among member states oriented mostly at the cooperating partners. However, the

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<sup>50</sup> Mikula, N. A. (n.d.). (Ed.). Recommendations on implementation of new forms of transborder cooperation. Lviv, Institute for Regional Studies, National Academy of Sciences of Ukraine, pp. 75–78. Retrieved from [http://eep.org.ua/files/MR\\_NewForms.pdf](http://eep.org.ua/files/MR_NewForms.pdf) (in Ukrainian).

<sup>51</sup> A Story on how Denmark and Sweden were building a Medicon Valley. (2012, October 15). Retrieved from : <http://babansky.livejournal.com/4944.html>. (in Russian).

boundaries of such formations are also rather broad and must be supplemented with local integration unions, as it is not possible to achieve worldwide conjunction of interests with regard to production and distribution of goods and services.

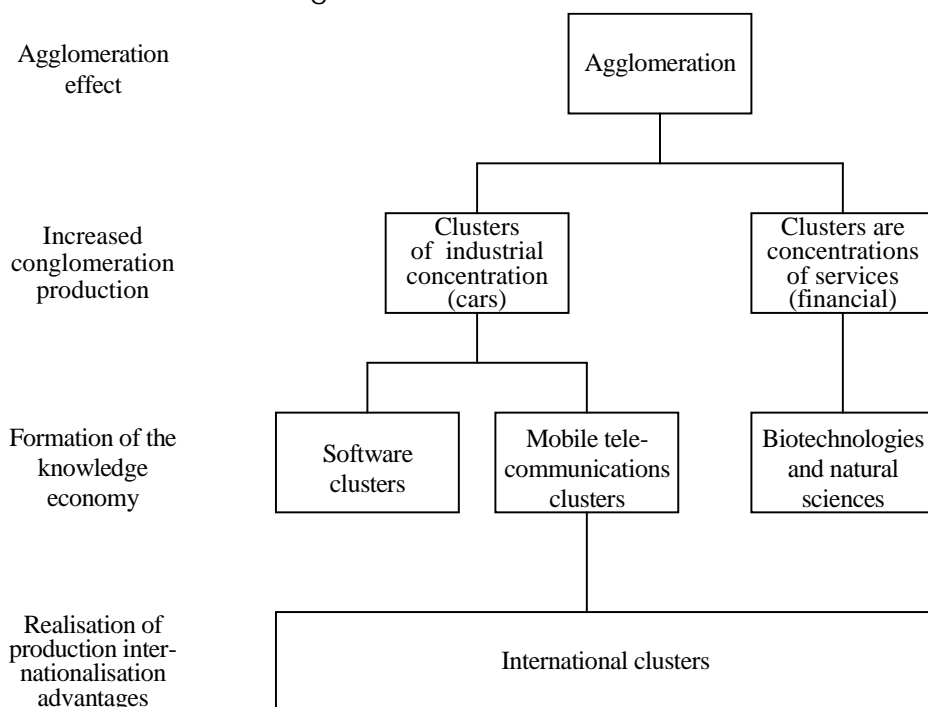


Figure 5.3. Evolution of clusters within the agglomeration framework

Source: Developed by the author based on analysis of Chuzhykov, V. I. (2013). (Ed.). Technological modernisation in the European economy. [Monograph]. Kyiv, KNEU. (in Ukrainian).

Taking advantage of national economic openness sets certain preconditions for companies, which are forced to choose those locations for their business activity that offer better business environment for their needs. The larger the global markets, the higher the probability that material, financial and intellectual resources will be allocated in more attractive areas, stimulating the formation of local specialization and creation of local science and industry associations, primarily clusters. The latter, having gained higher competitiveness, create new clusters to cover their needs in additional services or to provide services to other specialised entities. Centres for industry and science and technology activity can be initiated by members of the



existing associations who develop their personal scientific and productive ideas and developments.

At that, it should be noted that in many countries, cluster policy began to emerge at the regional level earlier than at the national level. For example, such lands as Baden-Württemberg, Bavaria, North Rhine-Westphalia in Germany initiated the programmes aimed at fostering networks for science and business integration back in 1980s.

In contrast, federal government initiated the first programme of this kind in the mid 1990s<sup>52</sup>. This testifies to the fact that it is economically and administratively strong regions, such as the lands of Germany, that can serve as a trigger mechanism for development of important directions, not the centre.

It will be a mistake if decentralisation is only reduced to forming state and regional budgets. Urgent and radical economic reforms should obviously reproduce a new strategy of development over the long term with a focus on the increased role of regions and their responsibility for socio-economic outcomes. Under such conditions, clustering shall become an important form of new regional policy of Ukraine.

The development of cluster initiatives in the system of regional policy of Ukraine could be supported by using the invaluable experience of France, which developed and effectively introduced different approaches that were gradually implemented with care, risk-awareness and application of financial levers. Involvement of the state in the development of network-related policies is largely connected with a need to finance joint projects. Usually, it reduced to stimulation of self-organization and formation of clusters in regional economies. This can be illustrated by the example of the programme in France which aimed at providing support for the development of local production systems. It provided a possibility for LPS to receive

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<sup>52</sup> European Cluster Observatory. (2008). Cluster policy in Europe. A brief summary of cluster policies in 31 European countries, p. 17. Retrived from: <http://www.clusterobservatory.eu/system/modules/com.gridnine.opencms.modules.Eco/providers/getpdf.jsp?uid=100146>.

subsidies of 37.5 thousand Euros on average. The conditions of financial support were relatively soft: formation of a cluster-based organization, which would consolidate its founders.<sup>53</sup> They could spend money on a wide range of expenditures, including branding, export support, self-organisation of companies, universities and local authorities; gaining experience for future implementation of large-scale programmes.

When introducing state programmes of cluster support, it is important not to miss the moment of their obsolescence. Thus, in France, the above-mentioned approaches to providing state support for local production systems contributed to their proliferation. However, the final outcomes of government – business interaction have not always positively affected the strengthening of international competitiveness. That is why in 2006–2008 the programme on local production systems development was replaced with the programme «Competitiveness clusters» with a budget of €1.5 bn, which significantly expanded the range of support for cluster initiatives. It was used to finance specific cluster programmes which have already been set up and proved effective.

Strong regionally located clusters spread globally by attracting personnel, technology and investments. They cooperated with other clusters, additionally contributing to global value chains, and successfully entered foreign markets. Finally, specialisation deepened in local spaces. In case regions are too slow to get involved in this process, they not only face higher risks of lagging behind in terms of economic and social development, but can also fall into depression.

When assessing the development of cluster-based systems in developed countries, it should be noted that, on one hand, they promoted economic development in view of the global conditions of the last decades, but on the other hand, they needed to adapt to the challenges faced in the second decade of the 21<sup>st</sup> century. However, the

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<sup>53</sup> Martin, P., Mayer, T., Mayneris, F. (2010). Public support to clusters: A firm level study of French «Local productive systems». [Mimeographed]. University of Paris I, p. 4. Retrieved from <http://perso.uclouvain.be/florian.mayneris/rsue.pdf>.

statistical studies of Teresa Bal-Woźniak<sup>54</sup> proved that clusters did not yield significant advances in the context of innovativeness, especially in the new EU member countries. There is a hypothesis that during the transition from resource-based network economy to knowledge economy, the leading role is played by the factor of clusters' innovativeness.

The aim of the current Strategy «Europe 2020» was to enhance the economic power of the European Union and the well-being of its citizens. As stated in the conclusion of the European Council: «Our efforts should be more focused on the development of EU competitiveness, productivity, growth potential and economic convergence. The new strategy concentrates on the key areas: knowledge and innovation, more sustainable economy, higher employment level and social inclusion»<sup>55</sup>.

In order to maintain high living standards and improve them further, Europe launched a search for new organizational forms for clusters that would ensure the progress in innovations. Europe needs these new forms to become more productive in generating new ideas and to reduce its gap with the U.S. and Asia in terms of innovative development. Thus, European clusters develop towards transformation into powerful catalysts of this process, acting as inter-connected territorial centres.

Current views on the role of clusters were put forth in the «European Cluster Memorandum», which defines them as «regional centres for concentration of specialized companies interconnected by multiple channels, which creates favourable environment for innovations. They enable «open innovations», that is, the creation and improvement of new ideas in a network consisting of companies and organizations that cooperate with each other. These groups of com-

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<sup>54</sup> Bal-Woźniak, T. (2011). Economic networks as effective mechanisms of innovation activity coordination. *Mizhnarodnya Ekonomichna Polityka*, 12–13, p. 152 (in Ukrainian).

<sup>55</sup> Eurobulletin. (2010, Number 4). European Council approved the Europe-2020 Strategy.

panies and organizations facilitate the removal of barriers to transformation of new ideas into new products and generation of maximum benefits from globalization»<sup>56</sup>.

Generalisation of the above-mentioned modern clustering practice in developed countries gives an opportunity to present a classification of cluster-based forms of industrial organisation according to territorial, evolutionary, organisational, and qualitative parameters (Figure 5.4).

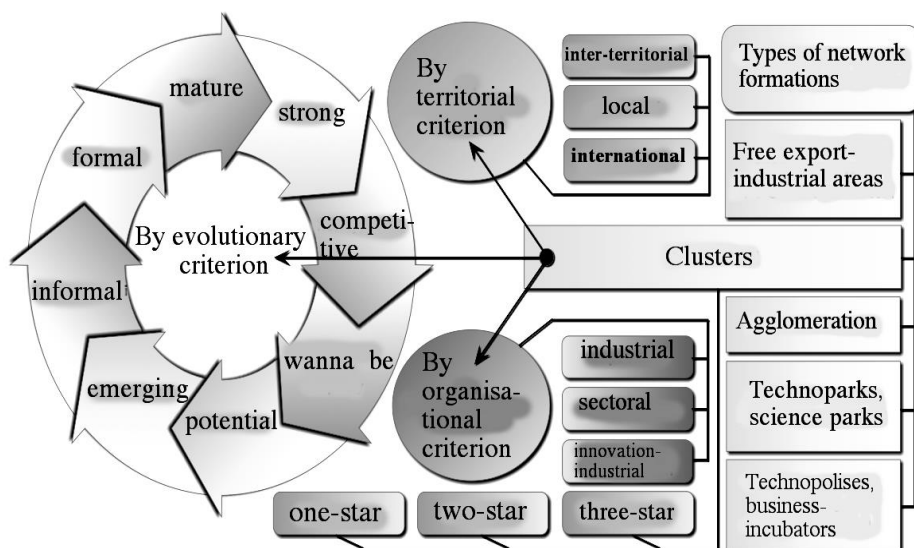


Figure 5.4. Classification of cluster-based forms of industrial organisation and their position in networked territorial entities

Source: Developed by the author based on Chuzhykov, V. I. (2013). (Ed.). *Technological modernisation in the European economy*. Kyiv, KNEU. (in Ukrainian); Sokolenko, S. I. (2004). *Clusters in the global economy*. Kyiv, Logos. (in Ukrainian); TACTICS (2012). *Where the cluster winds are blowing in Europe*. Brussels, European Commission. Retrieved from <http://abclusters.org/wp-content/uploads/2013/12/Where-the-cluster-winds-are-blowing>.

According to territorial criterion, clusters develop as local, inter-territorial and international. In the evolutionary aspect, it is worth to distinguish among potential, emerging, wannabe, informal,

<sup>56</sup>The European Cluster Memorandum. Promoting European Innovation through Clusters: An Agenda for Policy Action. Prepared by The High Level Advisory Group on Clusters, chaired by Senator Pierre Laffitte. Retrieved from [http://www.vinnova.se/upload/dokument/VINNOVA\\_gemensam/Kalender/2008/Klusterkonferens\\_jan08/European%20Cluster%20Memorandum%20Final.pdf](http://www.vinnova.se/upload/dokument/VINNOVA_gemensam/Kalender/2008/Klusterkonferens_jan08/European%20Cluster%20Memorandum%20Final.pdf).

formal, mature, strong, and competitive clusters. In the organisational sense, clusters can be classified into industrial, sectoral, and innovation-industrial. By the criterion of sustainability and sophistication, clusters can be assigned stars, as it is done for hotels: three stars, two stars and one star.

## 5.2. Clusters and science parks as a moving force for the formation of a creative economy

The development strategies until 2020, which were adopted by the EU and the majority of countries falling under the European Neighbourhood Policy aim at transition to innovation economy. Science parks play an important role in achieving this goal. Their creation and functioning in Ukraine are carried out in accordance with the Law of Ukraine No.1563-VI «On Science Parks» of June 25, 2009<sup>57</sup>. Science parks are defined as legal entities created by initiative of higher education institutions and/or scientific institutions by consolidating the contributions of its founders with the aim of organizing, coordinating, and controlling the process of development and implementation of the projects of scientific parks. Its partners may be business entities that have to sign the corresponding agreement. The priority directions for science parks should be economically- and socially-induced scientific, technical and innovative activities that are consistent with the goals of their creation, take into account the needs of the region and comply with the laws «On Priority Directions for Development of Science and Technology» and «On Priority Directions for Innovative Activity in Ukraine».

Research of the problems of science parks development is carried out by many Ukrainian and foreign scientists. Among them, we would like to mention B. Andriyanov (theoretical foundations of science parks)<sup>58</sup>; M. M. Ivanov, S. R. Kolupaev (methods of science and

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<sup>57</sup> Law of Ukraine «On science parks». Retrieved from <http://zakon3.rada.gov.ua/laws/show/1563-17>. (in Ukrainian).

<sup>58</sup> Andriyanov, V. Science parks. The south-eastern version. *Vneshnyaya trgovlya*, 9, pp. 33–35. (in Russian).

innovation management in the U.S.)<sup>59</sup>; A. G. Karataev (operation of science parks in the developed capitalist countries)<sup>60</sup>; V. K. Vasenko (world experience of the strategy and development of free economic zones in Ukraine)<sup>61</sup>; V. I. Lyashenko, A. I. Zemlyankin, I. J. Pidorycheva, T. F. Berezhna (infrastructure of science parks)<sup>62</sup>; O. A. Mazur (Ukrainian and international experience of technology parks)<sup>63</sup>; V. Semynozhenko (parks and experience of innovation economics)<sup>64</sup>; D. V. Tabachnyk (Ukrainian and international experience of technology parks)<sup>65</sup>, and others. However, the practice of creating science parks has not become widespread enough, although some experience has already been accumulated, which provides grounds for creation of their network in the future.

In practice, science parks are designated with different names, in particular «scientific-technological parks» and «technoparks», even though their meaning is the same – the creation of a science and production complex, which integrates a research centre and the surrounding industrial area, where science-intensive firms are located on rental or other terms. Educational structures are an important element of science parks, which provide the latter with human resources and engage students, professors and lecturers of higher educational establishments in performing science and production functions (Figure 5.5).

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<sup>59</sup> Ivanov, M. M., Kolupaev, S. R. (1990). The USA: Management of science and innovations. Moscow, Nauka. (in Russian).

<sup>60</sup> Karatayev, A. (1990). Science parks of developed capitalist countries. *Vneshnyaya trgovlya*, 9, p. 13–15. (in Russian).

<sup>61</sup> Vasenko, V. K. (2004). Free economic areas: Strategy of development. [Monograph]. Sumy, Dovkillya. (in Ukrainian).

<sup>62</sup> Lyashenko, V. I., Zemlyankin, A. I., Pidorycheva, I. Yu., Berezhna, T. F. (2012). Perspectives of science parks development as elements of small innovative business infrastructure in Ukraine. *Visnyk Ekonomichnoyi Nauky Ukrayiny*, p. 89–109. (in Ukrainian).

<sup>63</sup> Mazur, O. A., Shovkalyuk, V. S. (2009). Technological parks. World and Ukrainian experience. Kyiv, Prok-biznes. (in Ukrainian).

<sup>64</sup> Semynozhenko, V. (2004). Technological parks in Ukraine: First experience of forming the innovation economy. *Ekonomika Ukrayiny*, 1, p. 6. (in Ukrainian).

<sup>65</sup> Tabachnyk, D. V. (2004). (Ed.). Technological parks. World and Ukrainian experience. Kyiv, Vydavnytstvo Tp IEZ. (in Ukrainian).

The first science park «Kyiv Polytechnics» was created on the basis of National Technical University «Kyiv Polytechnical Institute» by the Law of Ukraine No 523-V dated December 22, 2006, «On Science Park «Kyiv Polytechnics'» with the aim of organising massive innovation activity to intensify the development, production and commercialisation of high-technology products on the internal and external markets, to increase state and local budget revenues, and to accelerate innovative development of the economy of Ukraine. The law was actually of pilot significance for elaboration of normative rules and principles of science park operations.

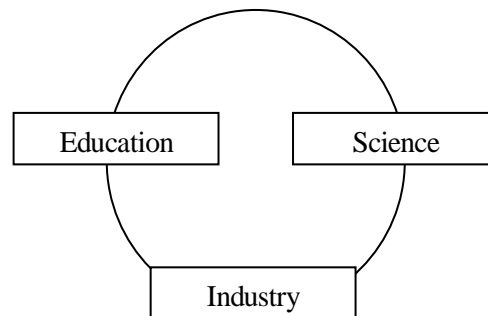


Figure 5.5. Territorial-functional structure of a science park

The creation of the science park «Kyiv Polytechnics» attracted 55 foreign and local technology companies, almost 100 research groups and laboratories of Kyiv Polytechnical Institute producing competitive know-how, more than 20 engineering faculties offering high-quality personnel for companies, several venture and investment funds, which if necessary invest in start-up projects. The science park attracts ever more students that not only work for its companies, but also create their own small enterprises for commercialization of their own inventions and projects within the framework of the scientific park's business incubator.<sup>66</sup>

During 2005–2010, the participants of the technopark «Kyiv Polytechnics» commercialised more than 150 new products and technologies. Among the achievements of the park one can mention

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<sup>66</sup> Dzerkalo Tyzhnya. (2011, No.2). Research universities as centres for innovative development of the country. [Interview of the Rector of National Technical University «Kyiv Politechnical Institute» to journalist of Dzerkalo Tyzhnya]. Retrieved from <http://www.dt.ua/articles/73711#article> (in Ukrainian).

the following: a complex of computer technology instruments that protect users from indirect electromagnetic radiation; strategic planning and systemic management of sustainable development of megacities of Ukraine; energy-efficient Eco-house with complex use of renewable and alternative energy sources; technology of production of new dietary foods of sanative and preventive action; micro-satellite; technologies of low-cost titanium production, etc.

Organization and activity of the park is realized in accordance with three main elements of the «triple helix» model, which was developed in 1996 by Henry Etzkowitz, professor of Stanford and Edinburgh universities, and includes such elements as universities, business and the state.<sup>67</sup> In the case of the science park «Kyiv Polytechnics», only two elements are actively involved – the university and the manufacturing sector (American companies Netcracker, USPolytech, EPAMSystems; «European Institute of Innovation Technologies» (London), German Research Center «Eurocentrum»; Ukrainian companies – Group DF, «Datagroup», «Technologies of nature», «UAVIA», Kherson enterprise «Sudmash», concern «Ukrpozhservis», Kyiv enterprise «Meridian» and others). In its turn, **the state did not show any interest in the work of the country's first science park.** Although it could place orders for creation of high technologies in such critical areas, as resource and energy saving; biotechnology for food and agricultural sectors; information systems for effective management of different parts of society, etc. Such a policy could have contributed to reduction of the respective high-technology imports to Ukraine.

The network of science parks is currently expanding in Ukraine, but their influence on formation of innovation economy cannot yet be realised. In order to track the processes of science

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<sup>67</sup> Dezhina, I. G., Kiseleva, V. V. (2007). State, science and business in the innovation system of Russia. Moscow, Institut Ekonomiki Perekhodnogo Perioda (in Russian).



parks' functioning, it would be feasible to delineate their network. Scientific literature describes the following science parks:<sup>68</sup>

- «Airspace Innovation Technologies» created in 2010 under the auspices of the EU project «Support to science-intensive and innovative enterprises and technology transfer in Ukraine» on the basis of National Aviation University (Kyiv);

- «Kyiv T. Shevchenko University», which was created at the end of 2010 by the research institutions of the National Academy of Sciences of Ukraine (Institute of Archeology; Institute of Bioorganic Chemistry and Petrochemistry; O. Palladin Biochemistry Institute; Institute of Geochemistry and Mineralogy named after M. P. Semenkov; E. O. Paton Electric Welding Institute; Institute of History of Ukraine; Institute of Metal Physics named after G. Kurdyumov; Institute of Microbiology and Virology named after D. K. Zabolotny; Institute of Organic Chemistry, Institute of Applied Physics; Institute of Materials Science named I. M. Frantsevich; Institute of Information Registration; Institute of Theoretical Physics named after M. M. Bogolyubov) and higher educational establishments of the IVth level of accreditation (Kyiv National T. Shevchenko University and National University of Food Technologies);

- «AGROECO» created on the basis of the Institute of Agroecology and Environmental Economics of the National Academy of Agrarian Sciences of Ukraine (IAEE NAAS of Ukraine) with the participation of the Institute of Agroecology and Environmental Economics NAAS of Ukraine; Institute of Sugar Beet and Energy Crops NAAS of Ukraine; Institute of Hydraulic Engineering and Land Reclamation NAAS of Ukraine; National Scientific Centre «Institute of Agriculture» NAAS of Ukraine; National Scientific Centre «Institute of Mechanization and Electrification of Agriculture» NAAS of Ukraine; Institute of Agricultural Microbiology NAAS of Ukraine; National Scientific Centre «Institute of Agrarian Economy» NAAS of

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<sup>68</sup> Lyashenko, V. I., Zemlyankin, A. I., Pidorycheva, I. Yu., Berezhna, T. F. (2012). Perspectives of science parks development as elements of small innovative business infrastructure in Ukraine. *Visnyk Ekonomichnoyi Nauky Ukrayiny*, p. 104–105. (in Ukrainian).

Ukraine; Darnytsya center for assistance of investments, innovation and high technology; Kyiv Regional State Administration; National University of Bioresources and Environmental Science of Ukraine.

It is worth to admit that the use of different terminology in creation and operation of science parks can generate complications in their legal functioning. In particular, some technoparks cannot qualify for privileges, which are granted to natural persons participating in associations that were given the legal status of «science parks»<sup>69</sup>. Among them are such technoparks as «Kyiv Polytechnics»; «Textile» based at Kherson National Technical University; «Agro-technopark» at the National University of Food Technologies, and «Yavoriv» at National University «Lviv Polytechnics».

The dynamic development of technoparks in the EU encouraged comprehensive best-practice studies of their functioning. Worthy of attention is the experience of Poland, where, thanks to support provided by structural funds of the EU, a tendency has started since 2004 towards dynamic development of technoparks within the framework of operational programmes. In view of the heterogeneity and ambivalence of these processes, a consortium of companies F5 Konsalting Sp. z. o. o. performed a study of a group of technoparks titled «Organising and performing benchmarking of technoparks in Poland»<sup>70</sup> to the order of the Polish Agency for Enterprise Development and Polish Trade and Industry Chamber of Advanced Technologies (Polska Izba Gospodarcza Zaawansowanych Technologii). Eighteen technopark agreed to undergo benchmarking analysis, one of which refused upon acquaintance with project documentation.

The mentioned research was instrumental in development of basic recommendations. The Polish experience proves that it is necessary to increase the efficiency and productivity of the available as-

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<sup>69</sup> Nemets, L., Hryshchenko, N. (2010). On the issue of technoparks' functioning in the world and in Ukraine. *Chasopys Socialno-Ekonomichnoyi Geografii*, 8, p. 62 (in Ukrainian).

<sup>70</sup> Benchmarking of technoparks in Poland. General Report. Retrieved from [http://www.pi.gov.pl/PARPFfiles/file/OIB/Benchmarking\\_parkow/Benchmarking\\_of\\_TP\\_Report\\_vRussian.pdf](http://www.pi.gov.pl/PARPFfiles/file/OIB/Benchmarking_parkow/Benchmarking_of_TP_Report_vRussian.pdf). (in Russian).

sets by increasing the quantity and quality of services and rationalising the expenditures. The field of contacts available to technoparks allows them to increase cooperation with enterprises, science institutions and financial organisations, thus achieving an additional number of patents and implemented innovations, as well as developing their tangible and intangible resources. The performed benchmarking analysis also corroborated the feasibility of increasing the number of spin-offs (new, autonomous enterprises created by an employee or employees of a parent company or a scientific organisation) and start-ups (newly created academic enterprises created by students or university graduates). Researchers' estimates also show that residents attract insufficient venture and greenfield investments for their development.

The «choke point» of the Polish economy is a small number of patents and trademarks protected by the law. The development of partner marketing is very promising in view of the evolving knowledge economy. The EU stepped in with an initiative to create a single educational and scientific space in Europe. In 1995, the European Commission founded a network of Innovation Relay Centres (IRC), the aim of which was to create a European platform for stimulating international technology transfer and provision of services in the sphere of innovations. Similar organisations are already in place in Ukraine. In particular, several centres for technology transfer were set up in Ukraine, in particular on the basis of «Nauka» Concern and at national technical universities.

Besides, the Ukrainian Network for Technology Transfer and National Technology Transfer Network are in place, which were designed according to the methodology and model of the European Network of Relay Centres<sup>71</sup>. Today, there is high need to perform benchmarking analyses of the centres for technology transfer in order to develop recommendations aimed at facilitating the development and implementation of innovations.

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<sup>71</sup> National Technology Transfer Network. [Official web-site]. Retrieved from <http://www.nttn.org.ua/?idm=1&lng=1>. (in Ukrainian).

### 5.3. European vectors of regional innovation development

By forming the association with the EU and its member states, Ukraine receives a unique opportunity to adopt the European Strategy «Europe 2020» as a reference for its own development. This concerns both the goals and the means of their achievement. The main goal of the European Union for the second decade of the twenty-first century is to regain the positions lost in result of the crisis. «Europe needs to get back on track. Then it must stay on track»<sup>72</sup>, said J. M. Barroso in the preamble to the European Commission’s report on the European strategy for 2010–2020. Titled «European Strategy for Smart, Sustainable and Inclusive growth», this strategy determines five priority directions for activity of the European countries: employment; research and innovations; climate change and power engineering; education; poverty reduction.

Figure 5.6 shows that Europe can go beyond the pre-crisis development trajectory only if it follows the path of sustainable growth.

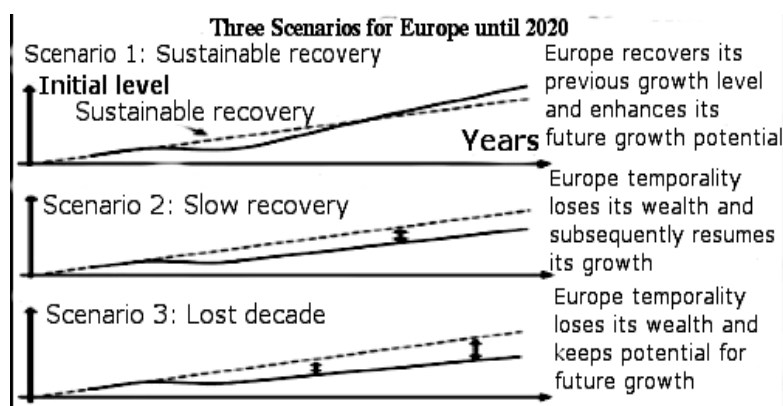


Figure 5.6. Scenarios for successful realisation of the European strategy<sup>73</sup>

Slow recovery will generate small base for economic growth, leading to lower growth trajectory than that of the pre-crisis period.

<sup>72</sup> Europe 2020: a European strategy for smart, sustainable and inclusive growth, p. 3. Retrieved from <http://ec.europa.eu/research/era/docs/en/investing-in-research-european-commission-europe-2020-2010.pdf>.

<sup>73</sup> Source: Europe 2020: a European strategy for smart, sustainable and inclusive growth, p. 7. Retrieved from <http://ec.europa.eu/research/era/docs/en/investing-in-research-european-commission-europe-2020-2010.pdf>.

The third scenario predicts that Europe will gradually lose its wealth and potential for future growth. Thus, the strategy of sustainable recovery is an ideology, which should lay the basis for economic policy in the countries exiting from the crisis. Ukraine should adopt it as an important component in the development of its new strategy of socio-economic development.

In view of its geopolitical and geo-economic positions, Ukraine can use networked forms of industrial organisation to reach smart, sustainable and inclusive growth, starting with rejuvenation of the military-industrial complex. The general approach stipulates that the main task is to give a «second wind» to those science and research, education, test, and manufacturing enterprises, which perform the development, production and armament of military and special-purpose machines, ammunition, and armament. At the same time, new enterprises should be created in order for the country to have a closed loop in production of competitive armour.

The priority for clustering in the defence industry is preconditioned by the need to defend the country in the conditions of the «hybrid war» which has started in 2014, as well as satisfies the task of supplying military forces in the current and future periods. However, this is not the only argument, as the majority of modern weaponry can also be acquired through importing. No less important is the fact that the economy of armament intensifies science and technology research, using it in production processes primarily to satisfy the needs of the army, and only later for the civilian sphere.

The solution to the problem of achieving leadership positions in global economic space can be found in the area of knowledge-based development. The political-economy debate names it «taking a «decent» place in the global competitive environment». In the conditions when Ukraine is forced to fight the unannounced war on its territory and when traditional trade flows with the Russian Federation are disturbed, it is primarily necessary to settle the problems of business reorientation from the countries of the Customs Union, es-

pecially the Russian Federation, towards the markets of other countries. In this respect, the Association Agreement between the EU and Ukraine creates favourable institutional conditions by opening access to European markets.

It is beyond doubt that European customers will have a demand for Ukrainian products of agriculture, food industry, and eventually power engineering. Today, these are the most successful Ukrainian products on the world market. In the future, Ukraine should develop a strategy for promoting itself on the markets for innovation products.

For the foreign markets, «of particular interest are new industries, since the future is theirs. IT, education and healthcare can give rise to inward medical tourism in Ukraine. We can already have such a complex product of Ukrainian land: not only chernozem, but people as well». <sup>74</sup>

The orientation of the cluster component of Ukrainian reforms towards knowledge economy is the exclusive condition for Ukraine to achieve real Europeanization, – which is understood as adoption of modern values of the world civilisation, – in the observable future. The concentration of effort on generation of knowledge and formation of new technological processes and industries is the most complicated but also the least risky way towards leadership, since economic growth based on production of traditional and standardised products brings no global recognition. African and especially Asian countries are good examples of this practice. Thus, in 2005–2012, world exports grew at an average growth rate of 3.5%, whereas North America had the growth rate of 3.5%, Central and Southern America – 1.5%, Europe – 2%, CIS countries – 3%, Asia – 7% (China 11%, India 10%, Japan 2.5%), Australia – 3.0%. <sup>75</sup>

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<sup>74</sup> Pavlo Sheremeta held a meeting with representatives of economic services at local authorities. [Press service of the Ministry for Economic Development]. (April 14, 2014). Retrieved from <http://www.me.gov.ua/News/Detail?title=PavloSheremetaProvivNaraduZPredstavnikamiEkonomichnikhSluzhbmistsevikhOrganivVladi>. (in Ukrainian).

<sup>75</sup> WTO: International trade statistics 2013. Retrieved from [http://www.wto.org/english/res\\_e/statis\\_e/its2013\\_e/its13\\_world\\_trade\\_dev\\_e.htm](http://www.wto.org/english/res_e/statis_e/its2013_e/its13_world_trade_dev_e.htm).

Ukraine, being the country that integrates with the European economic space, should select the European Union as its main strategic benchmark. It is quite understandable that government authorities and businesses should primarily study thoroughly the processes of knowledge economy development that take place in Europe.

The reformers of Ukraine should take into account the fact that out of the five key goals of the EU Strategy until 2020, the EU set its target share of expenditures on research and development in the GDP at 3% (for the EU-27 countries). In 2011, this indicator was 2.03%, while in 2010 it was 2.01%. These indicators (average for the EU-27 as a whole) are lower than R&D expenditures in many developed countries. Thus, according to recent statistical data published by the State Statistical Service of Ukraine in 2013, the share of R&D expenditures was 2.01% in Japan, 4.0% in South Korea, and 2.87% in the USA (2009), but higher than in China (1.7% in 2009). Among the countries of EU-27, the R&D intensity exceeded the strategic target indicator of the USA only in Finland (3.78%), Sweden (3.37%) and Denmark (3.09%). In such states as Germany, Austria, Slovenia, Estonia, France, the Netherlands, and Belgium, the R&D intensity was above the average for the EU-27, but still lower than the target value of 3% (2.84%, 2.75%, 2.47%, 2.38%, 2.25%, 2.04%, and 2.04% respectively)<sup>76</sup>.

R&D intensity in Ukraine is at a much lower level than in the developed countries and countries of the EU. In 2012, it accounted for 0.75% of the GDP, even though in 1990 it reached 2.3%.<sup>77</sup>

Irrespective of the fact that in 2011 such a level was characteristic of some post-socialist countries (Slovakia, Latvia, Bulgaria, and Roma

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<sup>76</sup> State Statistical Service of Ukraine. (2013). Science and innovation activity in Ukraine. [Compilation of Statistics]. Kyiv, pp. 150, 153. Retrieved from <http://www.ukrstat.gov.ua/>. (in Ukrainian).

<sup>77</sup> On compliance with legislature on the development of science and technology potential and innovation activity in Ukraine. (2004). [Decree of the Supreme Council of Ukraine]. Vidomosti Verkhovnoyi Rady Ukrayiny, 43-44, p. 494. Retrieved from <http://zakon4.rada.gov.ua/laws/show/1786-15>. (in Ukrainian).

nia), as well as Malta and Cyprus,<sup>78</sup> the existing state of scientific research and development creates no basis for the development that would be adequate to geo-economic and geostrategic place of Ukraine in Europe. To tell the truth, compared with less populated countries of the EU, Ukraine has an advantage in terms of absolute R&D expenditures, which reach \$2.4 bn. However, the circle of EU countries whose R&D expenditures are lower than in Ukraine is limited to Latvia, Bulgaria, Estonia, Lithuania, Slovakia, and Romania.

On the whole, in terms of R&D expenditures, Ukraine is by far the biggest laggard compared to other European countries. The countries which rank closest to Ukraine include the Czech Republic (whose R&D expenditures exceed those of Ukraine by the factor of 2.2), Poland (2.4), Denmark (2.6), Finland (3), Belgium (3.5), Austria (4), and the Netherlands (5.9). At the same time, France spends 20.1 and Germany spends 37.2 times more on R&D than does Ukraine.

The analysis of R&D expenditures in Ukraine allows making at least two conclusions. First of all, the collapse of the country's economy due to creation of an oligarchic model in the conditions of weak state governance and exploitation of assets inherited from the Soviet times by private business people that were in power or in management of state enterprises, has brought the country close to being recognized as underdeveloped country. Second, in spite of numerous problems that have accumulated in the economy of the country, the government should adopt a programme for accelerated R&D development. The European target indicator of 3% of the GDP should lay its basis. If the existing level of expenditures is increased by 0.25 points every year, by 2020 Ukraine could reach the level stipulated in the strategy «Europe – 2020».

Achieving the 3%-level of R&D intensity will make the share of R&D expenditures in the GDP equal to \$10 bn. This will place

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<sup>78</sup> State Statistical Service of Ukraine. (2013). Science and innovation activity in Ukraine. [Compilation of Statistics]. Kyiv, p. 150. Retrieved from <http://www.ukrstat.gov.ua/>. (in Ukrainian).



Ukraine at one level with such developed countries as Austria, Belgium, Denmark, the Netherlands, Finland, and Sweden in terms of both total financing volumes and per capita expenditures.

Finally, this strategy can transform Ukraine within a short period of time into a knowledge-based economy and remove the burden of oligarchic economic model. Truly speaking, there will be no alternative for the oligarchs other than to get involved in the processes of transforming national economy into the knowledge economy or gradually fade away. The capital, which has initially been accumulated by collecting rent on corruption, must be channelled to qualitatively new industries, productions and products. Otherwise, the power of oligarchic capital and of the post-Soviet type of business people<sup>79</sup> will be lost and used by new entrepreneurs. The focus is on the new generation of business managers which is being formed today and, most probably, will be developing in the near future based on the chain reaction principle.

The idea of transforming Ukrainian economy into the knowledge economy can be successfully realised only if investment is undertaken in the R&D, which, first, will be of industrial importance and second, will contribute to forming a modern innovative national economic complex. For that, it would be feasible to adopt the German experience of harmonised implementation of the innovation strategy by the government and private businesses with the help of «competence networks» (Kompetenznetze), which are regional associations generating new knowledge based on concentration of industrial competences (Figure 5.7). Competence networks are created in order to search for new science and technology solutions involving target financing from the government. The grant application procedure is based on open competitive selection of projects prepared by regional consortia comprising academic institutions and private companies.

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<sup>79</sup> On the whole, huge doubts arise as to the capability of the majority of oligarchic capitalists to successfully operate in a new way without regulatory capture. It is highly probable they will undergo the processes of natural transformation, some kind of «dispossession of the kurkuls», with the help of the market.

German specialists view the current stage of innovation policy development as a stage of transition. It is characterised by increased demands on the integrity of science and technology developments, which is expressed in attention paid to aspects of external environment, healthcare, transport, etc.<sup>80</sup> In the new conditions, one could also use the idea of using cluster forms in building the innovation capacity of enterprises, the practice which proved worthwhile in the world economy.

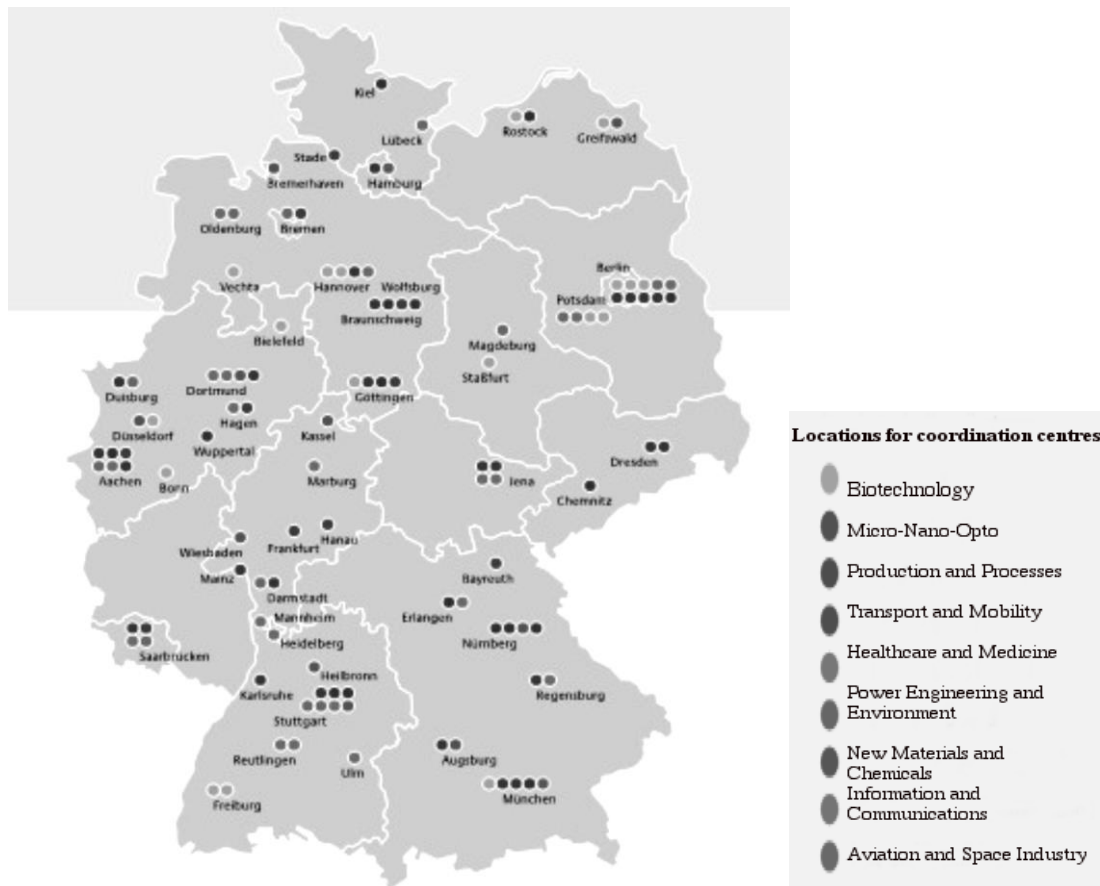


Figure 5.7. Location of coordination centres of competence networks in Germany<sup>81</sup>

However, the approach of M. Porter to geographic concentration of companies and research institutions within one industry or technological field has been extended. New approaches give preference to

<sup>80</sup> Evaluation: Instrumente für eine bessere Politikgestaltung. [Jahresbericht 2013]. (2014). Berlin. Institut für Innovation und Technik, p. 11. Hantsch S., Kergel H., Lämmer-Gamp T., Meier zu Köcker, G., Nerger, M. (2013). Cluster Management Excellence in Germany – German clusters in comparison with European peers. Berlin: Institut für Innovation und Technik, p. 37.

<sup>81</sup> Source: Initiative «Kompetenznetze Deutschland»: Die innovativsten Netzwerke im Überblick. [Jahresbericht-iit-2013]. Retrieved from KO-NETZ-2007\_11\_endfassung.pdf.

creation of networks of industrial and scientific structures, which adopt cluster principles in their organisation and management without necessarily binding them to a certain territory. They have an overarching, that is, territorial and institutional autonomy and encompass the groundbreaking developmental issues<sup>82</sup>. In Europe, such networks are called «cluster initiatives», which are financed by cluster support programmes.

The overall framework for creating competence networks can be described on the example of the first federal initiative titled Bio-Regio programme ([www.bioregio-stern.de](http://www.bioregio-stern.de)). It was directed at new clusters, which have not yet grown stiff from long-term «fixating» on traditional approaches. Seventeen applications were submitted for programme participation, of which only three were selected. The winners received €90 mn upfront, with the level of support later increasing by another €1 bn thanks to excellent results of programme realisation.

No less important in the competence network initiative is the assessment system for submitted applications, since winners of the competitions are awarded considerable amounts of research and development financing. Poland, for example, can attract €100 mn for five years to cluster support only from the all-European Fund of the Operational Programme for Innovation Economy (Program Operacyjnego Innowacyjna Gospodarka)<sup>83</sup>.

It is also worth to assign an important role to small and medium business in the structure of cooperation relations. The mechanism of its inclusion in realisation of national projects should be flexible and provide support both from the bottom-up and from the top-down. On the side of the government, it will be necessary to focus on adoption of a legislative package ensuring real possibilities for and encouraging the creation and functioning of clusters in the system of competence networks.

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<sup>82</sup> Hantsch S., Kergel H., Lämmer- Gamp T., Meier zu Köcker, G., Nerger, M. (2013). Cluster Management Excellence in Germany – German clusters in comparison with European peers. Berlin: Institut für Innovation und Technik, p. 14; Evaluation: Instrumente für eine bessere Politikgestaltung. [Jahresbericht 2013]. (2014). Berlin. Institut für Innovation und Technik

<sup>83</sup> Rekomendacje dla Polski / Portal innowacji klastry. Retrived from [http://www.pi.gov.pl/klastry/chapter\\_86438.asp](http://www.pi.gov.pl/klastry/chapter_86438.asp).

#### 5.4. Development of cluster systems in the Visegrad countries

The formation of a cluster network in the Visegrad countries is based on two approaches: as a result of national and regional initiatives and spontaneously, that is, without state support. However, within each approach certain national peculiarities must be singled out. Even when examining the experience of the Czech Republic and Slovakia, which had a common historical development, researchers set out their own conceptual approaches. In particular, Slovakia has a milder support for cluster initiatives in comparison with the Czech Republic<sup>84</sup>.

In the Czech Republic, the Operational Program Enterprise and Innovation (OPEI) and the COOPERATION-Clusters (2007-2013) program focused on the development of innovative potential, the use of new technologies on the basis of cooperation between industrial enterprises and research institutions in the long term. (CzechInvest, 2013). At the same time, participation in international projects was foreseen (for example, ERA-NET, CORNET). After the OPEI, the Operational Program for Enterprise & Innovations for Competitiveness 2014-2020 (OPEIC) was implemented, with the COOPERATIONCLUSTERS program. In order to receive funding for cluster initiatives, the applicant had to prove that the result of the activity would be innovation, to improve the quality of R&D infrastructure and to establish links between enterprises and R&D institutions.

The formation and development of cluster forms in Slovakia largely occurred without special regulatory materials. Only in 2009, the Slovak Innovation and Energy Agency identified 7 clusters in the country in the course of a study. Thus, the system of financial support for clusters from the state budget was created. The Scheme de

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<sup>84</sup> Pavelková1 D/, Martina Sopoligová V., Bednář P. Impact of Cluster Policies on Structure and Management of Cluster Organisations in Czechia and Slovakia.-. URL: [http://www.ramp.ase.ro/en/\\_data/files/articole/2017/29-01.pdf](http://www.ramp.ase.ro/en/_data/files/articole/2017/29-01.pdf)

minimis devoted to industrial COs was launched only in 2013. Table 5.1 and Table 5.2 show statistics on funds allocated in the Czech Republic and Slovakia to promote cluster activities. Czech Republic has relatively large funds dedicated to COs in comparison with the support of COs in Slovakia.

Table 5.1. Review of cluster-supported operational programs in Czechia (status in 2016)

Operational programme	Cluster supporting programme	Allocation (in 1000 EUR)	Min.-max. budget per project (in 1000 EUR)	No. of application	No. of supported cluster projects	Total amount of support (in 1000 EUR)
OP Industry & Enterprise	CLUSTERS, Mapping	17390	8-40	67	41	1260
2004-2006	CLUSTERS, Establishment & Development		120-1800	18	12	7921
OP Enterprise & Innovation 2007-2013	COOPERATION Clusters 1st call	40000	120-1800	30	17	22910
	COOPERATION Clusters 2nd call	30000	120-3200	20	22	28533
	COOPERATION 28 535 N Clusters 2nd call-prolongation	20000	240-2400	43		
OP Enterprise & Innovation for Competitiveness 2014-2020	COOPERATION Clusters 1st call	18505	19-593	52	n/a	n/a
	COOPERATION Clusters 2nd call	1480	19-555	3	n/a	n/a
	COOPERATION Clusters 3rd call	15185	19-1480		n/a	n/a
Total amount					92	60 626

Source: Pavelková1 D., Martina Sopoligová V., Bednář P. Impact of Cluster Policies on Structure and Management of Cluster Organisations in Czechia and Slovakia.-. URL: [http://www.ramp.ase.ro/en/\\_data/files/articole/2017/29-01.pdf](http://www.ramp.ase.ro/en/_data/files/articole/2017/29-01.pdf)

In the early 2000s, the national government of Hungary actively supported the development of corporate cooperation and clusters. The basis of such a policy was the idea of forming a strategy for regional economic development using cluster forms. To this end, in the spring of 2001 in the Pannonia region there were several competitive sectors of the economy with a large number of employees and a significant proportion of small and medium-sized enterprises, grouped around several large companies. This model is called "bottom-up"<sup>85</sup>.

Table 5.2. Review of programmes supported COs from the state budget in Slovakia (status in 2016)

Cluster supporting programme	Allocation (in 1000 EUR) planned	Min.-max. budget per project (in 1000 EUR)	No. of applications	No. of supported cluster projects	Total amount of support (in 1000 EUR)
Subsidy for scientific and technical services 2012	250	20 - 80	n/a	5	250
Regional Operational Programme (2007/2013)	86	136 - 285	n/a	4	86
The Scheme of aid de minimis DM 3/2013	200	10 - 40	n/a	6	161
The Scheme of aid de minimis DM 18/2014	113	10 - 20	7	7	128
The Scheme of aid de minimis DM 18/2014, app. forf.y. 2015	130	10 - 20	12	7	130
The Scheme of aid de minimis DM 18/2014, app. forf.y. 2016	280	10 - 50	10	7	242
Total amount				36	997

<sup>85</sup>OECD Science, Technology and Industry Outlook 2014. URL: [https://read.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-industry-outlook-2014\\_sti\\_outlook-2014-en#page91](https://read.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-industry-outlook-2014_sti_outlook-2014-en#page91)

Source: Pavelková1 D/, Martina Sopoligová V.,Bednář P. Impact of Cluster Policies on Structure and Management of Cluster Organisations in Czechia and Slovakia.-. URL: [http://www.ramp.ase.ro/en/\\_data/files/articole/2017/29-01.pdf](http://www.ramp.ase.ro/en/_data/files/articole/2017/29-01.pdf)

The first cluster in the Central and Eastern Europe region is believed to be PANAC (Pannon Automotive Cluster), which was created using such a model. It consists of four major automakers, several small businesses, three large suppliers, one university, two banks and several organizations able to provide consulting services, including the Regional Development Council.

During 2007-2013, Hungary developed a three-tier cluster program that included: start-up cooperation, establishment of clusters; developing clusters (at least 1 year track record); accredited clusters. In awarding grants priority was given to accredited clusters that met the following criteria: significant impact on employment; outstanding depth of cooperation between members; national or cross-border impact of cooperation among members; international market entry potential, and significant innovation potential.

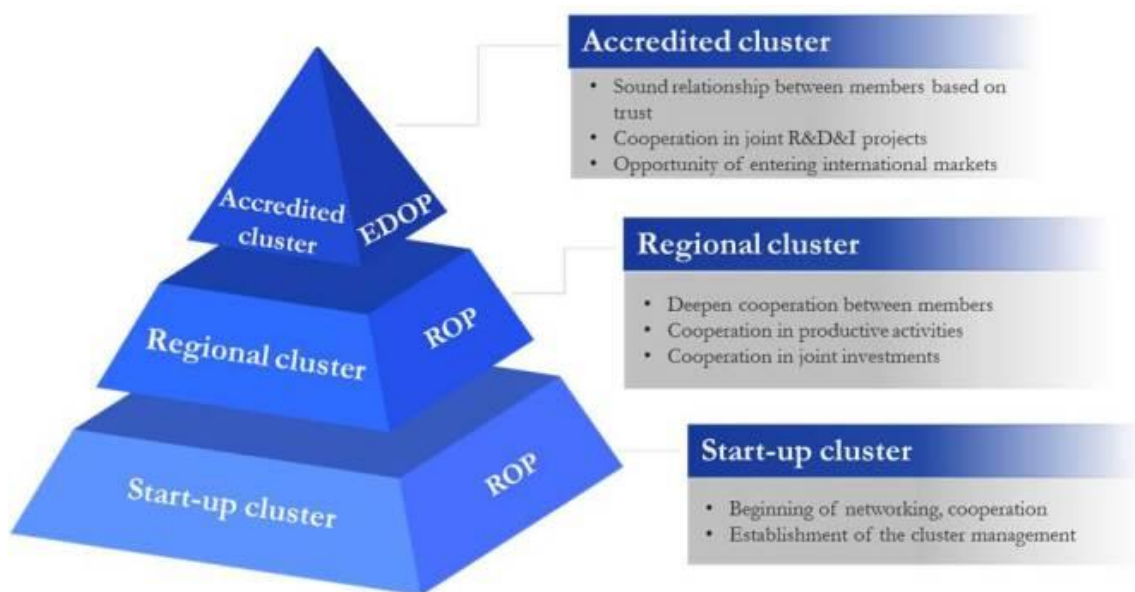


Figure 5.8. Three-level cluster development model 2007-13 in Hungary

Source: Evolution of cluster policy in Hungary - 2000-2020. URL: <https://www.clustercollaboration.eu/news/evolution-cluster-policy-hungary-2000-2020>

In 2013, 34 clusters had the Accredited Cluster label. Altogether, they had 1261 members of, which there were 1140 business organizations. The 34 clusters employed around 117,000 people and their aggregate income was over 9,500 billion HUF, one quarter of which came from export activities.

The 3-level cluster development model (Figure 5.8) and the available calls for clusters and for their members led to an explosion of the number of Hungarian clusters in the 2007-13 period (Figure 5.9).

The generalization of the 2007-2013 experience allowed Hungary to develop a new cluster strategy for 2014-2020. It was taken into account that only one third of 176 running and developing clusters could successfully use the received grants. The other clusters did not perform any real activities after the project implementation period. In the new environment, great importance is attached to international cooperation.



Figure 5.9. Supported Hungarian clusters 2007-2013

Source: Evolution of cluster policy in Hungary - 2000-2020. URL: <https://www.clustercollaboration.eu/news/evolution-cluster-policy-hungary-2000-2020>



Hungary's cluster policy till 2020 is determined by the following four components: cluster concentration, internationally visible clusters; implementation of successful and market-oriented projects; increasing international presence; strengthening regional clusters. New approaches to the preparation and implementation of a cluster policy developed by the Ministry of National Economy is presented on Figure 5.10.

Notably, Hungary is better than many OECD countries in the level of development of university science and R&D, in particular in the field of networking. There are extensive links between innovative firms, state research institutions and higher education institutions in the country. However, such connections are unevenly spread among the individual regions.

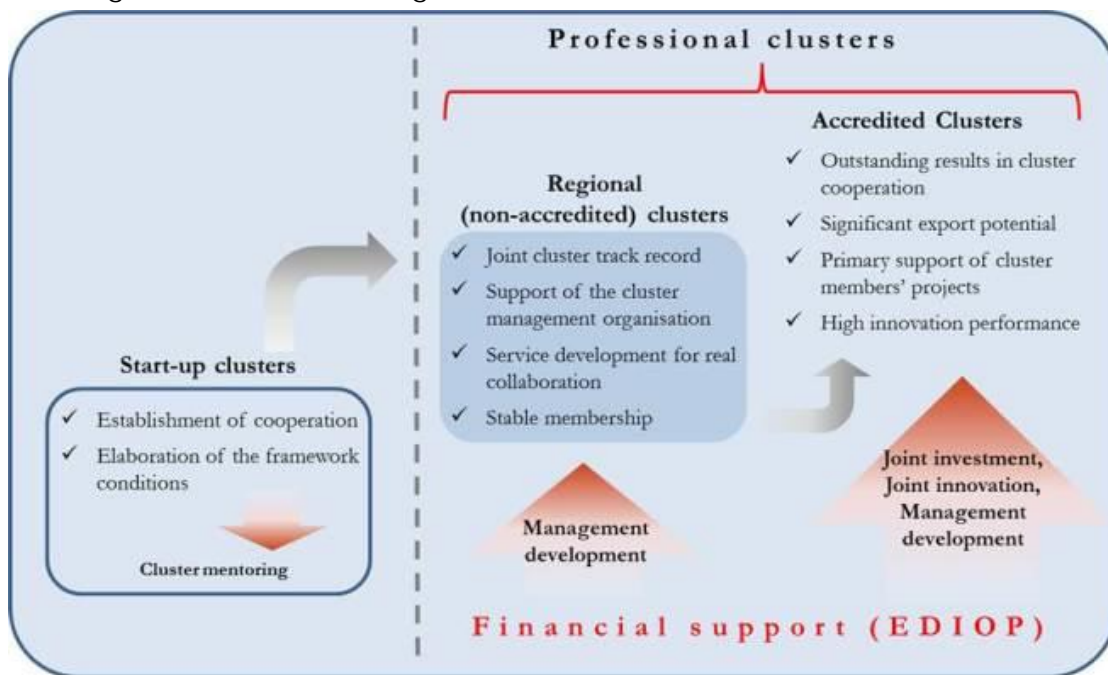


Figure 5.10. Cluster development model 2014-2020

Source: Evolution of cluster policy in Hungary - 2000-2020. URL: <https://www.clustercollaboration.eu/news/evolution-cluster-policy-hungary-2000-2020>

In general, Hungarian experience indicates that innovation policy is impossible without strengthening the links between inter-sectoral structures and research institutions at different levels. Such

connections should be more varied than merely traditional cooperation between industry and science in research and development. During the creation of cluster networks, the strengthening of cooperation between production and science can be done through building institutions that will specialize on tasks that are in line with the development of a cluster organization..

The formation and development of the Polish cluster policy coincided with the accession to the European Union and relied on the Lisbon Strategy to ensure the highest competitiveness by 2010, based on the construction of a knowledge-based economy. At the same time, in 2004 it became clear that such a task could not be solved by all EU members simultaneously with equal success. In these conditions, the emphasis was placed on increasing the role of local authorities in innovative development, in particular through creating conditions for cluster-based initiatives.

The first public references pointing to the need of cluster development in Poland were made in the programmes named *Sectoral Operational Programme. Increase of Economic Competitiveness for 2004- 2006* and *Operational Programme. Human Resources Development for 2004-2006*. The emphasis on supporting industrial cluster development and ensuring the conditions for network cooperation was included in the *Directions of improving economic innovation for 2007-2013*<sup>86</sup>. This provided an opportunity for the intensive development of Polish clusters in 2006-2008 and the formalization of a series of structures in the 2009-2013, as part of the Polish cluster policy. The period featured provision of large financial resources for the creation and development of cluster initiatives, both in terms of national and regional programmes<sup>87</sup>.

The development of cluster systems in Poland for 2014-2020 is characterized by an emphasis on supporting innovation and

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<sup>86</sup> Ejsmont, A., Klemens, B., Moczala, A., (2016), *Klasy - kooperujące i konkurujące organizacje sieciowe*, Wyd. Texter, Warszawa. – P. 24

<sup>87</sup> Dyba, W., (2016), 'Współpraca i przepływ wiedzy w organizacjach klastrowych w \_wietle polityki klastrowej UE - przykład badania relacji ł\_cz\_cych przedsi\_biorstwa z wykorzystaniem analizy sieciowej', [w:] *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego*, nr 30(1). – S. 130.

knowledge transfer, as clusters constitute a natural field for this process on a large scale. At the same time, the causes of the failures of the past were eliminated. They consisted of the following: lack of management, **lack of the cluster members' activity**, **insufficient trust** or cooperation among members.

In addition, there were frequent cases where cluster were created in order to receive financial support, after which they ceased to function actively<sup>88</sup>. At the same time, in the process of evolution, the goal was to exemplify the successful clusters and mechanisms for their functioning. Accordingly, programs of financial and organizational support for clusters were developed with the focus on so-called key clusters<sup>89</sup>.

In 2015 a selection system for the Key National Clusters with a material importance for the national economy was introduced and characterized by high international competitiveness. Using this approach, 16 Key National Clusters were selected in 2015 -2016. These included: Aviation Valley Cluster, Interizon Cluster Metal Processing Cluster, Mazowieckie ICT Cluster, Polish Aluminium Cluster, Eastern Construction Engineering Cluster, "Green Chemistry" Zachodniopomorskie Chemical Cluster. The key national clusters in Poland that have to confirm their status in 2018 and 2019 are presented in Table 5.3.

The peculiarity of the Polish model for using clusters in the economic development of the country is that they are part of the Plan towards Responsible Development adopted in February 2016. According to this plan, in 2017, the Council of Ministers of the Republic of Poland adopted Strategy towards Responsible Development until 2020 (with a perspective until 2030), two of the three

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<sup>88</sup> Klemens B. Cluster development policy in Poland. – URL: [https://www.researchgate.net/profile/Brygida\\_Klemens/publication/326058593\\_Cluster\\_development\\_policy\\_in\\_Poland/links/5b35cbb90f7e9b0df5d8441f/Cluster-development-policy-in-Poland.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Brygida_Klemens/publication/326058593_Cluster_development_policy_in_Poland/links/5b35cbb90f7e9b0df5d8441f/Cluster-development-policy-in-Poland.pdf?origin=publication_detail)

<sup>89</sup> Heffner, K., Klemens, B., (2016), 'Finansowanie struktur klastrowych w perspektywie 2014-2020 -wnioski dla klastrów na obszarach wiejskich', [w:] *Studia Obszarów Wiejskich*, tom 41, PAN IGIPZ, PTG, Warszawa. – S. 93

objectives of which deem clusters as a tool for the strategy's execution (Table 5.4).

Table 5.3. Key National Clusters in Poland - edition I and II

I competition for the KNC status (status valid until 30.09.2018):		II competition for the KNC status (status valid until 31.10.2019):	
Cluster name:	Discipline:	Cluster name:	Discipline:
Aviation Valley Cluster	aviation	Waste Economy and Recycling Cluster	environmental protection, renewable energy sources, recycling
Metal Processing Cluster	production of machinery, devices, tools	LifeScience Kraków Cluster	medicine, biomedicine, medical services, rehabilitation
Mazowieckie ICT Cluster	ICT	North-South Logistics and Transport Cluster	transport, logistics
Polish Aluminium Cluster	casting, metal processing	Sustainable Infrastructure Cluster	smart, sustainable construction engineering, energysaving and passive
Eastern Construction Engineering Cluster	construction engineering	MedSilesia - Silesian Medical Products Network	medicine, biomedicine, medical services, rehabilitation
“Green Chemistry” Zachodniopomorskie Chemical Cluster	chemistry	NUTRIBIOMED Cluster	LifeScience, food, pharmacy, cosmetology
		Silesian Aviation Cluster	aviation
		Eastern ICT Cluster	ICT

**Source:** Klemens B. Cluster development policy in Poland. – URL: [https://www.researchgate.net/profile/Brygida\\_Klemens/publication/326058593\\_Cluster\\_development\\_policy\\_in\\_Poland/links/5b35cbb90f7e9b0df5d8441f/Cluster-development-policy-in-Poland.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Brygida_Klemens/publication/326058593_Cluster_development_policy_in_Poland/links/5b35cbb90f7e9b0df5d8441f/Cluster-development-policy-in-Poland.pdf?origin=publication_detail)

The development of creative industries is an important area of clustering in the Visegrad countries. Their foundation is individual creativity, skills and talent in aspects that have a potential for wealth and job creation through the generation and exploitation of intellectual property. Creative industries emerged from the relationship between media and cultural sectors (Jeffcutt, 2000; Boggs, 2009).

The identification of creative and cultural clusters is based on the fact that they can specialize in these activities: music, print media

– books and press, object d’art – glass, ceramics, cutlery, crafts, jewellery, film, broadcast media, the “finer” arts – literary, visual and performance arts, architecture, design, advertising, games software, new media, libraries, museums, heritage, and photography<sup>90</sup>.

Given the lack of statistical accounting, some characteristics of the development of creative clusters in the Visegrad countries can be obtained from the results of the sociological research conducted by the researchers Magdalena Bialic-Davendra, Pavel Bednář, Lukáš Danko, Jana Matošková at Tomas Bata University in Zlín<sup>91</sup>.

Table 5.4. Importance of clusters in the entries of the Strategy towards Responsible Development until 2020

Area of intervention	Purpose of area of intervention	Directions of intervention	Actions/tools
SPECIFIC PURPOSE OF STRATEGY: Constant economic growth based more and more on knowledge, data and organisational perfection			
Reindustrialisation	Improvement of the industry’s ability to cope with global competition	Development of modern industry	- Key National Clusters, - direct foreign investments clustering and networking the activity of enterprises
Development of innovative companies	Improvement of the innovation of enterprises on the domestic market and foreign markets	Mobilisation of private capital towards conducting R&D&I activity, improvement of the market potential of the conducted research and the degree of commercialisation of R&D work results	- increase in the topical focus of expenditure towards R&D&I based on National Smart Specialisations and Key National Clusters; - Animation of cooperation between the sectors of science and business as well as establishment of strategic business partnerships (broader use of the KNCs potential, among others)
		Stimulation of external demand for innovation by improving company abilities and eagerness to export and place direct investments abroad	- use of the structures of Key National Clusters as a platform for developing the export abilities of small and medium enterprises (KNC internationalisation)

<sup>90</sup> Bialic-Davendra M., Bednář P., Danko L., Matošková J., Creative Clusters in Visegrad Countries: Factors Conditioning Cluster Establishment and Development. P URL: [https://publikace.k.utb.cz/bitstream/handle/10563/1006560/Fulltext\\_1006560.pdf?sequence=1&isAllowed=y](https://publikace.k.utb.cz/bitstream/handle/10563/1006560/Fulltext_1006560.pdf?sequence=1&isAllowed=y)

<sup>91</sup> Ibid

Small and medium enterprises	Sector structural transformations New activity and cooperation forms	New activity models	Supporting existing and construction of new institutions integrating agricultural and food industry entrepreneurs and producers, especially of organisational structures supporting the investment, trade and innovative potential of entities (including clusters).
		Supporting local entrepreneurship drivers	- Supporting local and regional business environment institutions - cluster initiatives, professional services for agricultural holdings and entrepreneurs, also improvement of their accessibility to entrepreneurs from rural areas; - Supporting network cooperation between business environment institutions, entrepreneur
Expansion abroad	Improving the internationalisation of the Polish economy; Increase in the export of technologically advanced goods	Modernisation of the export offer	Integration of the state policy in terms of export promotion with activities aimed at the development of research, innovation and the cluster policy. “Internationalisation of Key National Clusters” strategic project.
SPECIFIC PURPOSE OF STRATEGY: Socially sensitive and territorially sustainable development			
Territorially sustainable development	Sustainable development of the nation, using individual potentials of particular territories; Strengthening regional competitive advantages; Improvement of the effectiveness and quality of incorporation of territorially-focused policies	Strengthening regional investment systems	Strengthening of pro-export oriented companies and economic clusters

Source: Klemens B. Cluster development policy in Poland. – URL: [https://www.researchgate.net/profile/Brygida\\_Klemens/publication/326058593\\_Cluster\\_development\\_policy\\_in\\_Poland/links/5b35cbb90f7e9b0df5d8441f/Cluster-development-policy-in-Poland.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Brygida_Klemens/publication/326058593_Cluster_development_policy_in_Poland/links/5b35cbb90f7e9b0df5d8441f/Cluster-development-policy-in-Poland.pdf?origin=publication_detail)

It was limited to Poland and the Czech Republic, as in Hungary and Slovakia at the time of the study the emergence of such clusters had only begun (Table 5.5).

Table 5.5. Creative clusters in Hungary and Poland (in 2013)

Cluster name	Country	City	Type of city	Year of establishment	Number of members	Creative sector	Level of cluster activity
Clusters which participated in the study							
Hungarian Mobility and Multimedia Cluster* <sup>a</sup>	Hungary	Budapest	M	2007	56	Multimedia	Bronze label
Wamp	Hungary	Budapest	M	2006	23	Design	Moderate
Creative Communication Cluster*	Poland	Warsaw	M	2011	25	Multimedia	Bronze label
Creative Cluster Locomotiva	Poland	Bielsko-Biala	NM	2011	50	Culture	Low
INRET Cluster	Poland	Cracow	M	2009	23	Culture	Low
PIOT Cluster	Poland	Lodz	NM	2010	43	Design	Low
Leszno Printing and Advertising Cluster*	Poland	Leszno	NM	2008	24	Printing and advertising	Bronze label
Silesian Design Cluster	Poland	Cieszyn	NM	2005	31	Design	Moderate
Clusters which did not participate in the study							
3D Creative Innovation Cluster	Hungary	Szeged	NM	2011	n/a	Multimedia	Failure
Av cluster	Hungary	Pecs	NM	2010	17	Multimedia	Low
Central Hungarian Printing Cluster	Hungary	Budapest	M	2001?	n/a	Printing and advertising	Low

Culture Creative Industry Cluster	Hungary	Pecs	NM	2007	32	Culture	Moderate
Creative Media Innovation Cluster	Hungary	Budapest	M	2008	30	Multimedia	Low
Advertising Cooperative	Poland	Poznan	M	2011	15	Printing and advertising	Low
BizArt	Poland	Elblag	NM	2011	16	Culture	Low
Creativro	Poland	Wroclaw	M	2011	21	Multimedia	Low
European Game Centre Cluster	Poland	Cracow	M	2008	20	Multimedia	Moderate
Furniture Design Cluster of Wielkopolska	Poland	Poznan	M	2011	16	Design	Moderate
LabDesign	Poland	Kielce	NM	2013	12	Design	Low
Lublin Cultural Cluster	Poland	Lublin	NM	2007	n/a	Culture	Low
Malopolska Graphic Cluster	Poland	Cracow	M	2012	20	Printing and advertising	Moderate
Mazovian Printing and Advertising Cluster	Poland	Warsaw	M	2007	19	Printing and advertising	Bronze label
Media Cluster	Poland	Lodz	NM	2007	59	Multimedia	Low
MultiCluster	Poland	Nowy Sacz	NM	2006	54	Multimedia	Bronze label
Printing Cluster ITTP	Poland	Cracow	M	2008	18	Printing and advertising	Low

*Note:* a \*Cluster appointed a “bronze label” under ECEI, assessed by ESCA. b M - Metropolitan, NM - Non-metropolitan.

Source: Bialic-Davendra1 M., Bednář P., Danko L., Matošková J. Creative Clusters in Visegrad Countries: Factors Conditioning Cluster Establishment and Development. P URL: [https://publikace.k.utb.cz/bitstream/handle/10563/1006560/Fulltext\\_1006560.pdf?sequence=1&isAllowed=y](https://publikace.k.utb.cz/bitstream/handle/10563/1006560/Fulltext_1006560.pdf?sequence=1&isAllowed=y)



The research showed that the highest number (9, i.e., 36%) of clusters was found in the area of multimedia, followed by clusters in the printing and advertising sectors (24%), culture/arts sector (20%), and design (20%).

Despite the fact that the first creative cluster was created in 2001, the real development of creative clusters started in 2005, after the EU accession. In Poland, 2011 was the peak of creative clusters emergence. As for Hungary, its specificity is to quantitatively reduce typical clusters through the formation of creative clusters in the metropolitan city of Budapest. 4 out of 7 clusters dominate in the Hungarian metropolitan city of Budapest. This is due to its population as well as its characteristic as the headquarters of the national economy. In Poland, on the contrary, these types of clusters are more spatially dispersed and are located in two west-east corridors, i.e., Wrocław - Cracow and Poznan - Lodz - Warsaw - Lublin, concentrated mostly in populated areas. Cracow has the highest number of creative clusters in Poland (4). Polish and Hungarian cultural clusters mainly locate in non-metropolitan cities, where their development is supported by public and non-profit organisations.

The peculiarity of creative clusters is different approaches to profitability. Non-profit clusters operating mainly in the cultural and artistic sector for government orders are highly dependent on state subsidies. The field of multimedia, printing and advertising are regulated by the market principles. In the design sector, creative cluster members focus on large businesses, low subsidies, small-scale and tailor-made production, where employees usually have flexible assignments.

The emerging trend in the development of a creative clusters network suggests that their creation is based on the "bottom-up" model. Cases of cluster creation following the "top-down" model are not frequent. As a rule, they arise as a result of cooperation with government organizations and foreign partners. One can also define the subordination of the motivational priorities for making creative clusters. The main ones are: the need for a creative search network,

combining competencies for R&D, use of legislation to grant cluster organizations subsidies, and other forms of financing activities and lobbying. At the same time, the further development of creative clusters calls for a creation of a mechanism for removing barriers, especially those that gain typopulmonary distribution. The barriers in the V4 countries include insufficient exchange of internal information and practical experience, lack of public interest in creative clusters, and administrative obstacles.

### 5.5. Clusters in the process of shaping a new Ukrainian economy

Using the experience of German competence networks in the Ukrainian conditions requires that priorities for science and technology policy be set. Even such a developed country as Germany cannot afford allocating financial support «to order»; thence, Ukraine should be especially careful with channelling funds to directions that can hamper the formation of the knowledge economy.

It would be logical to build this process according to the scheme «priorities – human and material providing – financing». However, in the modern conditions, this process should be reverse. The scarcest resource in Ukraine is finance; thence, it is primarily important to define the necessary and possible volumes of investment for competence networks, and in view of this to substantiate the priorities.

The priorities in the science and technology sphere of Ukraine should first be determined as alternatives for consideration. Recently, they have been indirectly discussed in connection with the forced re-orientation of export flows from the Russian market to the European market. They can be arranged in the following order:

1. Agriculture and food industry;
2. Medicine and medical tourism;
3. Machine- and ship-building;
4. Aviation and space industry.

It should be noted that fundamental research in agriculture, food industry, medicine, and medical tourism can have one inter-industry programme. At the intersection of these sciences, one should always expect the appearance of the most perspective directions for applied research, which will be adjusted to know-how in manufacturing and practical medicine. The respective methodology can lay the basis for the strategy of building a competence network, which would encompass machine- and ship-building and aviation and space industry. Such approaches allow to achieve maximum results with minimum expenses.

It is worth to anticipate that in the case if the competence network initiative is launched, there are high chances that a temptation may arise to monopolise access to finance based on the region's existing industry position. Thus, in machine- and ship-building, Dnipropetrovsk, Kharkiv, Mykolayiv, Odessa, and Kyiv might claim to have exclusive rights to shape the industry's science and technology policy. In order to prevent this, it is worth to choose a new geographic location for the coordination centre of the competence network, for example, the centre of the country. This will make it easier to attract new human resources than it is when the industry's largest enterprises and organisations are located in traditional places.

As shown in Figure 5.11, it is reasonable to select Central Ukraine as a place for the coordination centre of the competence network for agriculture and food industry. This could be South of Vinnytsya oblast, where the climate is similar to that in almost all regions of the country. The Centre for medicine and medical tourism could be Western Ukraine, which has comprehensive conditions for scientific research in the sphere of medicine and creation of new medical facilities based on using the factors of nature and climate. For coordination of new approaches in the machine- and ship-building industries, it is reasonable to consider Kyiv oblast (not the city of Kyiv), or the angle made by South of Kyiv oblast – North of Khmelnytskyi oblast – South-West of Cherkasy oblast. They are located close to leading science and technology institutions (Kyiv, Zhytomyr,

Poltava, Kharkiv, Dnipropetrovsk, Chernihiv). Locating the coordination centre of the competence network for aviation and space industries in the Land of Kirovohrad is feasible in view of the economic and political factors. This region is relatively far from the borders and is not densely populated, which contributes to better security of commercial secrets. Moreover, the Flight Academy of the National Aviation University is located in Kirovohrad oblast.



Figure 5.11. Locations for coordination centres of competence networks in Ukraine (project)

The creation of centres for competence networks will provide for development of their human and material assets, which will be responsible for key scientific problems and involve best clusters towards achievement of the end objective. With time, they will lay the basis for national science and industrial corporations with global strategic goals. Certain distance of the centre from main oblast cities will allow to avoid corruption in selection of personnel and to facilitate the settlement of everyday problems. For that, it will be necessary to allot territories for construction and development of scientific-industrial and housing complexes.

The prototype of such an approach can be found in the policy of cluster support in Great Britain, where the North East Process Industry Cluster (NEPIC) in the chemical industry was created in 2005 in Teesside as one of the most successful clusters in North-Eastern England.

The cluster turned out to be rather successful, especially in what concerns attracting new investment. Its staff was mostly local because chemical industry is a place for successful careers.

NEPIC evolved as a result of two regional cluster initiatives: Pharmaceutical & Speciality (P&S) Cluster and the Teesside Chemical Initiative (TCI). Their members came to conclusion that pharmaceutical and chemical industries are so interconnected that can generate mutual integration benefits.

**The area of cluster's activity includes pharmaceuticals; biotechnology; chemicals, polymers, rubber, petrochemicals and other products.** In these industries, the company has become a driving power of regional and national economic development. Companies of the cluster contribute nearly one billion pounds sterling annually to regional GDP (25%) and account for 20% of regional employment. In terms of output, petrochemical industry in Teesside ranks first in Great Britain and second in Europe.

The formation of new competence networks under the policy of transforming the national economy into the knowledge economy requires a systemic approach to selection of participants. It should be based on taking into consideration the socio-economic tendencies that are inherent to the country within the respective period in its development. It is especially important to perform the assessment of legal providing for development of long-term complimentary cooperation, which would make it impossible to break the network, that is, to exit from the system of important links, which can slow down or even hamper the achievement of the goal. The operation horizon for all project participants should be global so that to guarantee the high competitiveness of final products.

There is no need to prove that generation of new knowledge requires that research and education institutions be included in competence networks. However, in Ukraine, the mechanism of functioning of the former was «conserved» in the first half of the 20<sup>th</sup> century. The new Law on Higher Education approved by the Verkhovna Rada of Ukraine in June 2014 brings it closer to European standards. However, the search for a new organisation model for science and education activity cannot stop at this point. On the contrary, the approved law creates certain grounds for a new search process. At the same time, one should take into account the experience of granting new functions to academic centres, which developed after the World War II in the USA, in particular the pioneering experiments in organisation of business contacts performed by Massachusetts Institute of Technology (MIT) and Stanford University.

The commercialisation of scientific research becomes no less important for the new approaches than are science and education. According to Matusyak<sup>92</sup>, the task of higher educational institutions in the era of globalisation is to transform themselves into international centres for entrepreneurship and technology transfer so that to raise the quality of education and scientific research. Academic transformation is a specific combination of the ideas proposed by Humboldt (unity of education and scientific research) and Shumpeter (creative destruction).

The commercialisation of scientific activity should not be dependent only upon subsidies and various grants. No less effective can be the cooperation mediated by institutions specialising in organising direct contacts between science and business. Such practice is developing in Great Britain, where the Agency for Regional Development developed 9 programmes on creation of the Centres for Industrial Collaboration (CICs). They promote the adjustment of regional science and technology resources to the needs of entrepreneurs by facilitating their access to the most recent achievements of science

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<sup>92</sup> Matusiak, K. (2006). (Ed.). *Innowacje i Transfer Technologii – Słownik Pojęć*. Warszawa, Polska Agencja Rozwoju Przedsiębiorczości, p. 313.

and technology. The realisation of the programme allowed expanding the tasks of local universities towards marketing, market research, elaboration of pricing policy, negotiating, and contracting. The orientation of universities towards needs of the business is underscored by the fact that CICs locate their offices in the direct vicinity of universities' degree-granting departments.

The fact that enterprises cooperating with the CICs do not receive any grants made companies understand the value of research financed from their own funds. Apart from that, the inclusion in the CICs network enabled access to world-class scientists and industrial modernisation with installation of top-quality equipment. It is important that the orderer of research managed to ensure its implementation within the agreed time and within the specified budget<sup>93</sup>. Thus, in Yorkshire & the Humber region, the CICs initiatives resulted in growth of sales, expansion of access to new markets and business development for hundreds of enterprises. CICs cooperated in performing 1700 projects together with enterprises for the total value of £40 mn, preserving 1300 jobs in the region<sup>94</sup>.

Development of the state cluster programme must clearly determine the level at which it is aimed. Since cluster approach is primarily a managerial technique of integrating small and middle enterprises, it should be fundamentally targeted at raising the competitiveness of the region, where cluster participants are located. It is through the prism of the region that the influence of clustering on the development of industry and the state should be analysed.

The development of cluster policy has a multi-functional governance structure and depends on the profile of cluster's management subjects. It is feasible to differentiate clusters according to star methodology. This system was developed by the experts of the European Cluster Observatory by analogy with hotel classification. It has

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<sup>93</sup> Sztern, Ł. (2013). Współpraca nauki z biznesem. Formy i narzędzia wspierania. In: Współpraca nauki i biznesu. Doświadczenia i dobre praktyki wybranych projektów w ramach Programu Operacyjnego Innowacyjna Gospodarka na lata 2007–2013.

<sup>94</sup> European Commission: Centres for Industrial Collaboration. Retrieved from [https://www.google.com.ua/?gws\\_rd=ssl#q=Centres+for+Industrial+Collaboration+](https://www.google.com.ua/?gws_rd=ssl#q=Centres+for+Industrial+Collaboration+).

four grades – zero, one, two, and three stars, which are assigned to clusters based on indicators of size, specialization and location quotient.

In view of the peculiarities of cluster organisation, the priority directions within the cluster policy framework should be the orientation towards market challenges and leadership in the technology and product aspects, entrepreneurial activity; marketing and PR, internal communications; application of advances in science, generation of new knowledge, innovations, and unique value.



## CHAPTER 6.

# **Growth poles and axes in Visegrad Group countries**

*Ihor LISHCHYNSKYY*

### 6.1. Concept of development poles and axes and its implementation in Europe

The concept of spatial poles and axes runs back to 1950s and currently it is getting a new spark of interest (after few decades of mixed success implementation in some states). The main idea of the concept is that economic growth is not uniform in different territories but is concentrated in so-called poles, and then it spreads via diverse channels (axes) through the other regions.

The theory of growth poles (which later evolved into the concept of development poles) was launched in the 1950's by F. Perroux<sup>95</sup>. It is based on the idea of a leading role of the sectoral structure of the economy and, first of all, of the leading industries that create new goods and services. Centers and areas of economic space, in which the enterprises of leading industries are located, become poles, which attract the factors of production providing the most effective operation arranging.

Later, J. Bourdeville<sup>96</sup> showed that not only the association of leading industry enterprises, but also specific territories that function as generators of innovation and progress, can be considered as

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<sup>95</sup> Perroux F. Note sur la notion de poles croissance (Translated by Mette Monsted, 1974). Economic Appliquee. – Vol. 1, 2. – 1955. – p. 307-320.

<sup>96</sup> Bourdeville J. Problems of Regional Economic Planning. – Edinburg: Edinburg University Press, 1968.

growth poles. This statement has now got a new development after a number of R. Florida's publications dedicated to the idea of creative class.

Thus, the growth poles can be interpreted as a geographical agglomeration of economic activity or as a set of cities that have a complex of developed production.

H. Lasuen<sup>97</sup> elaborated the concept of economic growth poles:

1. The growth pole could be the regional complex of enterprises that form the export of the region, but not just the leading industry;

2. The system of poles and each of them in particular are expanding at the expense of impulses generated by nationwide demand, which is transmitted through the export sector of the region;

3. The impulse of growth is transferred to secondary industries, as well as to the geographical periphery, due to market relations between enterprises.

The theory of growth poles was further developed by P. Pottier's vision on the axis of development<sup>98</sup>. The main idea was that the territories located between the growth poles and provide transport connection, receive additional incentives for development, due to increased traffic flows, the spread of innovation, infrastructure development. Therefore, they turn into the axis (corridors) of development, which together with the poles of growth determine the spatial framework of the region.

Currently the idea of growth poles has a great number of relative concepts dedicated to different aspect of uneven spatial development. Perhaps the most integrated modern paradigm that explains the emergence of the growth poles is the concept of a "new economic geography", which emerged in 1991 after P. Krugman's papers<sup>99</sup>. Hundreds of other publications in this field had formed the concep-

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<sup>97</sup> Lasuen J. On Growth Poles. *Urban Studies*. – 1969. – Vol. 6. – No. 2. – p. 137-161.

<sup>98</sup> Pottier P. Axes de communication et developpement economique. *Revue Economique*. – 1963. – Vol. 14. – s. 58-132.

<sup>99</sup> Krugman P. *Geography and trade*. – Cambridge: MIT Press, 1991; Krugman P. Increasing returns and economic geography. *Journal of Political Economy*. – 1991. – Vol. 99. – p. 483-499.



the Mediterranean area on the Valencia-Genoa section) was gradually supplemented by ideas about Europe as “A House with Seven Apartments” or as “A Bunch of Grapes” / “Green Grape”. The visual representation of the mentioned poles of the international level (mega-poles) is illustrated in Figure 6.2.

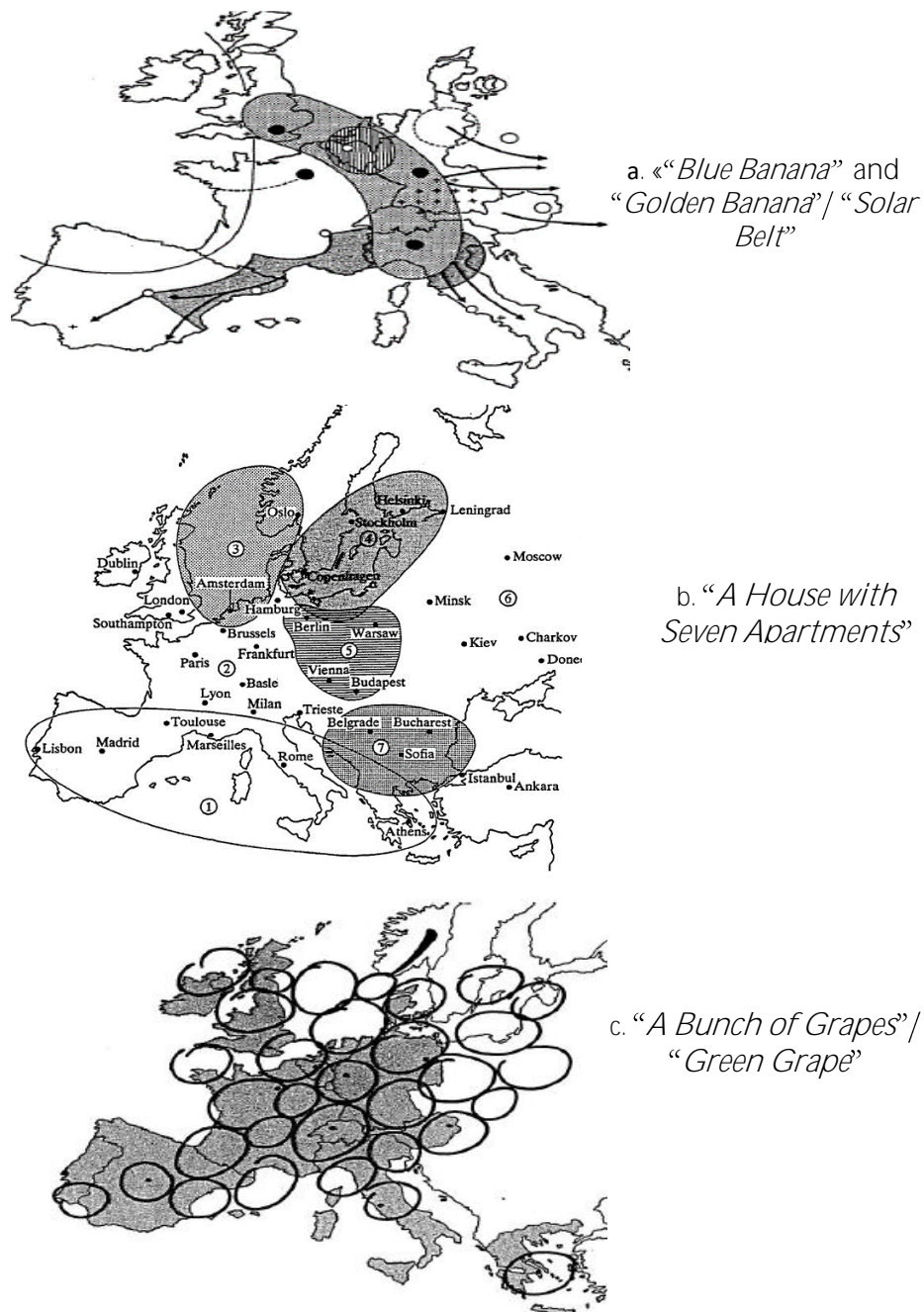
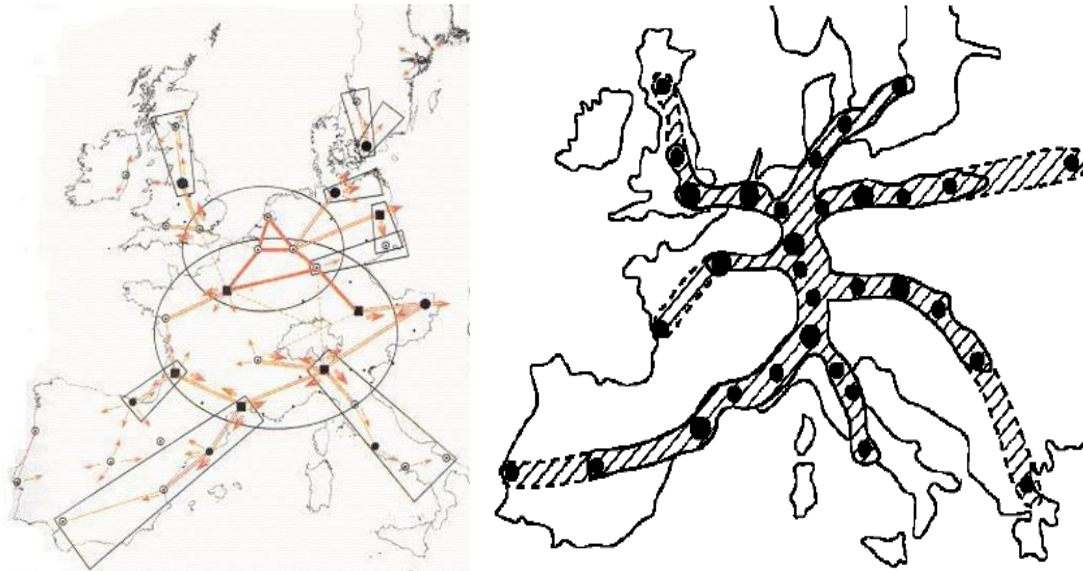


Figure 6.2. Variations of visual interpretation of spatial growth mega-poles in Europe in the early 1990's

Source: Metaxas T. and Tsavdaridou M. From ‘Blue Banana’ to ‘Red Octopus’ and the development of Eastern and Southern European cities: Warsaw and Lisbon

Later representations about the structure and dynamics of the outermost regions in Europe are depicted in the form of "Armatura Funzionale" or "Red Octopus" (Figure 6.3).



a. "Armatura Funzionale"

b. "Red Octopus"

Figure 6.3. Illustrations of modern mega-poles in Europe

Source: Metaxas T. and Tsavdaridou M. From 'Blue Banana' to 'Red Octopus' and the development of Eastern and Southern European cities: Warsaw and Lisbon

The dynamics of polarized development in Europe is not unambiguous. Thus, the experts of the European Spatial Planning Observation Network (ESPON) are considering three scenarios for the development of mega-pole growth in the European Economic Area: Trend Scenario (for the unchanging main current drivers), Competitiveness-Oriented Scenario (polarization enhancement) and Cohesive-Oriented Scenario (support for cooperation and territorial balance). Figure 6.4 shows the main changes in the territorial distribution of Pan-European regions of intensive development.

The territories studied in this monograph are either already on or have prerequisites for the "tentacles" of spatial development (Poland, Czech Republic, Slovakia) (Hungary - as an extension of the axis of Vienna-Bratislava-Budapest-Belgrade to Sofia and Ukraine-as the development of the axis of Berlin-Poznan-Warsaw-Kyiv or branching axis to Transcarpathia).

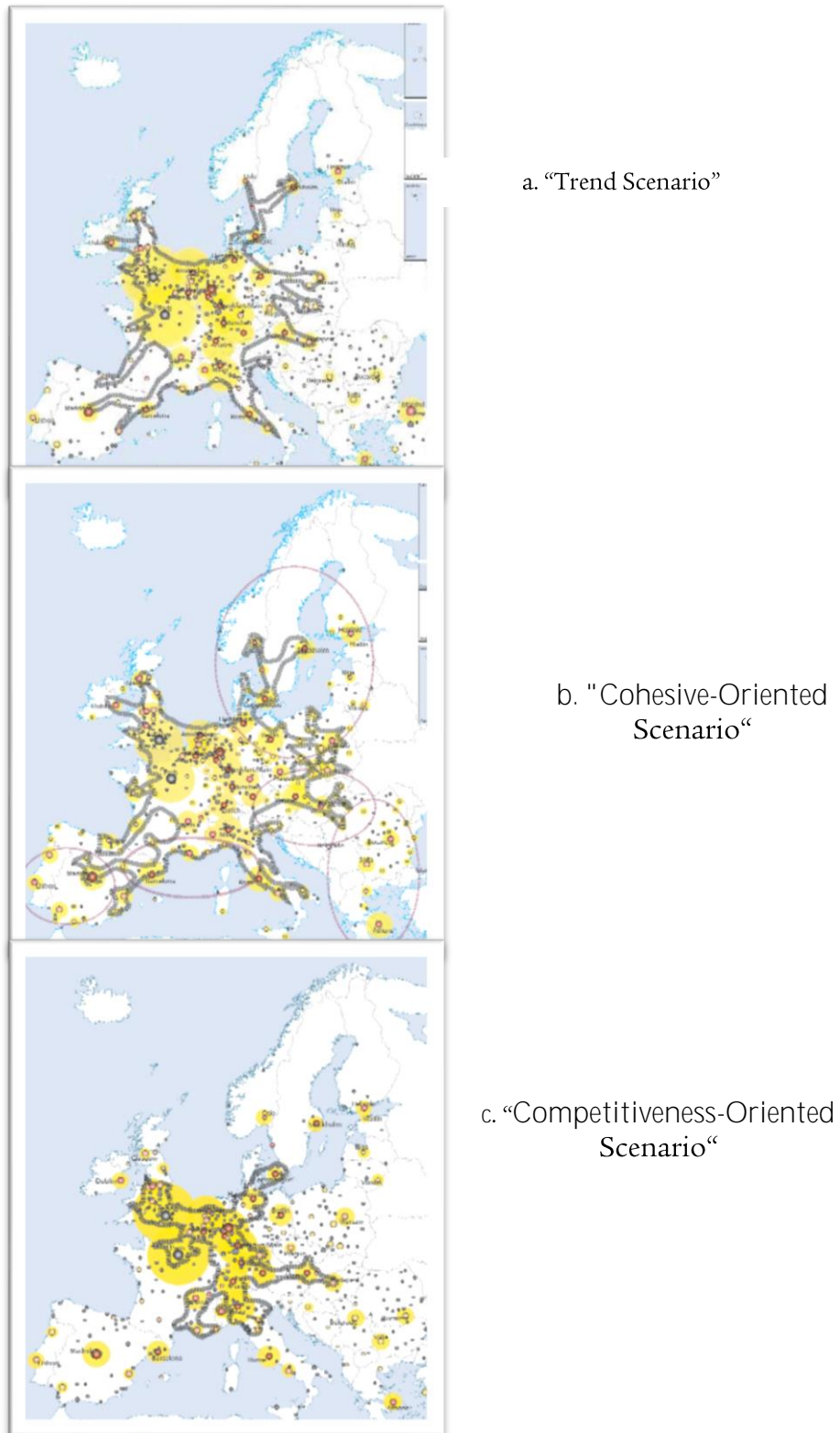


Figure 6.4. Scenarios of the spatial structure of Europe up to 2030

Source: ESPON Project 3.2. Scenarios on the territorial future of Europe

The countries of the Visegrad Group (Poland, Czech Republic, Slovakia, Hungary), as well as Bulgaria and Romania (V4 + 2), distinguish as a separate priority the formation and support of the poles and axes of development in their territories, laying the principle of polarization in the national spatial development programs. In addition, in order to harmonize national initiatives, the Common Spatial Development Strategy of the V4+2 Countries was formed.

## 6.2. **Strategy of development poles'** forming in Poland

The vision of the territorial development of the Republic of Poland is enshrined in the National Concept of Spatial Development of 2030 (pol. KPZK 2030<sup>100</sup>), which was approved in 2011.

The concept of KPZK vision is based on the five desired characteristics of the Polish socio-economic space: competitiveness and innovation, internal cohesion, biological richness and diversity, as well as security and spatial order.

The main milestone of the Concept was the formation of a polycentric metropolitan network, which was considered as the development poles, as well as cities of regional significance.

According to the KPZK 2030, the metropolitan network includes:

Metropolies:

- of pan-European significance: the capital of Warsaw;
- of national significance: Silesian agglomeration, Krakow, Lodz, TriCity (the metropolitan area of Gdansk, Sopot and Gdynia), Poznan, Wroclaw, Bydgoszcz, Torun, Szczecin, Lublin;
- cities that perform some functions of metropolitan areas: Bialystok, Rzeszow, Zelona Gora, Kielce, Olsztyn, Opole, Gorja Wielkopolski.

Main functional axes;

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<sup>100</sup> Koncepcja Przestrzennego Zagospodarowania Kraju 2030



Regional cities: Plock, Wloclawek, Koszalin, Slavsk, Elblag, Grudziondz, Bielsko-Biala, Rybnik, Czestochowa, Legnica, Walbrzych, Tarnow, Radom, Kalisz, Ostrow-Wielkopolski;

Additional functional axes.

Comparison of the structure of poles and axes of development of Poland in 2010 with the project of 2030 is shown in Figure 6.5.

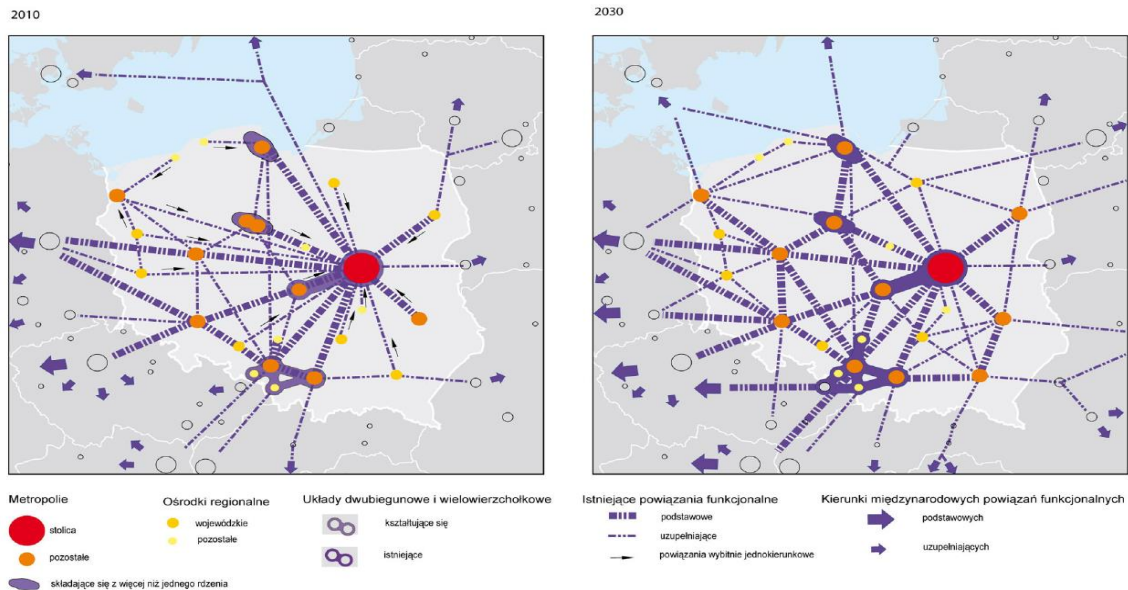


Figure 6.5. Comparison of the structure of development poles and axes of Poland in 2010 with the project of 2030

The peculiarity of the spatial development of Poland is an important role assigned to special economic zones (SEZs), which often become the poles of growth. However, it should be noted that SEZs are not a panacea in themselves and can be developed in both positive and negative scenarios. Thus, the zones can potentially become a platform for the emergence of adverse effects that not only become triggers of economic growth but, on the contrary, can prevent or generate negative processes that intensify each other (a phenomenon of negative synergy).

A negative scenario is likely when the state aid is not adjusted due to the size and specifics of the given region/settlement and ac-



according to the structure of private investment in the SEZ. This leads to excessive exploitation or misappropriation of resources, rather than to stimulate development in a viable way. Therefore, it is important to identify the mechanisms that either trigger a positive scenario (becoming the pole of growth), or activate a negative counter-productivity scenario and lead to the formation of an "anti-growth pole".

In Poland, special economic zones are created in 356 municipalities, representing 14% of all municipalities in Poland (level LAU2 of NUTS). Their total area does not exceed 12 000 hectares. Despite the fact that the SEZ phenomenon has gained considerable popularity among politicians and economists, these territories have a high geographical variance and, accordingly, they significantly affect the local economy only in limited cases, and their role for regional economies is almost unheard of.

A recent study by a group of researchers<sup>101</sup> demonstrated the interrelation between the activity of SEZ and the economic development of municipalities. The analysis considered the indicators of cumulative investment and the number of jobs (including newly created) in the SEZ, the number of business entities per thousand people, the share of taxes to the municipal budget and other indicators.

According to the study, special economic zones have shown significant importance for economic development in only 27 of the 356 municipalities. However, of these 27 municipalities, only 8 had the

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<sup>101</sup> Godlewska-Majkowska, H., Komor, A., & Typa, M. (2016). Special Economic Zones as Growth and Anti-growth Poles as Exemplified by Polish Regions. *Entrepreneurial Business and Economics Review*, 4(4), 189.

characteristics of the growth pole (that is, they were the centers of a polarized region that showed a much higher growth rate than the rest of the region), while the other 19 municipalities were characterized by unstable economic development. The growth poles were mainly located in southwest Poland (Polkowice, Legnickie Pole, Nowogrodzic, Jelcz-Laskowice) and sporadically in other regions (Glogow Malopolska, Nowe Skalmierzyce, Gliwice, Ksawerów). The anti-poles of growth were not detected in Poland.

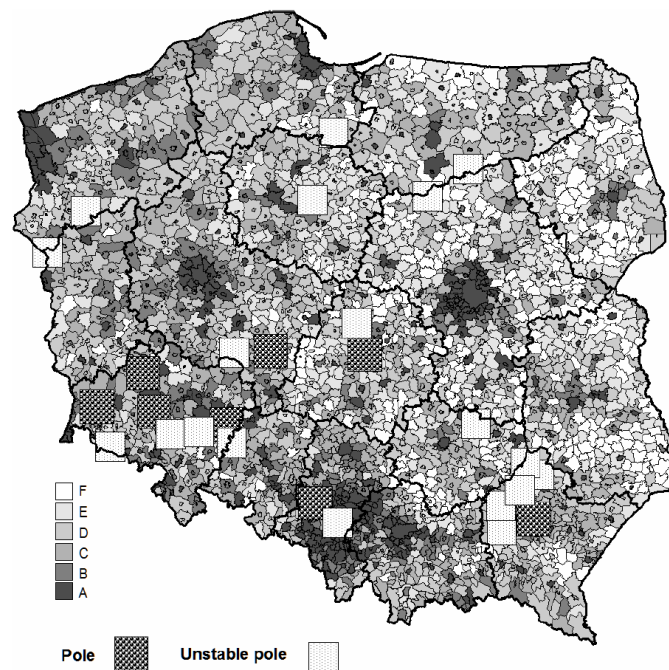


Figure 6.6. Distribution of regional poles in Poland in comparison with investment attractiveness of municipalities

Source: Godlewska-Majkowska, H., Komor, A., & Typa, M. (2016). Special Economic Zones as Growth and Anti-growth Poles as Exemplified by Polish Regions. *Entrepreneurial Business and Economics Review*, 4(4), 189

The mapping of the placement of growth poles and the expansion of investment activity did not reveal a direct relationship (Figure 6.6). The location of the growth poles in the southern part of the country is mainly due to the proliferation of the automotive industry and the presence of a traditional industrial region.

### 6.3. **Strategy of development poles'** forming in the Slovak Republic

The first fundamental program of the territorial organization of Slovakia was adopted in 2001 ("The Concept of Spatial Development of Slovakia") and supplemented in 2011 (since then the commonly used abbreviation of the program was KURS-2011<sup>102</sup>). The foundational principle of the program was the polycentric development of the regions. Among all the countries we have considered, the directions of the formation of the spatial structure of the state are most detailed in the Slovak program.

The key feature of the KURS-2011 program is to rank the system of settlements in focal groups, including agglomerations, groups of settlements and the axis of development of three levels. The expected structure of the development poles and axes in Slovakia is as follows (Figure 6.7):

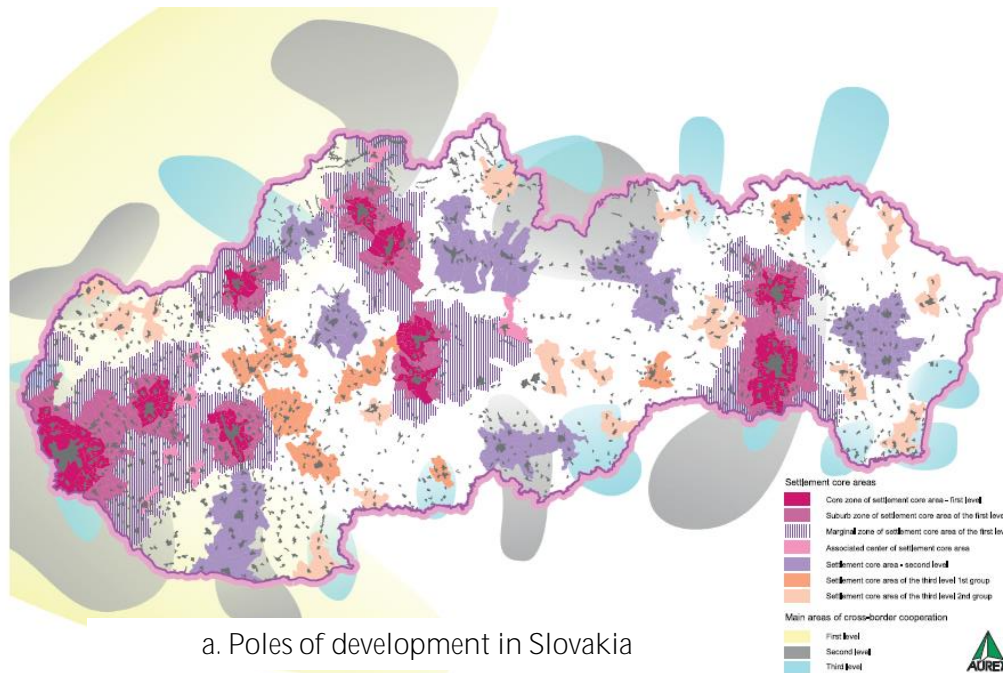
1. Focal centers of the highest level (1st category):
  - a. special group: Bratislava-Trnava agglomeration;
  - b. Košice-Prešov agglomeration;**
  - c. bipolar poles: Banská Bystrica-Zvolen and Žilina-Martin.
  - d monocentric poles: Nitra, Trenčín;
2. Axis of development of the first level (1st category) - 10 priority axes;
3. Poles of the second level (2nd category) – the Liptovský Mikuláš – Ružomberok - Dolný Kubín; the Lučenec - Rimavská Sobota; the Michalovce – Vranov – Humenné; Nový Zámky - Komárno, Poprad – Spišská Nová Ves, Povazska Bystrica Puchov, Prievidza;
4. Axis of development of the second level (2nd category) - 13 axes;
5. Poles of the third level include two subgroups. The first subgroup includes the poles that arose on the basis of centripetal forces

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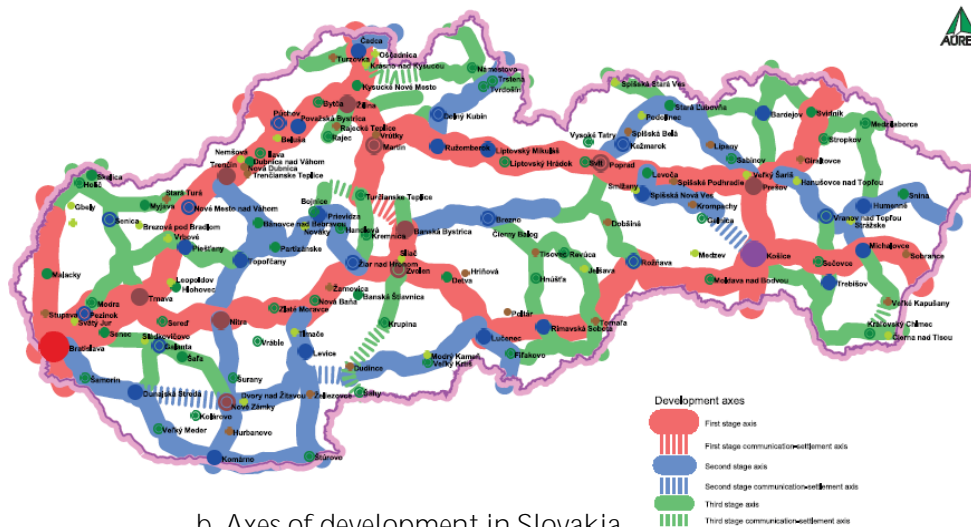
<sup>102</sup> Slovak Spatial Development Perspective: <http://www.telecom.gov.sk/index/index.php?ids=172817>

among the group of small cities (8 poles). The second group includes poles of lesser importance, which were formed on the basis of centripetal forces in one locality, that is, the polarization of the center and the outskirts (19 poles);

6. Axis of development of the third level - 29 axes.



a. Poles of development in Slovakia



b. Axes of development in Slovakia

Figure 6.7. Poles and axes of development in Slovakia

Source: Slovak Spatial Development Perspective

The prospects for the development of the settlement system in Slovakia are based on two principles:

- • establishment of interconnections with Pan-European system of settlements;

- • creation of favorable conditions for sustainable development of society.

In addition to the economic preconditions for social development and the current trends of globalization, which are closely linked to the spatial structure, one can also highlight a number of other factors of increasing importance for the international "inclusion" of the poles and axes of development of Slovakia:

- geomorphological and local features of both marginal and internal territories of Slovakia (the location between two mountainous massifs of the Carpathians and the Alps, the course of the Danube – the river of European significance). The mountainous character of the country is positive for the development of tourist and recreational potential, but it poses a problem for the development of transport (including the transboundary) network;

- spatial features relative to neighboring territories (placement in the center of Europe on the border of the EU and the post-Soviet space). Particularly in this aspect, it is worth highlighting the following points:

- Organization of a promising urbanization axis of development mainly along the Danube in the direction of Stuttgart-Ulm-Munich-Linz / Salzburg-Vienna / Bratislava-Budapest-Belgrade;
- the presence of close densely populated agglomerations of European importance, such as Vienna, Budapest and Katowice-Ostrava;
- the belt of settlements in the direction from north to south of Moravia along the western border of Slovakia: Katowice-Ostrava-Zlín-Brno-Vienna;
- domination of the Kosice-Prešov agglomeration in the Carpathian region at the junction with Poland, Hungary and Ukraine.

➤ Possibilities of organization of transboundary systems of settlements;

➤ The existence and design of transport networks through the territory of Slovakia (primarily the development of the Trans-European Transport Network TEN-T).

Consequently, the main directions of internationalization of the poles and axes of development of Slovakia may be (Figure 6.8):

- the North-South link between the Scandinavian and Baltic states with the Balkans via eastern Slovakia (the Via Carpathia corridor);

- connection with the region Povazie through Hungary with the Trieste and Rijeka ports or to Slovenia and Croatia;

- the west-east link as a central axis that connects the existing TEN-T corridors in the direction from Nuremberg/Dresden - Prague - Olomouc - Púchov - Žilina - Košice – state border with Ukraine.

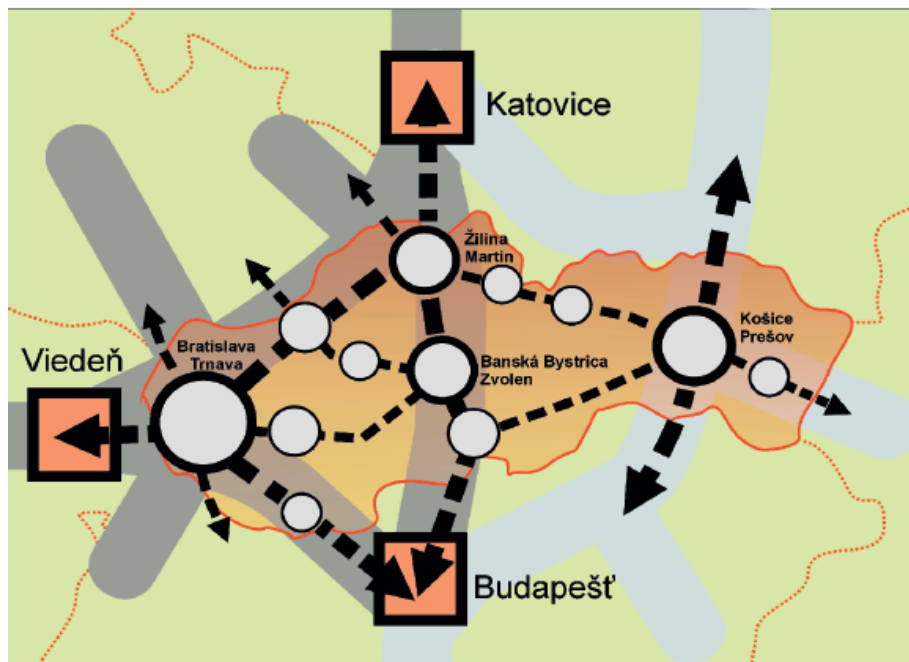


Figure 6.8. International issues of the settlement core areas of the Slovak Republic

Source: Slovak Spatial Development Perspective

The spatial development program of Slovakia includes not only directions for optimizing the structure of settlements. The complex of measures also covers initiatives on modernization of



transport and technological infrastructure, environmental protection, rational use of natural resources etc.

#### 6.4. Strategy of development poles' forming in Czech Republic

One of the priorities of the Czech Republic's Spatial Development Policy 2008 (PÚR ČR 2008), approved by the Government in 2009, is to promote polycentric development of the settlements structure. It defines the so-called development areas and axes, which are defined as territories where due to the concentration of the international, national and trans-regional importance, put forward higher requirements to the nature of change. The development areas and axis are not hierarchical (there is only one category). This results in a relatively larger number of major development poles in the Czech Republic compared to other V4 countries.

The main development areas and axis of development are (Figure 6.9):

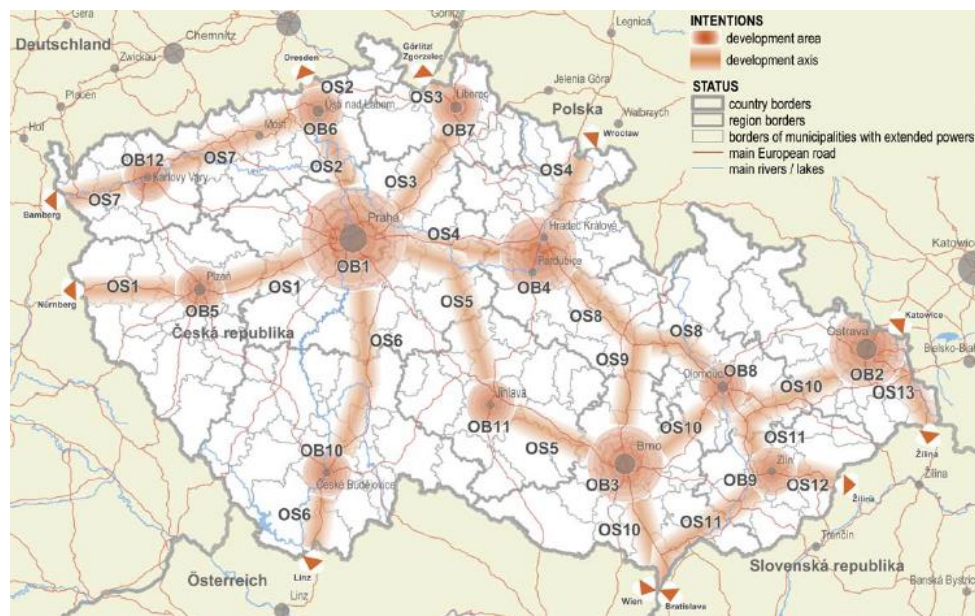


Figure 6.9. Development areas and axes in Czech Republic

Source: Spatial Development Policy of the Czech Republic 2008

- 12 development areas: Brno, České Budějovice, Hradec Králové / Pardubice, Jihlava, Karlovy Vary, Liberec, Olomouc, Ostrava, Plzen, Prague, Usti nad Labem, Zlin (1st category);
- Axis of development that link the above-mentioned areas (1st category).

### 6.5. **Strategy of development poles'** forming in Hungary

The National Development and Territorial Development Concept (NDTDC) <sup>103</sup> adopted by the Parliament in 2013 aims to promote balanced polycentric development in Hungary. In order to ensure that development is not limited to the capital's territory, economic centers of regions and districts are involved in the creation of a harmonious, polycentric and cooperative network, which is intended to become a catalyst for strengthening competitiveness.

The city network consists of different levels of city centers and functional urban areas (Figure 6.10):

- the metropolitan region of Budapest (category 0);
- city centers of (potential) international importance (1st category): Debrecen, Szeged, Miskolc, Pécs, Győr, Székesfehérvár;
- city centers of state significance (category 2): Kecskemét, Veszprém, Solnok, Tatabánya, Dunavirányos, Salgotarján, Eger, Nírygház, Sheksárd, Szombathey, Kaposvár, Bekescháza, Zalaegerszeg, Sopron, Nagykanizsa, Khodmezőváros;

Development axis of Hungary:

- international axis of development (category 1);
- the axis of regional development (2nd category).

The axes of regional significance can also have cross national borders (in this sense they are also international or cross-border).

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<sup>103</sup> Nemzeti Fejlesztés 2030: Országos Fejlesztési és Területfejlesztési Konceptió: <https://rio.jrc.ec.europa.eu/en/library/national-development-2030-national-development-and-territorial-development-concept>



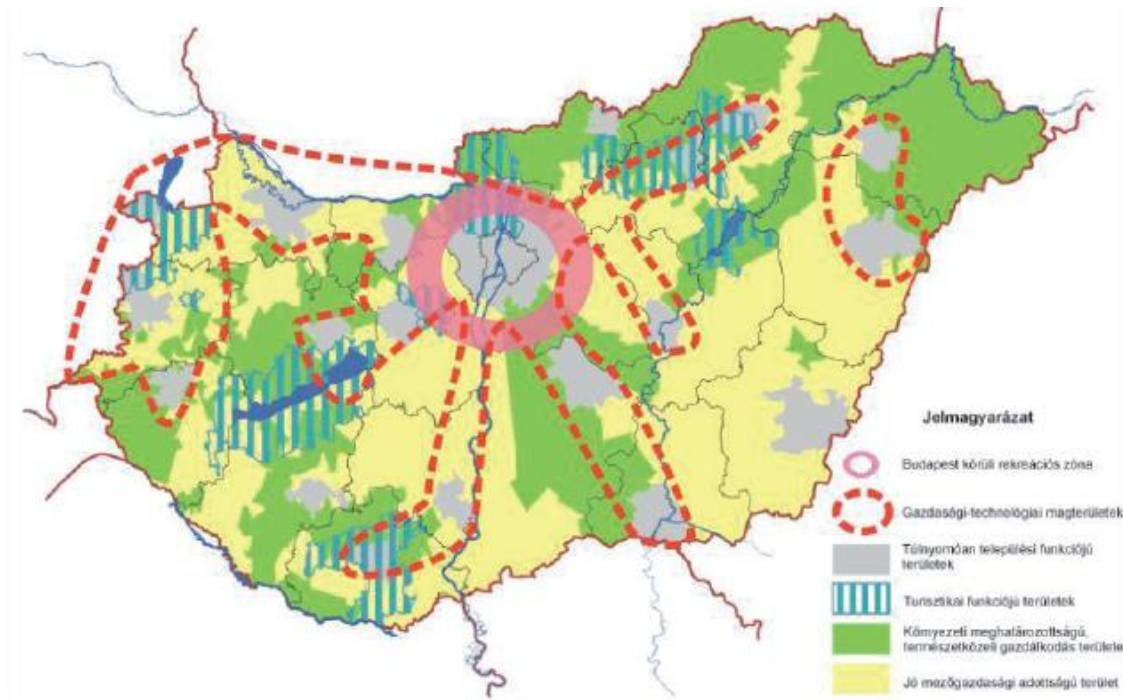


Figure 6.10. Functional development areas in Hungary

Source: Nemzeti Fejlesztés 2030: Országos Fejlesztési és Területfejlesztési Koncepció

## Conclusions

The above-mentioned review makes it possible to assess the complexity of the approach to territorial development in the Visegrad Four countries. Accession to the EU gave a new impetus to the polycentric, decentralized development of territories. However, it should be noted that pan-European programs have not diminished the importance and did not unify the national peculiarities of territorial development in the region.

A successful V4 experience may prove to be beneficial for Ukraine, which is just beginning to implement the first stage of administrative-territorial reform. As for the topical growth poles again, they are mainly considered in Ukraine in a purely theoretical plane. In addition, Ukraine still needs to go through a long process of forming a full-fledged active civil society. Significant efforts should also be made in the lawmaking process, especially in the aspect of polycentric development, regulatory regulation of large urban agglomerations, the formation of axes of development, etc.



# CHAPTER 7.

## **Economic diplomacy of the Visegrad Four countries – specific and direction of development**

*Constantine FLISSAK*

### Introduction

The Declaration on cooperation between Czechoslovakia, Poland and Hungary that was signed on February 15, 1991, proclaimed the beginning of close cooperation between them in various spheres in order to form a modern market economy, on the basis of close contacts with European institutions. The purpose of creating such a model of inter-country partnership was to provide support for the free movement of capital and labour, the development of economic cooperation on market principles, mutually beneficial trade in goods and services, the formation of favourable conditions for attracting of foreign investments, ultimately improving

the efficiency of economies <sup>104</sup>. The achievement of these goals was possible with the use of a set of instruments of international cooperation, among which economic diplomacy plays a leading role.

The accession of Poland, Slovakia, Hungary and the Czech Republic to the European Union in 2004 brought new elements to their international cooperation. On the one hand, it is necessary to follow to the European legal norms and standards, regulations and quotas, on the other hand – the competition has not been cancelled and each country has its own national interests, which must be protected.

The specific of the modern economy of the "Visegrad four" countries is a high level of export-oriented GDP and high linking (at the level up to 80%) of exports to the EU market. These hide certain risks for the economies of countries, especially in conditions of increased international competition, periodically emerging crises and trade disputes. In addition, it is specific for the European Union that countries are jointly responsible for the decisions taken by the EU central entities, and sometimes such decisions do not coincide with the national interests of the countries. This aspect also supplements the potential of factors of negative impact on national economies together with the intensification of global competition.

In connection with this, the countries of the Visegrad four are in urgent need of using of effective mechanisms to support national exports, promotion to foreign markets and the protection of national economic interests in foreign economic relations. The implementation of this task is entrusted to economic diplomacy that within frames of the EU has its own characteristics in each of countries. National governments begun to focus attention and efforts on effective economic diplomacy. As a result, it was formed its institutional component on the normative basis, defined strategic objectives and intensified activities.

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<sup>104</sup> Deklaracja o współpracy Czeskiej i Słowackiej Republiki Federacyjnej, Rzeczypospolitej Polskiej i Republiki Węgierskiej w dążeniu do integracji europejskiej. Sporządzono w Wyszehradzie dnia 15 lutego 1991 r.

## 7.1. Economic diplomacy of the Slovak Republic: its components and spheres of implementation

Foreign economic activity of the Slovak Republic includes export-import relations, investment activities in issues of attracting foreign investment inside and Slovak investment outside the country, development of foreign economic relations on a cooperative basis both within the European Union and in the Visegrad group, as well as with other countries. In recent years a peculiar feature of the Slovak system of foreign economic relations is the realization of the export-oriented policy. Hereby its implementation is largely provided by instruments of economic diplomacy. Thus, among the four main bases of foreign and European policy, noted in the Report of the Ministry of foreign Affairs "Foreign and European policy goals of the Slovak Republic for 2014" addressed to the National Council, there was distinguished the economic diplomacy of the Slovakia abroad <sup>105</sup>.

National interests of the country in the foreign economic sphere firstly are reflected in export activities. The main foreign trade partners of Slovakia are Germany, Czech Republic, Poland, Hungary, France, Italy, Russian Federation, China, and Republic of Korea. The dynamics of the structure of export-import operations of the Slovakia is shown in Table 7.1. The balance of Slovakia's foreign trade is chiefly positive.

The promotion of the products of the Slovak Republic in foreign markets and the development of its new segments is provided by the state support for exports and investments and the full usage of economic diplomacy tools. The implementation of economic diplomacy activities takes place in the following directions: 1) normative and legislative; 2) functional and institutional; 3) personnel; 4) methodological.

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<sup>105</sup> Марчичиакова Л. Цели внешней политики Словакии на 2014 год. - <http://rsi.rtvs.sk/russkiy/clanky/tema-dnja/22538/celi-vnesnej-politiki-slovakii-na-2014-god>

Table 7.1. Dynamics of the structure of exports and imports of the Slovak Republic in 2010 - 2017, in percent <sup>106</sup>

Countries	Export		Import	
	2010	2017	2010	2017
Total	100,0	100,0	100,0	100,0
- including:				
EU-28	84,4	85,4	66,0	66,9
- among them:				
Germany	19,3	20,8	15,3	16,5
Czech Republic	14,0	11,5	10,4	10,2
Italy	5,6	6,0	3,2	3,2
Poland	7,3	7,6	3,9	5,2
Hungary	6,7	6,0	4,2	4,8
France	6,9	6,3	3,5	3,2
Russian Federation	3,9	2,0	9,6	4,7
Ukraine	0,8	0,6	0,9	0,9
Asia	5,3	4,6	19,9	23,0
- including:				
China	2,0	1,6	5,9	7,3
Republic of Korea	0,2	0,1	7,8	5,7
Africa	0,5	0,6	0,5	0,5
America	2,3	3,7	1,4	1,7

The basic position of the success of Slovakian economic diplomacy is its appropriate normative support at the legislative level. Thus, the protection of Slovakia's interests in the external sphere is carried out in accordance with the "Strategy of foreign economic relations of the Slovak Republic for 2014-2020"<sup>107</sup>.

The core of the Strategy is the sphere of export policy as a priority direction of the state's foreign trade policy. The subject of this Strategy is the system of foreign economic relations of the Slovak Republic, through which the country participates in the international division of labour. Taking into account the need to form a significant impact on the international competitiveness of the country, the Strategy is aimed primarily at strengthening the national system of

<sup>106</sup> Zahraničný obchod Slovenskej republiky. Štatistický úrad Slovenskej republiky. – 2010, 12, S.9; Zahraničný obchod Slovenskej republiky. Štatistický úrad Slovenskej republiky. – 2017, 12, S.9

<sup>107</sup> Stratégie vonkajších ekonomických vzťahov Slovenskej Republiky na obdobie 2014 – 2020. <http://www.economy.gov.sk/obchod/podpora-exportu/strategia-vonkajcich-ekonomickych-vztahov-sr-na-obdobie-2014-2020>

export support and its alignment with both the trends of the foreign economic conjuncture until 2020 and the interests of the Slovak business sector.

The strategy of foreign economic relations of Slovakia is based on the following main principles:

1) compliance with international obligations arising from membership in the European Union and international organizations;

2) support of processes of liberalization in international business;

3) fulfilment of principles of the competition;

4) development of support mechanisms within building a transparent business environment;

5) taking into account the need of effective use of limited financial and human resources;

6) avoid of duplication of certain goals, procedures and instruments that are the subject of other strategic documents in the area of support of foreign investments, tourism, innovative cooperation with other countries, energy security and unified presentation of the Slovak Republic;

7) coordination of activities between the Ministry of Foreign and European Affairs of the Slovak Republic, the Ministry of Economy and other organizations that are involved in the formation and implementation of the strategy of foreign economic relations in accordance with the legislation and the Memorandum of cooperation between these ministries in the realisation of the goals of economic diplomacy by the Slovakian offices abroad.

The main goals of the Strategy of foreign economic relations for 2014-2020 are to ensure the stable state of the Slovak Republic in international economic relations, to promote the economic and social development of the country, to promote economic interests abroad, to ensure the requirements of economic security.

According to the main target, the Strategy provides the achievement of goals in the following four areas: 1) trade policy; 2) investment activities; 3) scientific and innovative cooperation with foreign countries; 4) unified presentation of Slovakia abroad.

In trade policy the Strategy defines its general regulations, objectives and directions of increasing both exports and number of exporters, ensuring stable supply of strategic goods. In the trade policy section are determined, taking into account the existing weaknesses of Slovakia, the objectives and directions of territorial diversification of the export structure by increasing its share on markets outside Europe. In addition, are identified the objectives regarding the need of exports diversification by increasing the exports share of electrical machinery and equipment and parts thereof (HS85) and vehicles, other than railway or tramway rolling stock, and parts and accessories thereof (HS87). Also according to the strategy, the objectives of Slovakia's trade policy are increasing the share of exports of small and medium enterprises and increase the volume of exports of services, including tourism.

Investment objectives of Strategy of foreign economic relations are associated to government programs and are focused on:

- 1) increase in investment flows to economic spheres with high value-added, but located in less developed regions;
- 2) improving export performance through investments;
- 3) increasing of investments in industrial research and development;
- 4) supporting of investors in their activities in Slovakia.

The strategy envisages that the implementation and verification (checking the status of the implementation of these positions) is performed by the Ministry of Economy of the Slovak Republic in close cooperation with the Ministry of Finance and the Ministry of Foreign and European Affairs of the SR.

The Strategy refers next goals of innovative cooperation of Slovakia with foreign countries:



- 1) raising the level of involvement of Slovakian business and research institutions to international scientific cooperation projects;
- 2) increasing the internationalization level of the results of domestic research and development;
- 3) increasing of interest of foreign venture capital sources to projects by Slovakian enterprises;
- 4) increasing the interest from foreign companies to establishing their research-and-developing centres in the Slovak Republic.

Particularly importance in promoting the national interests of the country abroad belongs to its qualified and effective representation abroad. Therefore, the Strategy of foreign economic relations for 2014-2020 clearly specifies the goals in this important segment of foreign economic activity. In particular, it is necessary to ensure: firstly, the creation of a functional model of coordination of actors that take part in the presentation of Slovakia abroad; secondly, the establishing a reliable, specific and attractive presentation of the identity of Slovakia.

The achievement of the main goal and implementation of the objectives of the Strategy of foreign economic relations for 2014-2020 is ensured, first of all, by the mechanisms and instruments of economic diplomacy of the Slovak Republic.

Functional and institutional support of economic diplomacy is provided through the process of coordinated activities of the government agencies of Slovakia and its special organizations and interdepartmental structures. The primary role here belong to the Ministry of Foreign and European Affairs (MZVaEZ SR) and the Ministry of Economy (MH SR) of the Slovak Republic. Important places in the promotion of national economic interests of Slovakia in foreign markets by means of economic diplomacy belong to the Slovak Government's Council for Export and Investments Promotion as well as the Slovak Investment and Trade Development Agency (SARIO).

Analysis of the practice of promoting Slovak foreign economic interests in trade and investment issues gives reasons to pay special

attention to the significant role and real effectiveness of the Ministry of Foreign and European Affairs (MFEA) of the Slovak Republic (MZVaEZ SR) in the functioning of economic diplomacy. In this context, the MFEA supports the promotion of exports, investment and research cooperation on the principles of international development, provides assistance to Slovakian companies through a network of foreign institutions in establishing contacts with foreign partners, identifies business and investment opportunities in host countries, creates conditions for the successful implementation of economic and trade cooperation at the highest political level, and provides functional support of export through tools of economic diplomacy.

In the structure of the MFEA the functional support of economic diplomacy is entrusted to the Economic cooperation section. It consists of Department of global policy, two Departments of economic diplomacy, the Department of entrepreneurship center, and the Department of international economic organisations <sup>108</sup>. Formed by the Ministry of Foreign and European Affairs of the Slovak Republic, the foreign network consists of 64 institutions and representative offices with economic orientation. The network includes 49 systematic positions of economic diplomats. In addition, 173 consular offices (including those with the use of the Institute of honorary Consuls) abroad were actively involved in the performance of the functions of economic diplomacy in the departmental subordination of the MFEA <sup>109</sup>.

The structures of MFEA of Slovakia, according to the competence and functional powers, both in the country and through a

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<sup>108</sup> Ministerstvo zahraničných vecí a európskych záležitostí Slovenskej republiky (MZVaEZ SR) - [https://www.mzv.sk/ministerstvo/organizacna\\_struktura](https://www.mzv.sk/ministerstvo/organizacna_struktura)

<sup>109</sup> Stratégie vonkajších ekonomických vzťahov Slovenskej Republiky na obdobie 2014 – 2020, s.9. - <http://www.economy.gov.sk/obchod/podpora-exportu/strategia-vonkajsich-ekonomickych-vztahov-sr-na-obdobie-2014-2020>

network of foreign institutions provides the following support and assistance to participants of foreign economic activity <sup>110</sup>:

- consultations on the political, trade-economic and business environment in the host countries of the Slovak missions;
- providing on the request from Slovakian business structures the basic contact details and other information about foreign business entities which can be potential partners;
- providing information and assistance according to the requests and proposals of Slovakian exporters;
- search for business and investment opportunities in the host countries for Slovakian exporters;
- search for potential investors and regular dialogue with key partners in investment cooperation in the host countries;
- providing foreign companies with necessary information about potential Slovakian partners and their proposals for investment partnership;
- selection of relevant exhibitions abroad for the participation of Slovakian companies, providing consulting and organizational support for their participation in exhibitions;
- organization of business missions, intergovernmental economic commissions for cooperation between the Slovak chamber of Commerce and industry (SOPK), the Slovak investment and trade development Agency (SARIO) and relevant ministries;
- organization of seminars for exporters jointly with SOPK, SARIO, relevant industry and professional associations;
- promoting of international cooperation in science, research and innovation, energy and food security, climate change, consumption of water and raw material resources (identification of the Slovak projects, interests and options regarding finding ways to participate in relevant international and regional projects);

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<sup>110</sup> Katalóg základných služieb MZVaEZ SR a ZÚ SR v oblasti ekonomickej diplomacie pre podnikateľskú verejnosť. <http://www.sario.sk/sites/default/files/content/files/Katalog%20zakl%20sluzieb-oblast%20ED.pdf>

- support for the participation of Slovakian enterprises in regional cooperation (e.g. within the framework of the Central European initiative, the European Danube strategy, cross-border cooperation, partnership between regions, cities, municipalities etc);
- providing information and cooperation in the organization of participation of entrepreneurs and public administration institutions in the EU external assistance projects for third countries, in the organization of public procurement in other countries of the world, in the establishing of international cooperation.

The Ministry of Economy of the Slovak Republic (MH SR) is the central authority of state administration in issues of foreign trade. Thus, the Ministry of Economy functionally ensures the following tasks in this area<sup>111</sup>:

1) develops the main directions and objectives of the foreign trade policy of the Slovak Republic in the framework of active participation in the Committee of permanent representatives of the EU member States and other EU structures, participates in the development of common foreign trade policy of the European Union in relation to the World Trade Organization and other regional associations;

2) develops the main directions and objectives of the state project policy, ensures its implementation, generate mechanisms for the provision of state assistance for the development of foreign trade;

3) develops a system of measures for stimulation the inflow of foreign direct investments;

4) provides comprehensive international trade and economic cooperation in accordance with the membership of the Slovak Republic in the Organization for economic cooperation and development and other relevant international organizations;

5) develops, coordinates and ensures the implementation of multilateral and bilateral contracts in the sphere of foreign trade cooperation of the Slovak Republic with foreign countries;

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<sup>111</sup> Štatút Ministerstva hospodárstva Slovenskej republiky, čl. 4. - <http://www.economy.gov.sk/uploads/files/ejpaZTT9.pdf>

6) vindicates the trade interests of the Slovak Republic in the use of trade protection instruments in committees and working groups of the European Commission and the Council of the European Union.

Normatively provided system of coordination of actions in economic diplomacy is a fundamentally important point in the performance of functional duties in the sphere of foreign economic activity of the Slovak Republic government structures, which ultimately determines its high efficiency. In addition to the foregoing personnel provision of economic diplomacy, the Ministry of Economy of the Slovak Republic closely cooperates with other ministries, Central and regional entities of state administration. Particularly, the Ministry of Economy cooperates with the Ministry of Foreign and European Affairs on the following issues:

- development, implementation and providing of a joint foreign policy in the trade and economic sphere;
- public administration of imports, exports and intermediation by military goods and technologies which are subject to inspection;
- development of concepts and justification of principles of relations on participation in international economic or trade organizations;
- preparation, signing and implementation of international trade agreements;
- preparation of intergovernmental agreements in the scope of tourism and implementation of tasks arising from membership in the World tourism organization;
- solving specific tasks related to activity of foreign missions of the Slovak Republic, which provide international trade and economic cooperation and collaboration with economic or trade international organizations;
- contacts of foreign representative offices of the Slovak Republic in the host countries and contacts of representative offices of

foreign states concerned to activities of Slovak business entities abroad and foreign entities in Slovakia.

Among the subjects of the national level of economic diplomacy is the Slovak Government's Council for Export and Investments Promotion - the advisory, coordinating and initiative entity of the Government on the issues of state support of economic and trade cooperation, and presentation of the Slovak Republic<sup>112</sup>. The Council consists of: 1) heads of Central Executive authorities (Minister of foreign and European Affairs, Minister of economy, Minister of Finance, Secretary of state of the Ministry of Transport, Construction and Regional Development); 2) state financial institutions (representative of Export-import Bank of Slovakia); 3) organizations of employers and commercial institutions (Slovak chamber of Commerce and industry, Association of trade unions and employers' associations of the Slovak Republic, National employers' Union, Club 500, Slovak Association of small and medium enterprises and individual entrepreneurs, Association of industry unions).

The statutory activities of the Government's Council for Export and Investments Promotion are focused on the following main tasks:

- 1) formation of proposals and conclusions to strategic documents of ministries and other central government entities in the area of support, investments, international presentations and other forms of international economic cooperation of the Slovak Republic;
- 2) evaluation of services which are provided by Slovak diplomatic missions as support to national business abroad and development of recommendations for their improvement;
- 3) submission of proposals on territorial priorities for the development of international trade, economic and investment cooperation of the Slovak Republic with foreign countries and the presentation of Slovakia abroad;

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<sup>112</sup> Štatút Rady vlády Slovenskej republiky na podporu exportu a investícií.- <https://www.mzv.sk/documents/>

4) taking measures for coordinated actions of the business sector for more effective ensuring trade and economic interests of the Slovak Republic abroad in accordance with the adopted territorial priorities of development of international trade and economic cooperation, including a coordinated presentation of the Slovak Republic abroad;

5) cooperation with relevant committees of the National Council and with advisers of the Prime Minister of the Slovak Republic.

According to the functional responsibilities and actual needs of the country, the Government's Council for Export and Investments Promotion considers the relevant issues and takes the necessary decisions. Thus, in December 2016, at a meeting of the Council the Ministry of foreign and European Affairs presented a document on the strategy of economic diplomacy until 2020 <sup>113</sup>. Its position was conceptually based on the Strategy of foreign economic relations of the Slovak Republic for the period 2014-2020 and the Government's program declaration. At the first meeting of the Council in 2017, one of the key issues was considered the basis of the "white book of the proexport policy 2017", presented by the Ministry of economy of Slovakia. The document set new goals to strengthen the country's export orientation. At the same time, the Ministry of Foreign and European Affairs presented proposals on innovative forms of strengthening the potential of economic diplomacy <sup>114</sup>. At the first meeting of the Council in 2018, one of the main issues for discussion and decision-making were priorities of the Slovak Republic's proexport policy for the period 2018-2020. In addition, it was heard and

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<sup>113</sup> Rady vlády Slovenskej republiky na podporu exportu a investícií Prvé rokovala o zamerani ekonomickej diplomacie do roku 2020. – [https://www.mzv.sk/podnikajme\\_v\\_zahranici/detail/-/asset\\_publisher/lw1ppvnScIPx/content/rada-vlady-na-podporu-exportu-a-investicii-rokovala-o-zamerani-ekonomickej-diplomacie-do-roku-2020](https://www.mzv.sk/podnikajme_v_zahranici/detail/-/asset_publisher/lw1ppvnScIPx/content/rada-vlady-na-podporu-exportu-a-investicii-rokovala-o-zamerani-ekonomickej-diplomacie-do-roku-2020)

<sup>114</sup> Prvé rokovanie Rady vlády Slovenskej republiky na podporu exportu a investícií v roku 2017. – [https://www.mzv.sk/podnikajme\\_v\\_zahranici/detail/-/asset\\_publisher/lw1ppvnScIPx/content/prve-rokovanie-rady-vlady-slovenskej-republiky-na-podporu-exportu-a-investicii-v-roku-2017](https://www.mzv.sk/podnikajme_v_zahranici/detail/-/asset_publisher/lw1ppvnScIPx/content/prve-rokovanie-rady-vlady-slovenskej-republiky-na-podporu-exportu-a-investicii-v-roku-2017)

discussed a report on the state and results of economic diplomacy of Slovakia in 2017 <sup>115</sup>.

An important place among the state subjects of economic diplomacy of the country belongs to the Slovak investment and trade development Agency (SARIO), which is the state agency of Slovakia, established under the Ministry of Economy of the Slovak Republic in 2001 with the aim of attracting of investments and promoting of national exporters on the global market <sup>116</sup>.

In the scope of foreign trade SARIO provides the following services to exporters:

- searches for foreign trade partners in regions of interest;
- makes analysis of a demand for the products of interest in foreign markets;
- forms on-line database of business opportunities;
- provides education and training of specialists in the sphere of foreign trade;
- assists in search for subcontracting opportunities.

In promoting of investment activities, SARIO provides detailed information on the Slovak business environment, conditions for establishing the company, services related to immovable property and a number of others, including advisement on state support.

For potential investors, SARIO offers:

- overview of the advantages of Slovakia as a place for investment, including the provision of key statistical indicators;
- making of sectoral and regional analyses;
- assistance in the realization of investment projects;
- consulting about support of investments;
- assistance in establishing and registering a company in Slovakia;
- real estate database and help in finding the required area.

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<sup>115</sup> Prvé rokovanie Rady vlády Slovenskej republiky na podporu exportu a investícií v roku 2018. – [https://www.mzv.sk/podnikajme\\_v\\_zahranici/detail/-/asset\\_publisher/lw1ppvnScI Px/content/prve-rokovanie-rady-vlady-sr-na-podporu-exportu-a-investicii-v-roku-2018](https://www.mzv.sk/podnikajme_v_zahranici/detail/-/asset_publisher/lw1ppvnScI Px/content/prve-rokovanie-rady-vlady-sr-na-podporu-exportu-a-investicii-v-roku-2018)

<sup>116</sup> Slovenska agenturá pre rozvoj investícií a obchodu - SARIO. – <http://www.sario.sk>



Operating investors can also use SARIO services, including the following:

- identification of local suppliers and service providers;
- consulting on preparation and realisation of the company's expansion;
- support in relocation company, obtaining work permits or residence permits;
- support activities in the sphere of innovation, research and design work;
- networking.

The most important trend in the modern economy of the country, SARIO considers the creation of job positions with high added value. Therefore, in the issues of scientific research, SARIO activity aims to transform Slovakia into a technological and innovation centre of Central Europe. In issues support of scientific research, SARIO offers:

- supporting activities for the development of the Slovak innovation environment and innovative researches;
- establishing links with existing national and foreign investors;
- establishing links between the innovative potential of Slovak enterprises and the needs of investors in order to transfer advanced technological processes into production;
- stimulating of foreign investors to invest in Slovakia;
- analysing of local investment opportunities for national and foreign investors in order to establish joint ventures.

It is important to emphasize that all services to exporters, current and potential investors are provided by SARIO free of charge that is in the Slovak Republic one of the forms of state support for exporters and investment activities.

Personnel providing of economic diplomacy is the fundamental basis of its effectiveness and efficiency and includes two components: the first - the formation of a professional resource at the level

of professional training during the educational process in higher education institutions and later at specialized seminars, forums, trainings; the second - the direct formation of the staff of national structures of economic diplomacy both within the country and abroad.

Slovakia is one of the few countries where higher education institutions study specialists in this profession. Thus, the faculty of international economic relations in the University of Economics in Bratislava study professionals in speciality "Economic diplomacy"<sup>117</sup>. Hereby the training program covers the entire range of academic disciplines required in the practical work of economic diplomats.

In terms of direct staffing of economic diplomacy, Slovakia has its own features. Thus, among the functional responsibilities of the Ministry of Economy of the Slovak Republic, it should be emphasized its role and authority in the implementation of professional providing of the structures of Slovak economic diplomacy. In particular, the Ministry of Economy professionally, financially, economically and by personnel manages and controls the activities of foreign missions, which are an integral part of the Slovak embassies. These issues are coordinated with the Ministry of Foreign and European Affairs of the Slovak Republic<sup>118</sup>.

The efficiency and effectiveness of the country's economic diplomacy requires appropriate methodological reasoning and content. An important element in this segment is the appropriate organization and planning of the main activities of economic diplomacy. Thus, at the level of the Ministry of Economy and the Ministry of Foreign and European Affairs of the Slovak Republic, annually is determined, adopted and accepted for execution a list of the main activities in the country's foreign and European policy. These activities consist of four blocks: 1) a safe and democratic world; 2) European politics; 3) economic diplomacy; 4) services for citizens and modern diplomacy. In the part of the economic diplomacies' events for 2015

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<sup>117</sup> Ekonomická univerzita v Bratislave. -<https://fmv.euba.sk/studium/bakalarske-a-inzierske-studium/zakladne-informacie>

<sup>118</sup> Štatút Ministerstva hospodárstva Slovenskej republiky. čl. 4, f.22, s.7. <http://www.economy.gov.sk/uploads/files/ejpaZTT9.pdf>

were highlighted the following: energy security (ensuring the security of supply of energy raw materials and the continued diversification of routes and sources), creating conditions for establishing partnerships between Slovak firms with foreign companies, promoting and establishing contacts of Slovak innovative enterprises with foreign partners, developing existing and potential investment and trade relations with EU countries and neighbouring countries, additional work on increasing exports and investments from China, India, Japan, Republic of Korea, Singapore, Brazil <sup>119</sup>. Among events of economic diplomacy in 2016 were emphasized: the preservation of security and profitability of way of natural gas transportation to Europe, facilitating access of Slovak goods and services to international markets, activation of work with international economic organizations according to new trends, expansion of investment and trade relations with the EU, increasing export efforts in the markets of China, India, Japan, Republic of Korea, Brazil <sup>120</sup>.

Thus, the economic diplomacy of the Slovak Republic, one of the Visegrad four countries, is an important tool for the success of the country's foreign economic policy, providing of its export expansion in international markets and intensive investment cooperation with foreign investors. Slovakia's practical experience in this area is a considerable interest to Ukraine and its foreign economic activity.

## 7.2. Economic diplomacy of the Republic of Poland: the basics and development

Economic diplomacy of the Republic of Poland originates from classical diplomacy, when the emphasis in external activities of central executive entities and foreign missions began to shift from

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<sup>119</sup> Zameranie zahraničnej a európskej politiky Slovenskej republiky na rok 2015. – <https://www.mzv.sk/documents/10182/2198827/2015>

<sup>120</sup> Zameranie zahraničnej a európskej politiky Slovenskej republiky na rok 2016. – <https://www.mzv.sk/documents/10182/2198827/2016>

the political sphere to the economic, and protection of economic interests of the country abroad become one of the state priorities. All preconditions for the formation of a modern efficient model of economic diplomacy in Poland were based on the development of foreign economic activity and interests of the country, on perspective directions of exports, import needs, the state and opportunities of investment partnership.

Polish and international statistics show that the main geographical export vector of the Poland is Europe and, in particular, the EU countries. There is an insignificant presence of Polish exports in Asia, America and Africa countries. The EU share is also dominated in the import, but there is a clear trend in recent years to increase the share of East, South and South-East Asia countries. An important component of Poland's foreign economic activity for its economy is investment activity and, primary, measures to attract of foreign investments.

Economic interests in promoting of Polish exports to new markets and attracting necessary foreign investments are one of the main factors determining the model of economic diplomacy adopted in Poland, its organization and objectives, the range of support and assistance tools used for national enterprises, as well as the direction of realisation in the future. Polish economic diplomats are often associated with such tasks as opening foreign markets for national enterprises, participation in the realisation of government programs of economic development of the country, intensification of activities to attract foreign investment and intervention at the level of public administration (state power) in the interests of Polish firms and institutions.

Considering the formation of the model of Polish economic diplomacy, it should be noted that exactly on the basis of the positive

Ukrainian experience in the organization and development of economic diplomacy <sup>121</sup>, the Republic of Poland in 2006 performed effective reform measures in this area. In Poland were guided by the fact that the support of the state administration for national enterprises in international markets is one of the main priorities of the country's foreign economic policy. In this regard, the Deputy Minister of Foreign affairs of Poland R.Vishnevski emphasized that "economic diplomacy should be an outpost of the classical promotion of the economy in many parts of the world, the subject of which is the interest of a single enterprise" <sup>122</sup>. As for the aspiration of certain authorities to connect the presence in foreign diplomatic missions of specialized economic units, their number and staff with export volumes, R.Vishnevski convincingly, in our opinion, emphasized about economic diplomacy, that it "is not a business and not engaged in business, but at the same time actually it opens the door for business" <sup>123</sup>. In justifying the establishment of an effective model of economic diplomacy in Poland was guided by the fact that "the main principal task of economic diplomacy will be the identification, analysis and impact on foreign conditionality of Polish economic interests" <sup>124</sup>.

The Polish economic periodical publication "Gazeta finansowa" emphasized on this issue: "the creation of economic diplomacy requires the professionalization and specialization of personnel. In this sphere, the model of a universal diplomat is not only unsuitable, but even harmful. It is necessary such selection of personnel that would ensure the effective realization of the tasks. ... And

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<sup>121</sup> Rośnie popyt na dyplomację ekonomiczną (2009) [Electronic resource] / Gazeta finansowa, 23.10.2009 – Accessed mode: [www.gazetafinansowa.pl/index.php/wydarzenia/analizy/2845-ronie-popyt-na-dyplomacj-ekonomiczn.html](http://www.gazetafinansowa.pl/index.php/wydarzenia/analizy/2845-ronie-popyt-na-dyplomacj-ekonomiczn.html) Accessed 05 December 2010

<sup>122</sup> Rośnie popyt na dyplomację ekonomiczną (2009), S.4

<sup>123</sup> Ibid. S.5

<sup>124</sup> Polska dyplomacja ekonomiczna – Anna Fotyga, Minister Spraw Zagranicznych. 2006-09-07. – [Electronic resource]. – Access mode: <http://pm.g-point.biz/document/:13063>

to them it is necessary to include economists, financiers and lawyers" <sup>125</sup>.

Effective staffing of economic diplomacy relies on the departmental subordination of both the sphere of activity and the organizational and financial support of the functioning of central office of the agencies and their foreign missions. In accordance with the Law on the activities of the government administration <sup>126</sup>, the tasks related to the economic diplomacy of Poland are assigned to two sectors:

- sector of economy (article 9) – this includes the definition of the basics of foreign economic cooperation, cooperation with international organizations in the economic direction, the realization of activities in the sphere of development and implementation of trade policy, providing of economic assistance, in particular support for the development of exports and Polish investments abroad;

- sector of foreign affairs (article 32) - coordination of foreign policy and public diplomacy, support of actions of other agencies aimed at promoting the Polish economy.

The actual time of the formal establishment of modern economic diplomacy in Poland should be considered in 2005, when the Ministry of foreign Affairs was obliged to ensure its formation within the framework of the government program "Solidary State". In addition, in the State Programme of Reforms for 2005-2008 were anticipated the strengthening of the institutional system for promoting the Polish economy and its effective coordination, as well as the changing the principles of the Polish Agency of Information and Foreign Investment and the statutory requirements to the Agency of aid to the economy <sup>127</sup>.

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<sup>125</sup>Rośnie popyt na dyplomację ekonomiczną. 23.10.2009. – [Electronic resource]. – Access mode: [www.gazetafinansowa.pl/index/wydarzenia/analizy/2845-ronie-popyt-na-dyploma-cj-ekonomiczn.html](http://www.gazetafinansowa.pl/index/wydarzenia/analizy/2845-ronie-popyt-na-dyploma-cj-ekonomiczn.html)

<sup>126</sup> Ustawa o działach administracji rządowej (Dz. U. z 2007 nr 65 poz.437). [Electronic resource] /Internetowy System Aktów Prawnych. – 2015. – Accessed mode: <http://isap.sejm.gov.pl/DetailsServlet?id=WDU20070650437>

<sup>127</sup> Krajowy Program Reform na lata 2005-2008, Rada Ministrów, grudzień 2005. – S.17.

Next significant step in the establishment of a modern model of economic diplomacy in Poland was the signing (on the basis of these decisions) between the Ministry of Foreign Affairs and the Ministry of economy of Poland in 2006 of two agreements: the first – about the issues of establishing of economic diplomacy <sup>128</sup>, and the second – about cooperation in the implementation of the tasks of the Ministry of Economy in the scope of promotion of foreign trade and foreign investment by the Polish foreign missions, in which there were no departments of trade and investment promotion (WPHI) <sup>129</sup>.

In accordance with these agreements, during the past 10 years through transformational actions in Polish diplomatic missions abroad were established 34 economic departments and 48 trade and investment promotion departments <sup>130</sup>. At the same time, the activity of economic departments is coordinated by both the Ministry of Foreign Affairs and the Ministry of Economy, and trade and investment promotion departments are subordinated (this is fundamentally important) to the Ministry of Economy. A clear system of organization of Polish economic diplomacy anticipates a reasonable and effective executive structure with the corresponding functional responsibilities, specification and distinction of strategic goals and tactical tasks, the availability of the necessary tools.

In the Central office of the Polish Ministry of Foreign Affairs among 18 departments two of them are involved in economic issues:

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<sup>128</sup> Porozumienie między Ministrem Gospodarki a Ministrem Spraw Zagranicznych z dn. 7 lutego 2006 r. w sprawie utworzenia dyplomacji ekonomicznej [Electronic resource] / Senat Rzeczypospolitej Polskiej. – 2015. – Accessed mode: <http://ww2.senat.pl/k7/kom/kgng/8.pdf>

<sup>129</sup> Porozumienie między Ministrem Gospodarki a Ministrem Spraw Zagranicznych z dnia 14 września 2006 r. W sprawie współpracy w realizacji zadań Ministra Gospodarki z zakresu promocji handlu i inwestycji zagranicznych przez polski placówki zagraniczne, w których nie funkcjonują Wydziały Promocji Handlu i Inwestycji (WPHI). – [Electronic resource]. – Access mode: [http://ekb.org.pl/ekb/?page\\_id=1506](http://ekb.org.pl/ekb/?page_id=1506)

<sup>130</sup> Marchewka-Bartkowiak K. Dyplomacja ekonomiczna w Polsce – organizacja, zadania i kerunki działalności // Analizy BAS, nr. 6 (110), 3.04.2014. – S.3

the Economic Department of the European Union and the Department of economic cooperation<sup>131</sup>. In the Ministry of Economy among 22 departments to issues of the economic diplomacy are directly involved the Department of European Affairs and the Department of assistance and bilateral cooperation. In addition, some sectoral issues in this sphere are among the interests of the Department of energy, Department of European funds, Department of trade policy and others<sup>132</sup>.

The main burden is on the Department of assistance and bilateral cooperation, which implements the mission of the Ministry in support of the activities of Polish enterprises in foreign markets, coordinates bilateral cooperation, investment partnership, international cooperation of Polish business<sup>133</sup>.

Most of the diplomatic missions have stable contacts and collaborate with the Polish information and foreign investment Agency (PAIiIZ) and with The Industry Development Agency and the Board of Directors of special economic zones (SSE).

The main activity of 48 departments of trade and investment promotion (WPHI) which are in subordination of the Ministry of Economy are to support Polish exports, attract of direct foreign investments and promotion of Polish investments abroad. For each Department (WPHI) the Ministry prepares and approves the annual program for their core activities. Goals of these departments include<sup>134</sup>:

- supporting for the Polish economy and products;
- providing of access to markets of goods and services in the host country;

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<sup>131</sup>Ministerstwo Spraw Zagranicznych. Komórki organizacyjne Ministerstwa. – [Electronic resource]. – Access mode: [www.msz.gov.pl/pl/ministerstwo/ministerstwo\\_organizacja/komorki/komorki\\_organizacyjne\\_ministerstwa](http://www.msz.gov.pl/pl/ministerstwo/ministerstwo_organizacja/komorki/komorki_organizacyjne_ministerstwa)

<sup>132</sup> Ministerstwo Gospodarki PL. – [Electronic resource]. – Access mode: [www.mg.gov.pl/Kontakt](http://www.mg.gov.pl/Kontakt)

<sup>133</sup> Ministerstwo Gospodarki PL. Departament Promocji i Współpracy Dwustronnej – [Electronic resource]. – Access mode: [www.mg.gov.pl/Kontakt/DPD](http://www.mg.gov.pl/Kontakt/DPD)

<sup>134</sup> Wydziały Promocji Handlu i Inwestycji. – [Electronic resource]. – Access mode: [www.polska.trade.gov.pl](http://www.polska.trade.gov.pl)



- protection of interests of Polish enterprises in contacts with authorities and economic entities of the host country;
- attraction of foreign investments to Poland;
- support and advisory assistance to Polish exporters;
- providing of information on the subject of opportunities for establishing and realization of trade, investment or cooperation partnership;
- formation of databases on importers, potential investors and exporters;
- formation of requests for receiving of direct offers;
- providing of information about trade events, commodity exchanges and conditions for participation, assistance in organization of trade expositions of Polish companies;
- providing of proposals or free databases of Polish exporters to potential importers and their representatives;
- obtaining or mediation in obtaining of data about trade characteristics of future partners of Polish companies;
- search for partners for cooperation and investment partnership for Polish companies;
- organization of seminars and missions in economic issues;
- initiation of interregional cooperation.

Among the tasks in the scope of support of Polish enterprises abroad, the Ministry of Foreign Affairs identifies <sup>135</sup>: information support; support for self-organization; active actions in cases of discrimination or violation of the rights of Polish enterprises; promotion of key and decisive trade transactions or investment projects; general assistance to the Polish economy, in particular in issues of the investment climate and probable trade contacts.

Recently also established a system of cooperation WPHI with a network of so-called Centers of Service for Investors and Exporters

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<sup>135</sup> Instrukcja nr 2 Ministra Spraw Zagranicznych z dnia 11 sierpnia 2009 r. w sprawie wspierania interesów gospodarczych polskich przedsiębiorców przez polskie placówki zagraniczne. – [Electronic resource]. – Access mode: [www.msz.pl.gov](http://www.msz.pl.gov)

(COIE), which are functioning under regional governments, this creates for regions opportunities of development of enterprises in the international arena through: establishing of contacts with new foreign partners; free access to global databases (B2B); close cooperation with the departments of WPHI which possess relevant and extensive data concerning conditions of access and operation on the selected foreign markets.

For its turn, the Ministry of Foreign Affairs <sup>136</sup> clearly declares that it is equivalent to both the Ministry and the subordinate foreign representative offices – without any signs of preference or discrimination – apply the same support tools to all enterprises registered in the territory of the Polish Republic, regardless of the legal form and structure of ownership.

In addition, according to the Ministry of Foreign Affairs, most diplomatic missions are in stable contact and cooperate with the Polish Agency for information and foreign investments (Polska Agencja Informacji i Inwestycji Zagranicznych - PAIIIZ SA) as an important partner in the framework of investment cooperation, the Agency for Industry Development (SA) and the management (Board of Directors) of special economic zones (SSE).

The full implementation of the tasks of economic diplomacy of the Republic Poland is ensured primarily through the comprehensive and coordinated actions of its competent institutions at the level of central departments and foreign diplomatic missions. An independent and special role in this sphere play financial instruments of support of Polish business in foreign economic activity, including export credits, financial guarantees and insurance.

Focusing on highly developed countries, Poland holds a position on the significant growth of the role of economic diplomacy in

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<sup>136</sup>Ministerstwo Spraw Zagranicznych. Departament Współpracy Ekonomicznej. – [Electronic resource]. – Access mode: [www.msz.gov.pl/pl/ministerstwo/ministerstwo\\_organizacja/komorki/komorki\\_organizacyjne\\_ministerstwa](http://www.msz.gov.pl/pl/ministerstwo/ministerstwo_organizacja/komorki/komorki_organizacyjne_ministerstwa)

the promotion of the national economy <sup>137</sup>. In this regard, the Council of Ministers of Poland adopted two state programs to support domestic exports: "The Program of the Interest Rate Support" ("Program Dopłat do oprocentowania kredytów exportowych", so called "Program "DOKE" <sup>138</sup>) and "The program of promotion of Polish export by supporting from the Bank of the National Economy (BGK) with providing loans to foreign purchasers of Polish goods and services or their banks with the protection of the insurance by Export Credits Insurance Corporation Joint Stock Company", so called "Program "KUKÉ" <sup>139</sup>. The DOKE program was adopted in 2003, and the KUKÉ program - in 2009, however, taking into account the requirements of the time and the current challenges of the KUKÉ program, the Council of Ministers of Poland amended it in 2012 and 2015.

The DOKE program consists in providing at the expense of the state budget additional payments to the interest rate of a certain export credit to ensure its sustainable size for loans issued by Polish and foreign banks or international financial institutions <sup>140</sup>.

The KUKÉ program is aimed at promoting of Polish exports through the provision of loans by the Polish Bank BGK (the government-authorized administrator of the program) to foreign buyers and consumers of Polish goods and services or their banks with insurance protection of the Export Credit Insurance Corporation, as well as to Polish exporters for the realization of export contracts.

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<sup>137</sup>Europejski Klub Biznesu Polska. Material informacyjny w sakresie wsparcia polskich przedsiębiorstw w ekspansji zagranicznej, S.6 - [Electronic resource]. - Access mode: [http://ekb.org.pl/ekb/?page\\_id=1506](http://ekb.org.pl/ekb/?page_id=1506)

<sup>138</sup> Program Dopłat do Oprocentowania Kredytów Eksportowych. DzU z 2001 r. Nr 73, poz.762 ze zm. - [Electronic resource]. - Access mode: [www.wmsse.com.pl/download/OFERTA%20BGK.pdf](http://www.wmsse.com.pl/download/OFERTA%20BGK.pdf)

<sup>139</sup>Program „Wspierania polskiego eksportu poprzez udzielanie przez Bank Gospodarstwa Krajowego kredytów dla zagranicznych nabywców polskich towarów i usług lub ich banków z ochroną ubezpieczeniową Korporacji Ubezpieczeń Kredytów Eksportowych SA”. - [Electronic resource]. - Access mode: [www.finance.mf.gov.pl/documents/766655/927993/20090730\\_program\\_rzadowy\\_bgk\\_kredyty\\_eksportowe.pdf](http://www.finance.mf.gov.pl/documents/766655/927993/20090730_program_rzadowy_bgk_kredyty_eksportowe.pdf)

<sup>140</sup> Bank Gospodarstwa Krajowego. Bank Gospodarstwa Krajowego realizuje Program rządowy wspierania polskiego eksportu. - [Electronic resource]. - Access mode: [www.wmsse.com.pl/download/OFERTA%20BGK.pdf](http://www.wmsse.com.pl/download/OFERTA%20BGK.pdf)

Thus, the KUKÉ program has the following goals: first – quality – facilitating the access of foreign entrepreneurs to the loans that finance the purchase of Polish goods and services; the second – quantitative – expansion of Polish exports by support of facilitation its financing through the provision of BGK Bank loans to foreign buyers of Polish goods and services or their banks with the insurance protection of Export Credit Insurance Corporation (“KUKÉ S. A.”), and to Polish exporters on the implementation of export contracts.

Analysing the formation and development of the system of support for Polish business and the Polish economy in the sphere of foreign economic activity, the establishment of interregional and cooperative partnership, it should be noted that the modern Polish economic diplomacy was formed and received the necessary legal, institutional, organizational and methodological support immediately after the country's accession to the European Union in 2004. A qualitatively new level of coordination of all components of the foreign economic activity of country within the EU and its full European integration did not reduce the role and importance, but rather became a catalyst for the creation of modern economic diplomacy of the Republic of Poland.

### 7.3. Economic diplomacy – the strategic direction of foreign policy of the Czech Republic

The leading place in ensuring the effective foreign economic policy of the Czech Republic belongs to its economic diplomacy. Thus, in the establishment and development of partnerships with other countries the President of Czech Republic M. Zeman positions himself primarily as a proponent of economic diplomacy<sup>141</sup>. And in

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<sup>141</sup> Милош Земан: я сторонник экономической дипломатии. 17.11.2017. – <http://news.rambler.ru/other/38438792-milosh-zeman-ya-storonnik-ekonomicheskoy-diplomatii/>

accordance with the priorities of the foreign policy of the Czech Government, economic diplomacy is among its geostrategic directions<sup>142</sup>.

To that the country did not come immediately. Originally (after the "velvet revolution") was for the modern Czech Republic in the foreground the solution of foreign policy issues. However, the development of the economy required the activation of foreign economic relations. On this basis, relevant tasks were allocated between the Ministry of Industry and Trade and the Ministry of Foreign Affairs of the Czech Republic. At the same time, there was often a problem in reaching agreements between two ministries, primarily in matters of foreign economic strategy.

The country's accession to the EU, strengthening of participation in international economic organizations (the Organization for economic cooperation and development OECD, the World Trade Organization, the IMF, World Bank, European customs Union, "the Visegrad four" and others) on the one hand, and modern challenges (such as international competition, trade disputes, periodically emerging crises and other) from the other hand forced the Government to pay attention and appropriate efforts to the formation of effective economic diplomacy. As a result, on the normative basis were formed its institutional component, defined its strategic objectives and intensified activities.

Modern economic diplomacy of the Czech Republic plays an important role in the process of formation, promotion and protection of the interests of the country in the institutions of the European Union. At both theoretical and practical levels, it is considered as a set of measures aimed at promoting the state policy in the sphere of production, movement and exchange of goods, services, labor and investment, in the formation of a positive image of the country in the world<sup>143</sup>.

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<sup>142</sup> Тарасов И. Ориентиры внешней политики Чехии. Опубликовано 17.09.2008. - <http://www.perspektivy.info/print.php?ID=35925>

<sup>143</sup> Economic Diplomacy and Export Promotion Activities. - [https://www.mzv.cz/jnp/en/foreign\\_relations/export\\_assistance/economic\\_diplomacy\\_and\\_export\\_promotion.html](https://www.mzv.cz/jnp/en/foreign_relations/export_assistance/economic_diplomacy_and_export_promotion.html)

For economic diplomacy to be effective, it must have a clear vision and orientation, must be effectively organized, equipped with sufficient human and financial resources, understood as an active **part of the state's foreign and economic policy and created and conducted** in partnership with the private sector and based upon real demand for Czech firms and their services. Czech economic diplomacy possesses a number of these attributes <sup>144</sup>.

The basis of Czech economic diplomacy is the export-oriented direction of its economy, a certain dependence of the country's economic development from transnational corporations, which own large Czech enterprises. Cooperation with international organizations requires considerable attention, because, according to the Ministry of foreign Affairs, the Czech Republic is a member of 64 international economic and financial organizations. Czech exports are mostly focused on the EU countries; in particular, the EU's share was 83.2% of total exports in 2015, 83.7% in 2016 <sup>145</sup> and 83.7% in 2017<sup>146</sup>. This dependence on the European market retains certain risks for Czech exports in case of crisis in the EU countries with possible negative consequences for the Czech economy. This circumstance also requires appropriate actions in the sector of economic diplomacy in the direction of territorial diversification of exports.

Promotion of Czech products to foreign markets and diversification of supplies from a geographical perspective is an integral part of the overall economic policy of the Czech Republic. In 2012 the Czech Government approved "The Export strategy of the Czech Republic for 2012-2020", which is based on The National innovation

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<sup>144</sup> Economic Diplomacy and Export Promotion Activities. - [https://www.mzv.cz/jnp/en/foreign\\_relations/export\\_assistance/economic\\_diplomacy\\_and\\_export\\_promotion.html](https://www.mzv.cz/jnp/en/foreign_relations/export_assistance/economic_diplomacy_and_export_promotion.html)

<sup>145</sup> Teritoriální struktura zahraničního obchodu ČR za leden - prosinec 2016. - <https://www.mpo.cz/cz/zahranicni-obchod/statistiky-zahranicniho-obchodu/zahranicni-obchod-1-12-2016--225902/>

<sup>146</sup> Teritoriální struktura zahraničního obchodu ČR za leden - prosinec 2017. - <https://www.mpo.cz/cz/zahranicni-obchod/statistiky-zahranicniho-obchodu/statisticky-prehled-zahranicniho-obchodu-cr-za-1-12-2017---zpresnene-udaje-k-30-4-2018--237168/>  
<https://www.mpo.cz/cz/zahranicni-obchod/statistiky-zahranicniho-obchodu/statisticky-prehled-zahranicniho-obchodu-cr-za-1-12-2017---zpresnene-udaje-k-30-4-2018--237168/>

strategy (approved on 27.09.2011), the Conception of foreign policy (approved on 20.07.2011) and the Security strategy of the Czech Republic (approved on 8.09.2011) <sup>147</sup>.

The main goal of the document is to determine the goals and ways to achieve them in the field of exports. The state promotes further increase of Czech supplies abroad and increases GDP, employment, improves macroeconomic indicators of the economy. The strategy is aimed at providing of the inclusion of the Czech Republic in the twenty most competitive countries of the world till 2020.

The export strategy is aimed at maximizing the use of the interaction of the state's proexport activities, at creating services for Czech exporters that would maximally contribute to their successful activities in foreign markets. Thus, this strategy should significantly improve the Czech Republic's international competitiveness by supporting exporters, diversifications of markets outside the EU and promoting the production of goods and services for high value-added exports.

The main goal of the Export strategy for 2012-2020 includes:

- increase number of exporters, expand volumes of exports and receiving benefits for long-term sustainable economic growth, employment and revenues of state budget;
- increase in exports in per capita calculation by 25% up to 2020;
- increase quantity of exporters by 15% up to 2020;
- increase quantity of exporters which are represented small and medium-sized enterprises by 50% up to 2020.

It is assumed that the achievement of the main goal of the Export strategy can be reached through the following components:

1) diversification of exports to countries outside the European Union, including on the basis of:

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<sup>147</sup> Exportní strategie České republiky pro období 2012 – 2020. - Ministerstvo průmyslu a obchodu. – [www.mpo.cz/cz/zahranicni-obchod/podpora-exportu/koncepce-a-strategie/exportni-strategie-cr-2012---2020--220213/](http://www.mpo.cz/cz/zahranicni-obchod/podpora-exportu/koncepce-a-strategie/exportni-strategie-cr-2012---2020--220213/)

- increase of exports outside the EU by 50% up to 2020 in compare to 2010;
  - doubling the annual growth rate of exports to third countries in compare with exports to the EU;
  - increase the amount of exporters to countries outside the EU by 25% up to 2020;
  - keep up an active trade balance with EU countries;
- 2) relocate of Czech exporters to segments and industries with higher added value:
- doubling the amount of innovative exporters (so called "born globals, born creative") up to 2020;
  - keep and possibly increase the amount of large export projects (over 1 billion Czech Crowns) performed by Czech exporters on average 15 projects per year;
  - reduction of value of production concentration by 15% up to 2020;
  - increase of export of services, including those with high added value, by 20% up to 2020;
- 3) maximum use of the positive synergy of certain activities of the state for export, which are resulting from complementary measures, effective coordination and cooperation of all interested parties.

The Strategy defines three main areas of export support:

Information for exporters (simplified access to information, trade contacts and statistics; analysis of external markets; infrastructure and human resources for exporters).

The development of exports (preparing to enter on foreign markets and specialized training; consultation of exporters; mechanisms of financing of export, export "ecosystem").

Development of trade opportunities (expansion of demand for Czech products; investment in exports; marketing and branding; trade policy; solving of exporters' problems).



To achieve these goals, it is planned to implement a set of practical measures, including, first of all, the following:

- reduction of legislative procedures in foreign economic activity;
- direct credit financing and insurance of export and investment operations with using of state resources;
- active use of innovative products and technologies to enter new markets;
- increase the volume of investments and transactions for the purchasing of foreign assets.

One of the main principles of the Export strategy is to identify priority and special markets for Czech exporters in cooperation with the business community. These markets are identified on the basis of growth potential and compatibility with the Czech economy. Thus, the Export strategy identified 12 priority countries for the development of trade and economic relations of the Czech Republic, these are in particular: Brazil, China, India, Iraq, Kazakhstan, Mexico, Russian Federation, Serbia, Turkey, Ukraine, USA, and Vietnam. In addition, the Strategy identifies a list of countries "of high interest" for foreign economic cooperation of the Czech Republic. These are: Angola, Argentina, Australia, Azerbaijan, Belarus, Canada, Chile, Columbia, Croatia, Egypt, Ethiopia, Ghana, Israel, Japan, Morocco, Moldavia, Nigeria, Norway, Peru, Senegal, Singapore, South Africa, Switzerland, Thailand and United Arab Emirates.

It should be noted that the update in December 2016 of the Export strategy implemented by the Ministry of industry and trade and the Ministry of Foreign Affairs of the Czech Republic highlights new most popular sectors in key markets for the country, primarily outside the European Union. In accordance developed information database became a significant basis for the cost economy of Czech companies and provides new opportunities for a larger number of small and medium-sized enterprises to enter new foreign markets. In

addition, a focus on industry opportunities outside the country assists to implement innovations and to increase competitiveness of Czech firms.

To evaluate the implementation of the Strategy, the following key indicators were identified: 1) increase in the amounts of exports of companies that use tools of state export support; 2) increase the number of job places in these companies; 3) increase in the volume of exports of innovative companies that are supported.

Institutionally and functionally economic diplomacy of the Czech Republic is provided primarily by the Central authorities, in particular the Ministry of Industry and Trade and the Ministry of Foreign Affairs.

In issues of economic diplomacy the Ministry of Industry and Trade is authorized to <sup>148</sup>:

- provide of energy and trade policy in the context of the EU common market and proexport policy in foreign economic activity;
- coordinate of the Czech Republic's foreign trade policy towards particular countries;
- provide conclusion of bilateral and multilateral trade and economic agreements, including trade agreements;
- realise of economic cooperation with the European Union, international trade and economic organizations (OECD, WTO) and others.

At the same time, foreign trade and exports are among the priorities of the Ministry of Industry and Trade. In particular, the Ministry supports exporters in removing barriers to foreign trade, concludes free trade agreements, and facilitates access to information for the organization of state and business missions. The target of these activities is to further increase the volume and diversification of exports <sup>149</sup>.

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<sup>148</sup> Ministerstvo průmyslu a obchodu. Působnost ministerstva. <https://www.mpo.cz/cz/rozcestnik/ministerstvo/o-ministerstvu/pusobnost-ministerstva/pusobnost-ministerstva--1926/>

<sup>149</sup> Priority Ministerstva průmyslu a obchodu. - <https://www.mpo.cz/cz/rozcestnik/ministerstvo/o-ministerstvu/pusobnost-ministerstva/pusobnost-ministerstva--1926/>

The Department of economic diplomacy and the Department of multilateral economic relations provide functional support for economic diplomacy within the Ministry of Foreign Affairs of the Czech Republic.

Important subjects of Czech economic diplomacy are special institutions whose main task is to provide comprehensive assistance to Czech exports and exporters. First of all, it is structures which are subordinate to the Ministry of Industry and Trade such as the Czech Trade Promotion Agency (Czech Trade) <sup>150</sup> and the Investment and Business Development Agency (Czechinvest) <sup>151</sup>.

The main goal of the Trade Promotion Agency is to promote of international trade and cooperation, support of foreign economic activity and trade activity of Czech enterprises abroad. Special attention is paid to the provision of assistance to small and medium-sized enterprises. Services of the Agency are divided into four components: 1) informational; 2) training; 3) consulting; 4) services of foreign missions. Such missions are operating in almost 50 countries.

The Agency provides the following basic free of charge services: initial consultations in client centers; information on the system of state export support; assessment of the client's readiness to export activities; reaction to requests of foreign companies for actual information; information on offers of foreign companies; necessary information for exporters about foreign markets, their specifics, contact details of foreign agencies and organizations.

In addition, the Investment and Business Development Agency provides paid services to exporters. These are, in particular, the following: detailed market analysis; gathering of data on the solvency of foreign partners; organization of trade negotiations; assistance in all forms of participation and holding of exhibitions; long-term comprehensive export support; organization of presentations of Czech companies abroad; educational programs; analysis of trends and trade opportunities; membership in the Export club CzechTrade.

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<sup>150</sup> Czech Trade. – [www.czechtrade.cz](http://www.czechtrade.cz)

<sup>151</sup> Czechinvest. – [www.czechinvest.cz](http://www.czechinvest.cz)

Important in ensuring activities of Czech economic diplomacy is the use of the SINPRO Information system, which supports the activities of the Ministry of Foreign Affairs, the Ministry of Industry and Trade of the Czech Republic, and the Czech Trade Agency.

A special role in the support of Czech exporters among the subjects of economic diplomacy is assigned to the "Society for the guarantee and insurance of exports» (EGAP – Exportní garanční a pojišťovací společnost). It is a state credit insurance company oriented on insurance of export credits against territorial and commercial risks associated with the export of goods and services from the Czech Republic. EGAP is part of the state export support system, which provides insurance services to exporters of Czech products regardless of the size of the enterprise, its legal form and volume of exports.

As an integral part of the system of state export policy, together with EGAP, functioning the Czech export Bank (ČEB – Česká exportní banka), created by the state to support exports. The mission of the Bank is to provide state support for exports through the provision of export credits and other related services. The peculiarity of such assistance is the Bank's policy in establishing the level of interest rates and volumes of long-term sources of export financing, which allow Czech exporters to be successful competitors in foreign markets.

Economic diplomacy of the Czech Republic uses a network of diplomatic missions abroad, where economic and trade sections (ECS) are an integral part of embassies. Trade counsellors in embassies and consulates provide assistance to national exporters in the market of the host country. There is also a network of public institutions with offices abroad. They cooperate closely with specialized entities of the Ministry of Foreign Affairs and the Ministry of Industry and Trade of the Czech Republic, for which the promotion of economic interests abroad is among their priorities.

An important tool for promoting Czech exports in foreign markets is the state subsidies for strategic sectors of the economy. In

industry and agriculture of the Czech Republic it is carried out by the Ministry of Industry and Trade <sup>152</sup> and the Ministry of Agriculture <sup>153</sup> in the form of guarantees in lending and leasing, guarantees for investments, loans with a reduced interest rate, subsidization of interest rates on loans, specialized programs of support of small and medium-sized enterprises. State subsidies allow Czech companies to enter foreign markets with goods which prices are lower than prices of competitors.

Thus, the economic diplomacy of the Czech Republic gives the country the opportunity to occupy with confidence high positions in promoting its economic interests in foreign markets, and in ensuring the effectiveness of foreign economic activity.

#### 7.4. Foreign economic activity and the economic diplomacy of Hungary

The foreign economic activity of Hungary, one of the four countries of the Visegrad four, is important for the economy and socio-economic development of the state. This is evidenced by the high level of export orientation of Hungarian gross domestic product (GDP): if in 1980 due to commodity exports formed 34% of Hungary's GDP, in 2000 already 59.8%, in 2010 – 73.4%, in 2011 – 80.2%, in 2013 – 80% and in 2015 – 83.2%<sup>154</sup>. The territorial and geographical orientation of Hungarian export interests is shown in the Table 7.2.

The high export orientation of GDP on the one side, and the high binding of exports to one market on another side, conceals certain risks for the country's economy, especially in the conditions of periodically emerging crises. In addition, the EU countries are characterized by the joint responsibility for the decisions taken by the Central authorities of the EU and in some cases such decisions do

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<sup>152</sup> Ministerstvo průmyslu a obchodu (MPO) – [www.mpo.cz](http://www.mpo.cz)

<sup>153</sup> Ministerstvo zemědělství (MZe) – [www.mze.cz](http://www.mze.cz)

<sup>154</sup> UNCTAD. Handbook of Statistics 2016. – UN, New York, 2016, P.8, 228.

not correspond with the national interests of the country, also together with the escalation of global competition they complement the potential of factors of negative impact on the state economy. Concern to this, Hungary is in urgent need to use effective mechanisms to support national exports, its promotion to foreign markets and the promotion of national economic interests in foreign economic relations. This important role is assigned to economic diplomacy, which is perceived in Hungary as a powerful tool for promoting of national economic interests, support and facilitate of foreign economic activity of national business.

Table 7.2. Geographical structure of exports of Hungary, % <sup>155</sup>

Year	EU countries	countries outside the EU	<i>among them:</i>	
			Asia	America
2012	77,5	22,5	6,4	3,7
2013	77,1	22,9	6,0	4,4
2014	78,3	21,7	5,3	4,9
2015	79,1	20,9	5,7	5,0
2016	79,5	20,5	5,8	4,8
2017	79,5	20,5	5,8	4,5

With the accession of the country to the European Union, in Hungary were adopted a number of legislative documents, which created a modern legal framework in the sector of foreign economic activity and economic diplomacy.

Main goals in the sphere of foreign economic relations of Hungary for the period up to 2020 are defined in the government strategy, which is consistent with the long-term foreign policy concept. The document defines main long-term objectives: total amount of exports are expected to be increased up to 140 billion euro, and the volume of annual foreign investments attracted to the Hungarian economy to be raised up to 3 billion euro. Strengthening the role of

<sup>155</sup> Based on: External trade in goods in HUF by groups of countries. Hungarian Central Statistical Office. – [www.ksh.hu/docs/eng/xstadat\\_annual/i\\_gkt016.html](http://www.ksh.hu/docs/eng/xstadat_annual/i_gkt016.html)

national small and medium-sized enterprises in foreign economic relations is considered to be important, what should contribute to the growth of employment and balanced economic development.

An important role in the foreign economic activity of Hungarian business belongs to the system of state support and promotion of exports. The existence of the necessary national regulations in accordance with the country's membership in the EU harmonized this system with basic requirements of the European Union. The main such requirement is the rejection of direct subsidies for export activities, however, it should be noted that there are a number of ways to circumvent such ban.

In this regard, the system of export promotion and support of foreign economic activity in Hungary consists of two components:

*the first* one is a set of export support instruments that provide open or indirect financing from the state budget and other possible sources (favourable financing of export operations, subsidization of interest rates on loans, provision of state grants and guarantees on loans, insurance of export credits and others);

*the second* one is indirect tools of exports support that do not provide the allocation of any funds to recipients (among its are: providing of advices on foreign economic activity, providing background and market information, organization of training of entrepreneurs etc).

Among the indirect forms of export promotion in Hungary, tax privileges consist up to 80% of all volumes of state support. The Hungarian system of tax privileges is designed to stimulate investment, primarily relatively large and efficient in terms of profitability, job creation and export expansion. As largest volumes of investments in Hungary made by foreign investors which focus their production on exports, to them belong main share of such tax privileges.

The state is also successful in supporting of investment by national small and medium-sized enterprises. State support in this segment of the economy has the following goals:

- 1) stimulation of investments, including foreign ones, improving the competitiveness of Hungarian goods in the world markets;
- 2) development of small and medium-sized businesses, as well as industrial parks;
- 3) support of the development of foreign trade, primarily exports.

State support funds are allocated on a competitive basis. At the same time, it is advisable to note that, in cases of providing such support to foreign investors, they are obliged to increase the share of Hungarian sub-suppliers of relevant products, components or materials.

According to the clause "support for the development of foreign trade" state financial assistance is allocated for the participation of Hungarian enterprises in foreign exhibitions, marketing research and advertising, the creation of foreign offices and representative offices, the introduction of quality certification systems and environmental requirements in accordance with EU standards.

In order to stimulate investments, especially foreign, and to increase on this basis of exports, in Hungary is widely practiced the formation of industrial parks. Two-thirds of their products are sold in foreign markets. This aspect of support of foreign economic activity should be of interest to Ukraine. The fact is that in the Ukrainian practice the industrial park is only "a territory equipped with the appropriate infrastructure, within which the participants of the industrial park can provide economic activities" in various industries <sup>156</sup>. Unlike Ukraine, in Hungary for attracting investors to industrial parks, they are provided on a common basis investment and regional tax privileges and accelerated depreciation. In addition, local governments can exempt them from local taxes for 5 years, reduce the fee for community utilities or provide a delay on these payments.

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<sup>156</sup> Про індустріальні парки. Закон України від 21.06.2012 №5018-VI (із змінами внесеними Законами від 4.07.2013 р. №406-VII і 24.11.2015 р. №818-VIII). - <http://zakon2.rada.gov.ua/laws/show/5018-17/page2>



The main institution for supporting of Hungarian exports through open or indirect financing from the state budget and other possible sources is the state company "EXIM"<sup>157</sup>. The main purpose of this company is to promote national exports and Hungarian investments abroad. Main forms of such support are public credit and export insurance. Starting from 2014, "EXIM" unites in one structure "EximBank" ("Hungarian export-import Bank" – "Magyar Export-Import Bank Zrt.") and "MEXIB" ("Hungarian export credit insurance" – "Magyar Exporthitel Biztosító Zrt."). At the legislative level of Hungary, their goals and objectives are defined as follows:

- stimulation and promotion of foreign economic relations, especially the export of Hungarian goods and services;
- practical realization of state interests related to export;
- increasing the competitiveness of Hungarian exporters in foreign markets;
- divide of financial risks in exports that cannot be insured by traditional market methods;
- further development of the financial institutional system, including the system of export financing and insurance of export credits, by means of the market economy, as well as in accordance with international standards.

The main functions of "EXIM" are: granting to Hungarian exporters with preferential loans, Bank guarantees, checking the creditworthiness of counterparties on behalf of customers, insuring of export operations.

Among the objects of insurance against market (commercial) and non-market (political) risks, which "MEXIB" undertakes, in particular, the following:

- the cost of producing goods or providing services on the basis of the export contract;
- claims against a foreign debtor, which is based on a foreign trade contract or loan agreement;

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<sup>157</sup> EXIM. - <https://exim.hu/>

- direct investments abroad in cases where the share of the Hungarian participant reaches 10% or more of the share capital of the enterprise.

Indirect instruments of support and stimulation of Hungarian exports, that do not provide for any financial resources to be allocated to recipients, are institutionally provided by such organizations as the "Hungarian national trading house" ("Magyar Nemzeti Kereskedőház Zrt.")<sup>158</sup> and the "Hungarian investment Promotion Agency" (Nemzeti Befektetési Ügynökség – HIPA)<sup>159</sup>.

The purpose and objectives of "Hungarian national trading house" defined the requirement of qualitative improvement in the future the efficiency of foreign economic activity of small and medium-sized enterprises through the combination of their efforts with the provision of state support. It is taken into account that such companies do not have sufficient competence and experience in the issues of exports, do not have the necessary financial resources. Therefore, "Hungarian national trading house", as a commercial organization with state participation, provides for the Hungarian small and medium-sized enterprises expert advices, assistance in marketing, export organization, as well as other necessary services, including credit and insurance of possible operations.

The peculiarity of the activity of "Hungarian national trading house" is the presence of not only the central structure, but formed and deployed network of Hungarian trading houses abroad. Their main task is to promote export expansion of products of Hungarian companies in foreign markets. Currently, "Hungarian national trading house" has trading houses in 46 countries, as well as 22 trade offices, which operate on the basis of agency agreements (mainly in neighboring countries with Hungary).

"Hungarian investment Promotion Agency" (HIPA) provides mainly support for foreign investments aimed at the creation of new production and realization of projects in the sphere of research and

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<sup>158</sup> Magyar Nemzeti Kereskedőház Zrt.- <http://kereskedohaz.hu/>

<sup>159</sup> Nemzeti Befektetési Ügynökség – HIPA. - <https://hipa.hu/main>

development. Herewith the main forms of investment promotion are the following:

- direct financial support based on government decisions of Hungary or competitions that are co-financed with the European Union;
- provision of privileges in case of the creation of new jobs;
- tax privileges.

It should be noted that the legal framework valid in Hungary for the provision of investment privileges is an integral part of the common legal space of the European Union. However, Hungary offers a wide range of investment incentives to foreign investors through activities of the "Hungarian Investment Promotion Agency". First of all, the Government of the state gradually reduces the administrative burden on business, implementing measures of improving of the competitiveness of not only small and medium-sized enterprises, but also large businesses in Hungary.

In order to maintain a balance between the real support of enterprises and current norms and requirements of the European Union, the Government concludes "strategic partnership agreements" with largest investors, which encourages them to continue their activities in the country and make their influence in ensuring the economic growth of the country. In such way are realizing measures of economic diplomacy of Hungary in the suitable forms of support.

In addition, large foreign investors in Hungary receive preferences on an individual basis by special government decisions. At the same time, there can be mutual conditions of the Government regarding relevant indicators of localization of production, requirements for development of research and design works, different areas of professional education etc.

At the state level, control over export and investment activities is imposed to the main subject of economic diplomacy – the Ministry of Foreign Economic Relations and Foreign Affairs of Hungary.



## CHAPTER 8.

# **Monetary integration of V4 states: experience for Ukraine**

*Mariia LYZUN*

### 8.1. Concepts of monetary integration

The process of integration, which originally developed actively only among limited number of countries, now are covering all continents of the world. The rapid increase in number of integration associations is the result of promoting the idea of economic openness, strengthening of specialization, the growing role of MNCs in the international division of labour. Monetary integration is one of the main trends of the global monetary system at the present stage of globalization of the world economy. Monetary integration should be considered in the aspect of implementation the coordinated monetary policies of its member-countries and the creation and functioning of international organizations engaged in interstate currency regulation.

Mediating all international economic relations of the subjects of the world economy, foreign exchange relations are experiencing profound qualitative changes together with the sphere of international production, services, investment. Monetary integration and the forms it takes, usually associated with regional economic integration and the emergence of regional currencies.

The most common in the scientific literature interpretation of integration's evolution is represented by B. Balassa, who identified five stages: free trade area, customs union, common market, economic union, political union (Balassa, 1961). The typology was based on criteria abolition of discrimination between foreign companies and degree of liberalization of the international factor movement. At the highest stage, the harmonization and unification of social economic and monetary policy takes place.

One of the most difficult practical problems concerns the process of transition to full monetary integration. The debate between "monetarists" and "economists" about strategy and the timing of further steps toward monetary union has dealt largely with this interim stage. "Monetarists" argue that positive steps toward monetary integration would strengthen and accelerate the process of economic integration. Such steps would force member nations to coordinate their economic and financial policies, thus reducing disparities in wage and price trends and making exchange-rate rigidity easier to achieve. "Economists" argue that policy harmonization and real economic integration must come first, and that further steps toward monetary integration should not be taken until wage and price changes have in fact converged and structural adaptations in response to intra-Community free trade been completed (Ingram, 1973).

But nevertheless, monetary integration leads to positive effects, if there are sufficient conditions. In a path-breaking paper, Rose used an augmented gravity equation to show that trade between countries sharing the same currency is much larger than trade between other pairs of countries (Rose, 2000). His cross-sectional regression results

imply that the bilateral trade between two currency-union countries is, on average, 3.35 times as large as the bilateral trade between other countries. In language used hereafter, the trade raising effect of a currency union is 235 per cent, and this is additional to the most obvious trade-raising effect of a currency union – the complete suppression of exchange-rate variability (Kenen, 2002).

Neoclassical growth model, developed by R. Baldwin, argues that the decline in real interest rates as a result of monetary union temporarily increases the rate of economic growth (Baldwin, 1989). However, reducing the currency risk also reduces the volume of expected corporate profits. Thus, the use of a common currency has a dual effect: reducing real interest on the one hand, and the reduction of expected investment income – on the other. Neoclassical model of economic growth is represented graphically in Figure 8.1.

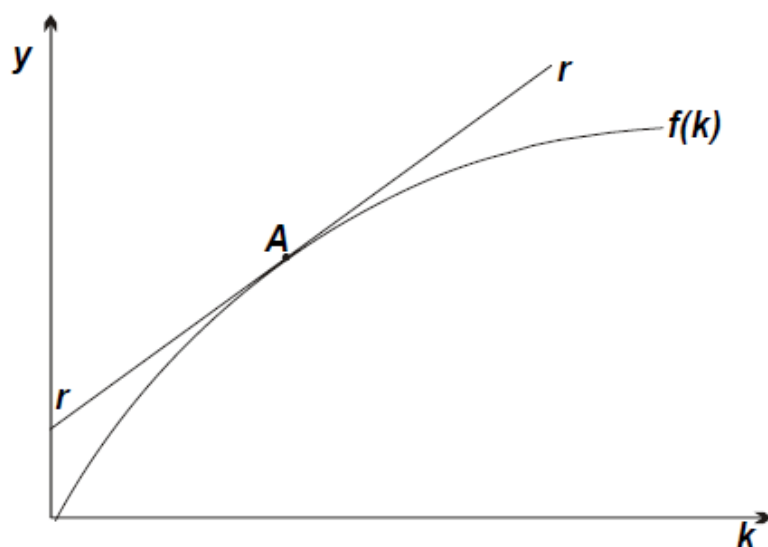


Figure 8.1 Neoclassical model of economic growth

Source: : Baldwin, 1989

The horizontal axis – the size of capital per manufacturer, vertical – production of one manufacturer. Line  $f(k)$  is the production function. Equilibrium in this model established when limit of capital productivity is equal to interest rate at which consumers refuse from future consumption. Equilibrium is reached at point A, where the

line  $rr$  (its slope is equal to the interest rate) is tangent to the production function. According to this model, economic growth is possible only under the conditions of population growth or external technological changes. Applying this model to the monetary union, we can assume that the abolition of currency risk leads to reduction of systemic risk and declining of interest rates (Figure 8.2). Reduction of interest rate makes line  $rr$  aslope, resulting the equilibrium moves from point  $A$  to point  $B$ , and is accompanied by accumulation of additional capital and the dynamics of economic growth. In the new equilibrium amounts of capital and production per producer increased. Thus, the decline in real interest rates as a result of monetary union temporarily increases the rate of economic growth.

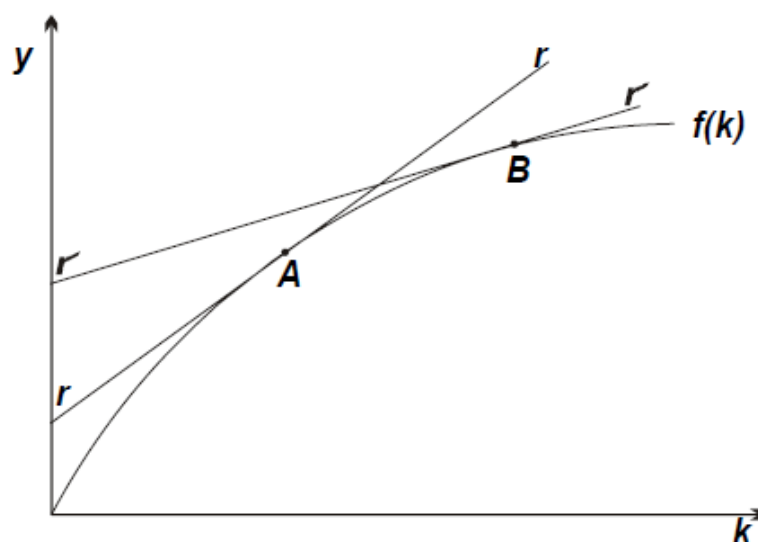


Figure 8.2. Neoclassical model of economic growth – the effect of monetary union

Source: Baldwin, 1989

Conditions necessary for effective currency (monetary) integration are considered in the theory of optimum (or optimal) currency area (OCA). Optimum currency area implies the existence of fixed rate between currencies and a limited range of floating exchange rates against the currencies of other countries.

The optimum currency area theory tries to answer an almost prohibitively difficult question: what is the optimal number of cur-



rencies to be used in one region. The difficulty of the question leads to a low operational precision of OCA theory. It is possible to distinguish two major streams of the optimum currency area literature. The first stream tries to find the crucial economic characteristics to determine where the (illusionary) borders for exchange rates should be drawn (1960s-1970s). The second stream (1970s-till now) assumes that any single country fulfills completely the requirements to make it an optimal member of a monetary union. As a result, the second approach does not continue in the search for characteristics, identified as important for choosing the participants in an optimum currency area. This literature focuses on studying the costs and the benefits to a country intending to participate in a currency area. The costs and benefits are compared and the question of participating in monetary union becomes largely an empirical problem. Later on, **OCA literature takes into account the “Lucas critique”, endogeneity** of the optimum currency area criteria and modern macroeconomic theories (Roman, Komarek, 2002)

An Optimum Currency Area fall within the ambit of currency unions. An OCA, using Mundell’s definition is ‘a domain within which exchange rates are fixed’ (Mundell, 1961). By this definition, Common Currency Area (CCA) would be a step further with the adoption of a single common currency among members of the currency union. Several structural preconditions have been cited as being necessary for an OCA. Mundell argues that a high degree of factor mobility is an essential ingredient. McKinnon, cites trade intensity or integration as a precondition (McKinnon, 1963). Kenen would examine regional production patterns for product diversification to determine if a region would be well suited for an OCA (Kenen, 1969). Yet other literature on the configuration needed for a country to be a candidate of a currency union identify factors, such as similar levels of inflation, extensive trade relationships, similar or synchronous business cycles and a certain extent of policy congruence (Bacha, 2008). The main factors influencing common currency areas are depicted on Figure 8.3.

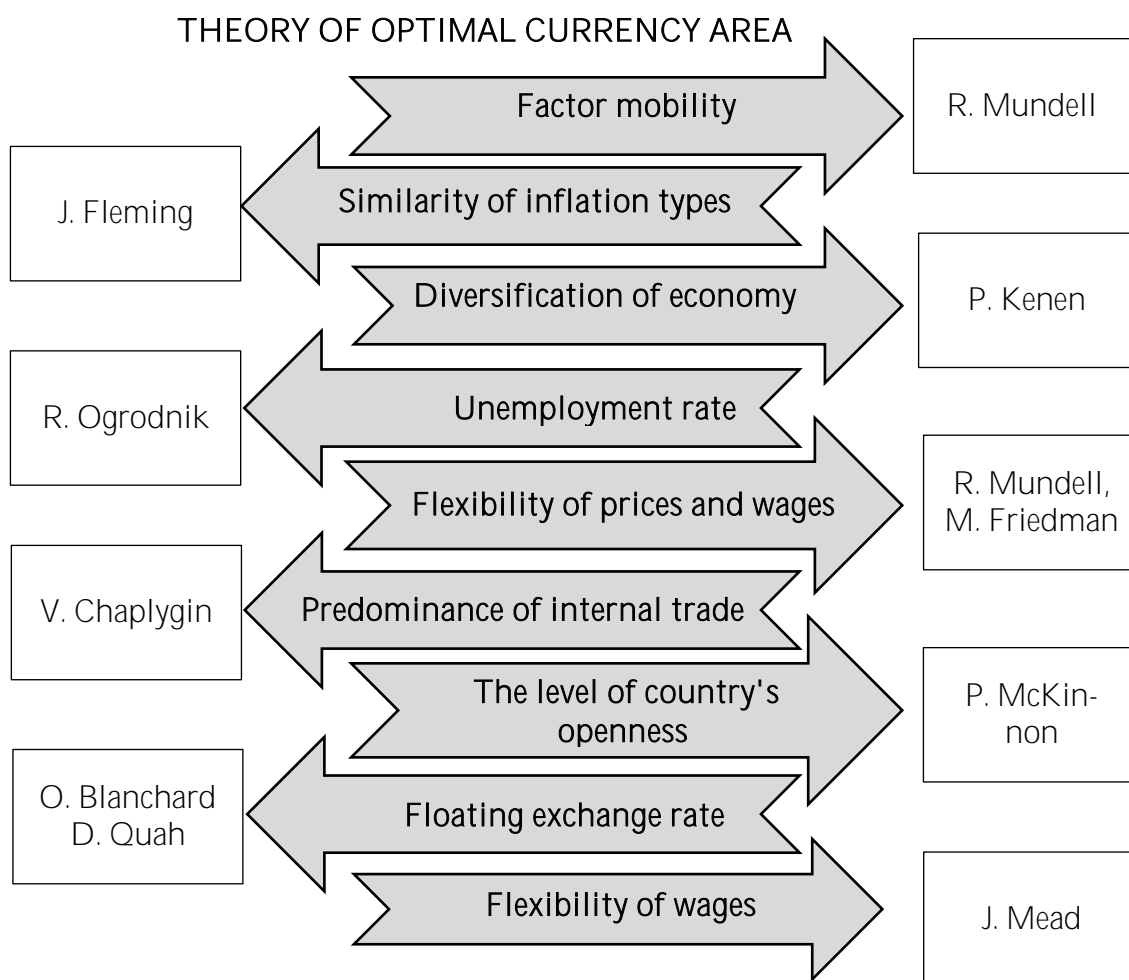


Figure 8.3. Main factors and researchers of the theory of optimal currency area

Source: McKinnon, 2000; Mundell, 1961; Kennen, 2002; Tavlas, 1993

Tavlas try to summarize main criteria of OCA and show their implications (Table 8.1). We still do not have general agreement on the relative importance of all of these criteria, nor on all of their interrelationships with one another. The recent Argentina crisis illustrates, however, that just meeting a few of the OCA criteria is not enough. While Argentina met the substantial currency substitution criteria with its high level of dollarization, its economy was rather closed with respect to trade and lacked a high degree of domestic economic flexibility. Coupled with the failure of its currency board to

promote fiscal as well as monetary discipline, the results were tragic. (See, for example, Willett, 2002).

Table 8.1. OCA Criteria

Criteria	Implications for OCA
1. Factor mobility	Alternative adjustment mechanisms.
2. Wage and price flexibility	
3. Size and openness.	High pass-through effect can make exchange rate changes ineffective High openness also reduces the cost of Keynesian adjustment under fixed rates.
4. Goods market integration	Promotes intra-regional trade and makes exchange rate fluctuations more costly.
5. Commodity diversification	Shocks tend to cancel out so less need for adjustment.
6. Fiscal integration	Transfers between states reduce adjustment pressure in the short-run.
7. Similar inflation trends	Reduces cost of common monetary policy.
8. Real exchange rate variability (Generalized PPP)	Affects amount of adjustment
9. Political factors.	Commitment of exchange rate and monetary policy coordination
10. Financial integration (It's ambiguous)	Can help finance payments imbalances. Consumers in countries with different economic situations can share risks. But it can also make floating rates work better.
11. Financial instability	Where speculation is unstable, high capital mobility makes flexible rates more costly.
12. Patterns of Shock	Short-term shocks can offset each other. Different patterns can favor fixed or flexible rates. Lowers cost of using common monetary policy. Optimal policy responses depend on nature of shocks.
a. Automatic stabilization	
b. Symmetric medium term shocks	
c. Optimal discretionary	
13. Optimal public finance	Can affect costs of fixed rates. Optimal inflation tax version is similar to differences in inflation rates.
14. New classical policy ineffectiveness	Surrender of monetary policy autonomy will not be costly.
15. Informativeness of price and quantity signals	The larger the variance of monetary disturbances is compared to that of real output, the less confusion about the shocks and the less adjustment of real exchange rate. Also, if the agents cannot distinguish between local and foreign shocks (by definition, in fixed regime), the response of real exchange rate is less.
16. Time inconsistency and credibility discipline problems	Creates case for use of fixed rates as a commitment technology to promote discipline.
17. Liability dollarization	Flexible rates increase the risk of balance sheet effects due to depreciation.
19. Endogenous OCA	Not necessary to fully meet the criteria before joining the currency union. Fixed rates will generate responses that reduce their costs

Source: Tavlas, 1993

Robert Mundell stated: the larger is the optimum currency area, the higher is the value of its currency because of reducing transaction costs for agents (Mundell, 1961). The common currency as a medium of exchange automatically excludes the costs of conversion and forward coatings that are required under floating exchange rate. Another important point related to monetary integration – improve the efficiency of financial operations and risk management in the financial market. Increasing number of available financial instruments allows both lenders and borrowers to rise the diversification of their portfolio through the acquisition or sale of assets with different risk (Tavlas, 1993).

Currency union has a positive impact on trade between states involved in. The impact of monetary integration on bilateral trade between the countries are researched detail by Rose, Engel, Frankel, Barro (Rose, 1999; Rose, Engel, 2000; Frankel, Rose, 2002; Barro 2003).

Along with all the benefits of the association, there are also costs that are likely to bear by the countries involved in the integration process. First of all, this is inability to use floating exchange rate as a tool for stabilizing the balance of payments after exposure to various shocks.

Another important drawback of fixed exchange rate regime or monetary integration for potential participants is the loss of autonomy in conducting of monetary policy. Autonomy in this case means that the government is able to run the policy, which is effective only for a given state or region. Loss of control over the national currency is a threat to the state (Ichiyama, 1975). While there are differences in price levels, productivity and wages under fixed exchange rate, the threaten of inflation will always follow the states with surplus of balance of payments; and constant depression and unemployment will follow the states with BoP deficits. Soft monetary policy will be adequate for the regions with high unemployment rate, whereas the increase in inflation, on the contrary, may need to make it tighter. The reasons for losing the independence of monetary policy under the

monetary integration are conveniently to considered in the context of so-called "incompatible triangle" or "impossible trinity" (Figure 8.4).

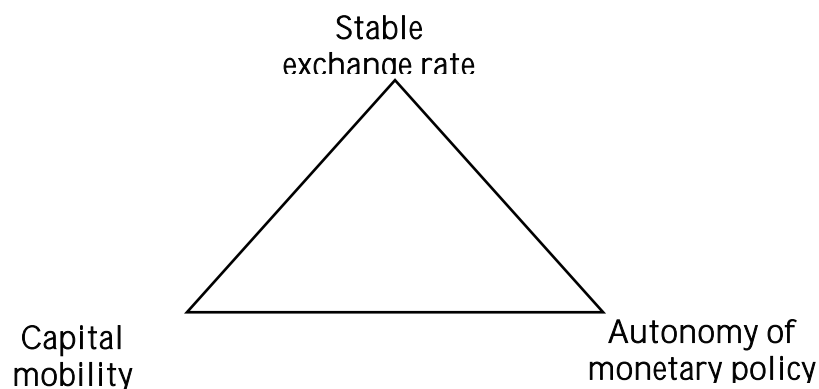


Figure 8.4. Model of "impossible trinity"

Source: Mundell, 1961

The main idea of this triangle is that all three conditions could not be reached simultaneously. The state must choose only two of them and give up with third one.

The ideas of OCA and CCA found their practical implication in the forms of regional currency areas (RCA). Regional currency areas originated from various roots such as historical, "existential", economic and especially political reasons. The importance of political factors can be found e.g. in the process of creating an independent Germany in 1871 (as well as in 1990, when east and west part Germany were unified) and many other states (e.g. Switzerland and Italy). So-called existential reasons were characteristic of the group of geographically small countries (El Salvador, Kiribati, Liechtenstein, Monaco, Nauru and Vatican), where the acceptance and the legalization of the foreign trade partner currency were a necessity. For the sake of completeness, there are also states, where more than one currency circulates within its borders. These are e.g. Hong-Kong and Macao. The best known and economically strongest is certainly the European Monetary Union (EMU) founded in a cashless form in 1999 (Roman, Komarek, 2002)

## 8.2. Regional monetary unions in Europe and beyond

The first formal steps of European monetary integration go almost as far back in time as the OCA theory (see Table 8.2).

Table 8.2. Monetary integration steps in Europe

1958	Establishment of the Monetary Committee
1962	A proposal for economic and monetary union among the members of the European Economic Community (EEC) is first floated in the Marjolin Memorandum.
1964	A Committee of Governors of the central banks of the Member States of the EEC is formed to institutionalise the cooperation among EEC central banks.
1970	The Werner Report sets out a plan to realise an economic and monetary union in the Community by 1980.
1972	A system (the “snake”) for the progressive narrowing of the margins of fluctuation between the currencies of the Member States of the EEC is established.
1973	The European Monetary Cooperation Fund (EMCF) is set up to ensure the proper operation of the snake.
1974	The ECOFIN Council adopted a Decision to foster the convergence of economic policies and a Directive on stability, growth and full employment.
1979	The European Monetary System (EMS) is created.
1988	The European Council mandates a committee of experts under the chairmanship of Jacques Delors (the “Delors Committee”) to make proposals for the realisation of EMU.
1989	The “Delors Report” is submitted to the European Council.
1989	The European Council agrees on the realisation of EMU in three stages.
1990	Completion of “One Money, One Market” evaluation that had been commissioned in 1988 as an input for the Delors Report.
1990	Stage One of EMU begins in July.
1993	The Treaty on European Union enters into force.
1994	Stage Two of EMU begins and the EMI is established.
1997	The European Council in June agrees on the Stability and Growth Pact.
1998	In May Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal and Finland are considered to fulfil the necessary conditions for the adoption of the euro as their single currency; the Members of the Executive Board of the ECB are appointed.
1998	The ECB and the ESCB are established in June.
1998	In October the ECB announces the strategy and the operational framework for the single monetary policy it will conduct from 1 January 1999.
1999	In January Stage Three of EMU begins; the euro is launched; conversion rates are fixed irrevocably; a single monetary policy is established for the euro area.
2001	Greece joins the euro area.
2004	In May the national central banks (NCBs) of 10 new EU Members join the ESCB.
2007	Slovenia joins the euro area.
2008.	Cyprus and Malta join the euro area, Bulgaria and Rumania join the EU and ESCB
2009	Slovakia joins the EMU.
2011	Estonia joins the EMU.
2014	Latvia joins the EMU.
2015	Lithuania joins the EMU.

Source: author’s modification of Mongelli, 2008.

In October 1962 the Commission issued a memorandum – known as the Marjolin Memorandum – that can be considered as the official starting point of monetary integration in Europe. The memorandum kicked off the discussion on a common currency and prompted several measures in the field of monetary cooperation. The exchange rates of the members of the European Economic Community (EEC) were never directly fixed, although they were all pegged to the US Dollar. At the time exchange rate stability was still secured by the Bretton Woods Arrangement, and there was no urgent need for a new institutional arrangements among European currencies. Under the provisions of the memorandum, a Committee of Governors (CoG) of the national central banks of the EEC was established in 1964. Over the years the Committee gradually gained in importance as it started developing, and managing, an institutional framework for monetary cooperation. It was this committee that prepared the first draft of the Statute of the ECB in 1990 (Mongelli, 2008).

By the end of the 1960s, the international environment changed due to persistent current account deficits of the US (the anchor country of the Bretton Woods System) and the emergence of widespread inflationary pressures that were then exacerbated by the first oilshock. The Bretton Woods System collapsed in August 1971 and the members of the EEC pursued different economic policies that in turn led to exchange rate tensions among them and even threatened to disrupt the customs union and the common agricultural market. In 1969 the Heads of State or Government requested a plan for the realisation of an economic and monetary union. The result was the Werner Report published in 1970, and that proposed to achieve economic and monetary union in several stages by 1980. While the final goal of monetary union was never achieved, as the report turned out to be too advanced for the level of economic and financial integration prevailing at the time, some of its elements could still be implemented. In 1972, after the demise of the Bretton

Woods system, the “currency snake”, an exchange rate arrangement for European countries, was created<sup>160</sup>.

Monetary cooperation became closer; internal and external monetary stability became important goals. Countries with relatively high inflation found it easier to pursue disinflation policies. This fostered a downward convergence of inflation rates, reduced excessive exchange rate volatility, and promoted trade and an improvement in overall economic performance. However, the lack of fiscal convergence remained a source of tension as some countries ran persistently large budget deficits.

The EMS lasted from 1979 until the launch of the euro in 1999. Exchange rates were based on the ECU, whose value was determined as a weighted average of the participating currencies. Officially no currency was designated as an anchor. However, the Deutsche Mark and the Bundesbank were unquestionably the centre of the EMS. During this period it went through four main phases and several periods of turbulence.

The first phase of the EMS lasted during 1979-85 and is marked with still maintained capital controls, significant inflation differentials, variances in budget deficits and public debt among EEC states. Full nominal convergence had not been established yet. With fixed nominal exchange rates this resulted in continued misalignments that required frequent adjustment of the official parities<sup>161</sup>, which periodically brought up questions about the sustainability of the ERM.

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<sup>160</sup> According to the Smithsonian agreement, IMF members pledged to support fluctuations of their exchange rates against the US dollar in the range of  $\pm 2,25\%$  (so-called "tunnel"), while EEC states in addition allowed mutual fluctuations between each other in narrower limits – up to  $\pm 1,125\%$  ("mini-tunnel" or "snake") – introducing the system known as "snake in the tunnel". It is fair to note that such regime was not long-lasting – in 1973 the EU lifted up the limits of fluctuations against the dollar (i.e. a snake came out of the tunnel) and expanded the range of mutual fluctuations to  $\pm 2,25\%$ . Overall, by the end of the 1970s only 5 of 9 EEC states consistently adhered to the regime of snake (Germany, Denmark and the Benelux countries), the others exited before.

<sup>161</sup> During this first phase, there were nine adjustments



The second phase of the EMS spanned from 1986 to 1992. Several EMS members (but not all) managed to bring down their inflation rates towards German inflation rates (in this phase the EMS is described by many as a “Deutsche Mark Area”). The quantity of adjustments of official parities was reduced<sup>162</sup>, capital controls were being dismantled and were officially banned as of July 1990. Owing to the impossible trinity proposition (refers to the fact that three desiderata of governments – i.e. free trade and capital mobility, monetary policy autonomy, and fixed exchange rates – cannot be reconciled), all central banks participating in the ERM had de facto renounced an independent monetary policy.

The third phase of the EMS, from September 1992 until March 1993, is marked by the most severe crisis of the whole EMS arrangement. Misalignments kept growing (albeit at a slower pace), because some countries were unable to reduce inflation. The tight monetary policy pursued by the Bundesbank following reunification and the shock of the Danish electorate voting against the Maastricht Treaty alarmed the exchange markets and prompted speculative attacks on the overvalued currencies that almost destroyed the EMS. The UK and Italy were forced to leave the ERM (Italy then rejoined in 1996) and the fluctuation margins were widened from  $\pm 2.25$  to  $\pm 15\%$ .

The fourth phase of the EMS runs until the launch of the euro, allowing the principle of fixed exchange rates, although much weakened, to be kept alive. The European Monetary System ceased to function in its original form when 11 EU countries irrevocably fixed their exchange rates in preparation to adopt the euro. The successor of the original arrangement was ERM II<sup>163</sup>, launched on 1 January 1999. In it, the ECU basket is discarded and the euro becomes an anchor for other participating currencies (Mongelli, 2008).

Starting from 1999 we can talk about the existence of the European Economic and Monetary Union (EMU): the euro is intro-

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<sup>162</sup> There were three more adjustments till 1987

<sup>163</sup> Currencies were allowed to fluctuate within  $\pm 15\%$  to the euro. The state needs to join the ERM II regime at least for two years to join the eurozone

duced first in the cashless form, and from 2002 – in cash circulation. Institutional adjustment of monetary policy is carried by ESCB and the ECB. 8 new members gradually join 11 initiators state forming the Euro Area.

In addition to the EMU states, euro is also used now by 6 countries outside the EU and by 4 overseas territories of the EU states. Exchange rates of 22 currencies outside the euro zone are pegged to the euro. Euro has become the second largest world reserve currency (over 20% of world reserves).

Recent years were very challenging for the EMU – debt crisis that harm Ireland, Portugal and especially Greece; Brekzit effect – these and other events give grounds for Eurosceptics to talk about the collapse of the entire system of European integration. However, the attempts to reform the architecture of the EMU are made (the first stage of reform was completed in 2015, the second phase – so-called "Report of five presidents" – is scheduled for the period 2015-2025).

The influence of the OCA theory on the design of EMU is rather blurred. The arguments underlying the Delors Report, which then formed the blueprint for the Maastricht Treaty, are principally aimed at reducing the risk from destabilising exchange rate volatilities and misalignments. Several commentators noted that this argument had no direct links, or very tenuous links at best, with the OCA theory (Bini-Smaghi et al., 1993; Baldwin and Wyplosz, 2006): i.e. the OCA properties did not figure prominently in the Delors Report. Furthermore, the "One Market, One Money" Report held a critical view of the "early" OCA theory.

In this lies a paradox as, at the same time, the "One Market, One Money" Report greatly contributed to revitalising interest in the debate on the OCA theory. But the empirical studies surveyed did not show strong effects of exchange rate volatility on either trade or international investment flows. This, in turn, justifies that monetary unification was seen as a limiting case of reduction of exchange rate

volatility leading to the elimination of exchange rate uncertainty and to reductions in transactions costs and hedging costs.

It should be noted that the OCA theory mainly focus on the positive effects of monetary integration, while the formation and management of monetary union is sooner institutional and normative process. In this aspect two historical stages of European integration should be considered: "pseudo monetary union" (typical to EMS) and "complete monetary union" (EMU).

Empirical work on the optimality of a European Economic and Monetary Union has dealt with four issues. A large body of work has sought to assess the cost to European countries of giving up exchange rate changes by measuring the co-variation of the exogenous shocks affecting those countries and thus the extent to which those countries (or subsets of those countries) are subject to symmetric or asymmetric shocks. Another body of work has tackled the same question by examining the degree of domestic diversification in European countries or decomposing output shocks into those that are place-specific and those that are industry-specific. A third body of work has looked at the role of labour mobility in international and inter-regional adjustment. And there is now a rapidly growing literature on the ways which a monetary union might itself affect the size and nature of exogenous shocks, the extent of labour mobility, and so on (Kenen, 2002).

Most of the researchers agree that the EMU is monetary union of the countries that do not meet the criteria of OCA theories (Lars and Drea, 2010; Krugman 2012). Among the most controversial conditions are: relatively low cross-border labour mobility, the lack of fiscal supranational mechanism of accumulation and transfer, high differentiation of domestic prices, low trade openness, differences in national economic structures.

But EMU is not only the single example of existing monetary union. Table 8.3 provides a survey of other non-European regional monetary unions.

Table 8.3. Regional monetary unions beyond the Europe

Monetary union	Currency	Central Bank
Eastern Caribbean Currency Union (1950)	Eastern Caribbean dollar (is pegged to the USD, prior 1976 it had been pegged to GBP)	Eastern Caribbean Currency Authority (1950-1982); Eastern Caribbean central bank (1983)
Central African Economic and Monetary Community (1945)	Central African CFA franc (it has been pegged to FRF and now to EUR)	Banque des États de l'Afrique Centrale
West Africa Economic and Monetary Union (1945)	The West African CFA franc (it has been pegged to FRF and now to EUR)	Banque Centrale des États de l'Afrique de l'Ouest

A key lessons of the euro zone crisis and the Global Financial Crisis (GFC) of 2008-2009 shows a serious threat to the stability of the monetary union, which follows financial shocks, coupled with the real imbalances. Monetary unions that have not paid enough attention to the financial integration of the participants in the period of economic growth can observe a sharp decline among the state-debtors. The slowdown of capital inflows leads to banking and structural crises in these countries. The chances of currency area's success depend on the effective institutions and policies aimed at resolving the financial and real asymmetric shocks that affect its members. In the absence of such mechanisms, asymmetrical financial turmoil may stimulate the destructive processes in the banking system, leading to structural and private debt crises, thus destabilizing monetary union.

The net benefits of joining a currency area change over time. What may have seemed like a viable and successful currency union destined to “live together happily ever after” (the first euro decade) may have turned into a bad union with strong centrifugal forces at times of asymmetric shocks that test the union's viability (the second euro decade). Tighter unions may offer enough pooling mechanisms

that provide sufficient insurance to increase the stability of a union. Achieving a tighter union, however, may require overcoming coordination problems, a move toward a banking union, possible union-wide deposit insurance backed by union-wide backstop mechanisms, and effective institutions to deal with the resultant moral hazard challenges (De Grauwe, 2011; Krugman, 2012; Aizenman, 2016).

A union of developing countries anchored to a global stable currency prevents runaway inflation (e.g., the CFA franc). However, it also implies the inability to use monetary policy to deal with asymmetric real and financial shocks impacting the union (e.g., with terms of trade shocks affecting countries in differential ways) as well as with external shocks that change the exchange rates between global currencies. Currency unions with low financial depth and low financial integration among its members may face complex dynamic challenges. Limited finance may reduce the exposure to asymmetric financial shocks, thereby stabilizing a currency union, at a cost of inhibiting the growth of sectors that depend on external funding. currency union member country blessed with exportable commodities may find that union membership inhibits diversification toward **manufacturing and magnifies the impact of “Dutch Disease”** concerns over time, thus hindering the adjustment to terms of trade shocks. Similar concerns apply to other versions of fixed exchange rates (e.g., currency board, dollarization etc.).<sup>164</sup>

### 8.3. Monetary integration of the Slovak Republic

After overcoming the economic crisis of the late 1990's and the introduction of market reforms, the Government of the Slovak Republic set itself a rather ambitious task – to enter the euro zone as

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<sup>164</sup> Kazakhstan's fixed exchange rate regime was one of the latest victims of the declining commodity prices, moving to a floating exchange rate in August 2015. Plummeting oil prices and devaluations by Russia and China increased exponentially the cost of defending the currency against the dollar. Azerbaijan followed Kazakhstan in moving to a floating currency in December 2015, after a devaluation of about 25% in February 2015.

the first among the countries of the Visegrad Group. A formal condition for the readiness of the country to adopt a single currency is the fulfilment of nominal convergence requirements – the Maastricht criteria, which aims to ensure balanced economic development of the member countries of the Eurozone. Based on data from Eurostat, the Ministry of Finance of the Slovak Republic and the National Bank of Slovakia, VÚB analysts investigated the fulfilment of the convergence criteria during the transformation period. The results of research are shown in Table 8.4.

Table 8.4. Implementation of the Maastricht criteria by the Slovak Republic during the transformation period

Criterion and its fulfilling	Period of time			
	2005	2006	2007	2008
Government deficit (% GDP)	2,8	3,7	2,2	2,0
<i>Fulfilling</i>	<b>v</b>	<b>v</b>	<b>v</b>	<b>v</b>
Government dept (% HDP)	34,1	30,4	29,4	31,0
<i>Fulfilling</i>	<b>v</b>	<b>v</b>	<b>v</b>	<b>v</b>
Measure of inflation (%)	2,8	4,3	1,9	2,9
<i>Fulfilling</i>	×	×	<b>v</b>	<b>v</b>
Stability of long-term interest rates (%)	3,5	4,4	4,7	4,5
<i>Fulfilling</i>	<b>v</b>	<b>v</b>	<b>v</b>	<b>v</b>

Source: J.Klučka, S. Strelcová, E. Leláková Implementation of euro in Slovakia// Mechanics. Transport. Communications. - issue 2, 2009: <http://www.mtc-aj.com/library/353.pdf>

It should be noted that the position of the Slovak government was to implement the policy in favour of satisfying the convergence criteria, since it was considered inevitable and necessary, regardless of joining the euro zone. Indeed, effective public finance, education and health systems, as well as a flexible labour market, are important for the successful development of any country's economy.

Accession to the Eurozone has become an important step in the country's entry into European structures and has influenced the further development of the economy of Slovakia. The process of preparation for joining the euro area began in mid-2003, namely a year before the country actually joined the European Union, with the

Government approval of "Strategy for the introduction of the euro in the Slovak Republic". Although the practical implementation of this strategy began with the accession in 2005 to the ERM II and compliance with the Maastricht criteria. The euro adoption process was completed on January 1, 2009. The entire process of joining Slovakia to the euro zone is divided into 4 stages and is presented in Table 8.5.

Table 8.5. The process of Euro introduction in Slovakia

1st stage – till the entrance to ERM II	
2005	Going through access procedures for the entrance to the mechanism of exchange rates ERM II
2nd stage – from the entrance to ERM II to the decision about the entrance of SR to Eurozone	
28.11. 2005	Entrance to ERM II
till May 2008	Convergence reports of EC and ECB
May – June 2008	Evaluation procedure in European institutions
June 2008	Decision of Council of EU about the cancellation of exception
June 2008	Determination of conversion rate SKK/EUR by the Council of EU
3rd stage – from the decision about the entrance to Eurozone to the entrance to Eurozone	
July – December 2008	Providing with the necessary amount of euronotes and mintage for the cashflow of SR
September – December 2008	Providing NBS and commercial banks with euronotes and coins
December 2008	Providing retail sector with euronotes and coins
July 2008 – December 2009	Compulsory dual pricing – all retail prices, payslips, pensions etc. will be compulsorily stated both in euros and Slovak crowns.
till 31 December 2008	Conversion of cashpoints, automatic and other coin and banknote operating machines.
4th stage – after the entrance to the Eurozone	
1 January 2009	Euro is introduced at the same time to the cashflow as well as the cashless flow without the interim period by the so-called „Big-Bang Scenario“ and becomes a legal currency on the territory of SR. Slovak crown becomes a partial unit of euro in the conversion rate stated by the Council of EU.
till 16 January 2009	Dual cashflow – during a short period of a dual cashflow on the territory of SR it is possible to use euro as well as Slovak crowns as means of payment. However the Slovak crowns are not put back into the circulation but are gradually withdrawn from it, and processed on the premises of NBS.
from 17 January 2009	Continuation of exchange of Slovak crowns for euro coins and notes in the commercial banks and NBS. Slovak circulation euro coins are the valid currency in all countries of eurozone and circulation coins of other countries of eurozone are the valid currency in Slovakia. Banknotes are the same in the whole Eurozone.
till 31 December 2009	Compulsory dual pricing
till June 2010	Recommended dual pricing

Source: J.Klučka, S. Strelcová, E. Leľáková Implementation of euro in Slovakia// Mechanics. Transport. Communications. - Issue 2, 2009: <http://www.mtc-aj.com/library/353.pdf>

Slovakia's accession to the eurozone coincided with the most devastating year of the global financial crisis. 2009 was wrapped up by instability and uncertainty around the world, but the economic indicators presented in Table 8.6 indicate that Slovakia maintains monetary and fiscal stability.

Table 8.6. Macroeconomic indicators of Slovakia 2003-2016

indicator Years	Growth of real GDP	Inflation	Unemployment rate	Export, bil- lion euros
2003	4.7 %	8.4 %	15.2 %	19.4
2004	5.2 %	7.5 %	14.3 %	29.6
2005	6.5 %	2.8 %	11.6 %	32.9
2006	8.5 %	4.3 %	10.4 %	40.9
2007	10.4 %	1.9 %	8.4 %	47.3
2008	6.4 %	3.9 %	7.7 %	49.5
2009	- 4.7 %	0.9 %	11.4 %	39.7
2010	4.0 %	0.7 %	12.5 %	48.3
2011	3.3 %	4.1 %	13.6 %	56.4
2012	3.4 %	3.7 %	14.4 %	62.1
2013	0.9 %	1.5 %	13.5 %	64.2
2014	2.5 %	- 0.1 %	12.3 %	64.7
2015	3.6 %	- 0.3 %	10.6 %	67.9
2016	3.3 %	- 0.5 %	9.7 %	70.1

Source: The Statistical Office of the Slovak Republic ([www.statistics.sk](http://www.statistics.sk)); EUROSTAT ([www.ec.europa.eu/Eurostat](http://www.ec.europa.eu/Eurostat)); Slovak National Bank ([www.nbs.sk](http://www.nbs.sk))

During 2007-2015, Slovakia received 12 billion euros from EU funds, accounting for 15% of GDP and more than 2144 euros per capita. Within the convergence objective, European funds are targeted at regions where GDP per capita is below 75% of the EU average. With the exception of Bratislava, the rest of the regions of the country were entitled to these funds. Instead, Bratislava received financial support to improve competitiveness, support innovation, employment and social inclusion.

The introduction of the euro in Slovakia has had a positive impact on many economic processes, but it also has its drawbacks. Among the advantages of joining the euro area, it is necessary to distinguish between lowering transaction costs, reducing currency risks; price transparency, increased pressure on the implementation of fiscal policy. In this case, there are a number of restrictions and



risks, among which one of the most significant is the loss of autonomy in the field of monetary policy and the ability to respond to market unbalances in the development of the world economy by changing the exchange rate of the national currency.

Thus, Slovakia shows an example of the positive effects of the introduction of the euro, which is accompanied by a reduction in transaction costs of 0.3% of GDP annually<sup>165</sup>. However, joining the euro area still does not give a clear effect of positive long-term effects on investment, employment and economic growth, mainly due to the coincidence in time of the introduction of the euro in Slovakia and the deployment of the global recession. Nevertheless, the experience of Slovakia confirms the need for flexible labour markets and goods to offset the loss of national monetary policy and proves the importance of a common currency for countries with intensive trade relations.

#### 8.4. Monetary integration of the Republic of Poland

The Republic of Poland has undertaken to introduce a single European currency during its accession to the European Union in 2004, although there were no specific terms for its entry into the currency union. At first, after joining the EU, the vision of the Polish government and society was in line with the political advice of the international institutions. In particular, the International Monetary Fund (IMF) was a supporter of the early adoption of the euro by Poland due to its expected impact on trade recovery, reducing borrowing costs and accelerating economic development. However, with the onset of the global financial crisis, the costs of joining the euro area have become clearer. The new member states, including Poland, start to review the benefits of the currency union and the prospect of a reform of the EMU.

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<sup>165</sup>Goliaš P. Slovakia in eurozone// INEKO.- July 2015: <http://Slovakia%20in%20Eurozone.pdf>

According to the convergence report of the European Commission for 2016<sup>166</sup>, Poland does not fulfil the conditions for adopting the euro, considering the assessment of legal consistency, the fulfilment of the convergence criteria and some additional factors.

Poland fulfils one of the most important convergence criteria, namely price stability. It should be noted that the average inflation rate in Poland during the 12 months to April 2016 was -0.5%, which is below the reference value of 0.7%. It is expected that such a trend will continue over the next few years.

The annual inflation rate became negative in August 2014 and dropped to its lowest level (-1.3%) in February 2015. These changes were mainly due to the drop-in of world oil and food prices. According to the European Commission's forecast, inflation is expected to increase gradually from -0.6% in 2016 to 1.6% in 2017 (Figure 8.5). The comparatively low prices in Poland (about 55% of the euro area average in 2014 p.) indicates the potential for further convergence of prices in the long run.

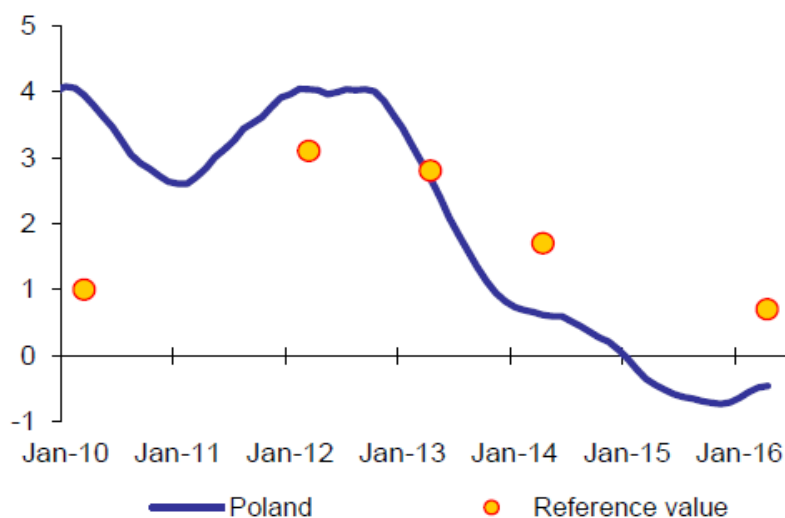


Figure 8.5. Implementation of the convergence criterion on inflation from 2010 by Poland

Source: Eurostat, Commission services' Spring 2016 Forecast.

<sup>166</sup> Convergence Report - June 2016 (PDF) // European Commission Institutional Papers 26. June 2016. Brussels. PDF. 200pp: [https://ec.europa.eu/info/sites/info/files/file\\_import/ip026\\_en\\_2.pdf](https://ec.europa.eu/info/sites/info/files/file_import/ip026_en_2.pdf)

With regard to the level of the state budget deficit, Poland also fulfils this convergence criterion. The general government budget deficit fell from 4.0% of GDP in 2013 to 3.3% in 2014 due to the implementation of fiscal consolidation measures<sup>167</sup>. The ratio of the deficit to GDP in 2015 increased to 2.6%, remained unchanged (2.6% of GDP) in 2016, and according to the European Commission forecast, it will increase to 3.1% in 2017. The ratio of total public debt to GDP increased from 51.3% in 2015 to 52.7% in 2017 (Fig. 1.7.). According to the European Commission's assessment, there is a risk that Poland will not comply with the conditions of the Stability and Growth Pact, as there is a risk of significant deviation from the recommended rate. It should be noted that Poland remains the only EU country that does not plan to create an independent tax council.

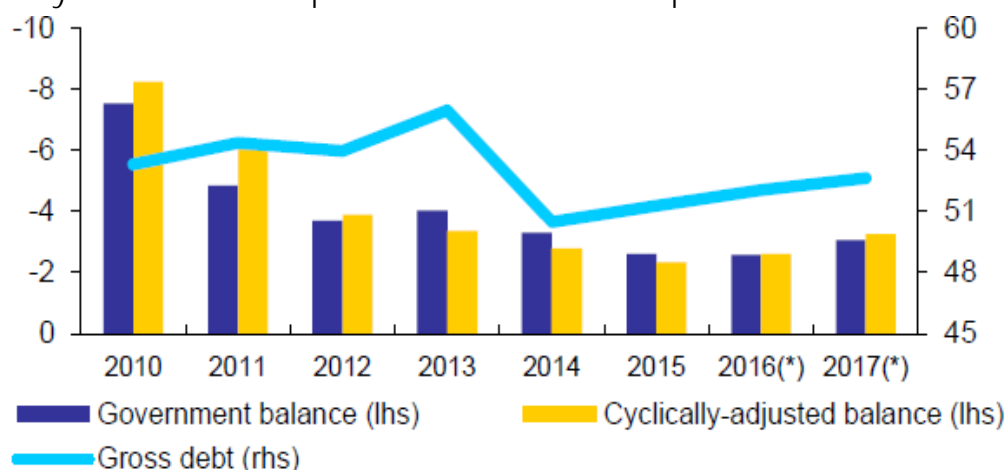


Figure 8.6. Implementation of the convergence criterion for the balance of the state budget and public debt from 2010 by Poland

Source: Eurostat, Commission services.

Poland also fulfils the convergence criterion for long-term interest rates. The medium-term long-term interest rate in April 2016 was 2.9%, which is lower than the reference value (4.0%).

However, Poland does not fulfil the exchange rate convergence criterion. Polish zloty does not participate in ERM II. Poland uses the regime of floating exchange rates, which allows for intervention in

<sup>167</sup> Convergence Report - June 2016 (PDF)// European Commission Institutional Papers 26. June 2016. Brussels. PDF. 200pp. [https://ec.europa.eu/info/sites/info/files/file\\_import/ip026\\_en\\_2.pdf](https://ec.europa.eu/info/sites/info/files/file_import/ip026_en_2.pdf)

the foreign exchange market by the central bank. In addition, there are a number of legislative issues that need to be brought into line with the requirements of the EMU, in particular the Law on the National Bank of Poland and the Constitution of the Republic of Poland.

But it should be noted that the decision on the introduction of the euro is not only economical, it is political factor that is often predominant. From this perspective, the advantages of introducing the euro in Poland should be attributed<sup>168</sup>:

1. The application of the euro moves Poland to the speedway of Europe of "two speeds";
2. The euro stinks from the protection of external threats to the sovereignty of the country;
3. Public opinion on the adoption of the euro;
4. Legal obligations.

Today, the transition to a single European currency in Poland is considered only in the long run. In 2016, Minister of Development and Finance M. Moravetsky declared that for the country it is unprofitable to join the euro zone, but in the medium term, the situation may change.

Thus, the attractiveness of the adoption of the euro for Poland has decreased for two main reasons. First, Poland has demonstrated more effective national supervisory and regulatory systems than the euro area countries, and its monetary policy has been more effective in supporting sustainable economic growth. Secondly, the benefits of adopting the euro related to trade, reducing borrowing costs and reducing transaction costs have been significantly overestimated.

## 8.5. Monetary integration of Ukraine

Theory of optimum currency areas caused increased interest on the part of Ukrainian scientists and politicians for justification of

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<sup>168</sup> Carlson M., Carroll C., Chan I and others. Should Poland Join the Euro?//An Economic and Political Analysis – Princeton University. – 2016

strategic vector for economic (including monetary) integration. Despite the fact that current political realities actually decided for Ukraine this dilemma, rejecting the eastern direction of integration, but the OCA concept could still be helpful for the overall arguing of monetary integration, analysis of its potential benefits or costs and selection of instruments for exchange rate policy.

Most of the pre-crisis scientific researches, devoted to empirical application of OCA theories for Ukraine, obviously dealt with the issues of monetary integration within the CIS. However, a definite conclusion concerning readiness of Ukraine for monetary integration toward post-Soviet states or Western Europe has not been done. The results of some studies showed the benefits of integration, while the results of others were opposite (Table 8.7).

One of the latest researches of OCA effectiveness criteria for Ukraine has been done by S. Shumska and is based on statistics till 2012. Among the indicators for verification criteria are: mutual volatility of real exchange rate, volatility and correlation of real sector, monetary and inflation indicators, the relative size of economies and mutual trade. The standard deviation for the fluctuations of the real exchange rate of hryvnia to euro (0.16) was less than hryvnia/ruble ratio (0.22). Therefore, according to the criterion of exchange rate volatility, joining the Customs Union for Ukraine may have more losses (and therefore stronger mechanisms of alignment for domestic prices and wages) in comparison with the euro zone.

Undervaluation and overvaluation of the national currency determines the parity of its purchasing power. Under globalization, these phenomena have a transitory effect on the functioning of the country's economy. They affect exporters and importers, the competitiveness and profitability of companies, change the situation with external debt and attract foreign investment. However, instability of the exchange rate and its undervaluation cause negative socio-economic consequences. They are expressed in structural changes of the economy due to the shrinking share of consumption in the na-

tional income, the growth of consumer prices and, ultimately, worsening living standards of the population.

Table 8.7 Results of pre-crisis researches arguing CIS monetary integration

Authors	States	Conclusions
O. Tereschenko (2001, 2003)	Belarus Russia	Non-readiness of these economies for the monetary union. The need for significant changes.
S. Drobyshevskiy, D. Polevoi (2004, 2007)	12 states of CIS	8 of 13 indicators in Ukraine fulfill the conditions of the OCA theory, Belarus – 6, Kazakhstan – 10. So, in general the readiest for currency union with Russia is Kazakhstan; Ukraine and Belarus later
V. Chaplygin, A Hughes-Hallett., C. Richter (2006)	Belarus, Kazakhstan, Russia, Ukraine	Creating of union is unnecessarily expensive in terms of growth and reduction of volatility. Economic losses from union forming in the long run will be the lowest for Russia, slightly bigger for Ukraine and Kazakhstan, significant for Belarus. In the short run most affected will be Ukraine and Kazakhstan
T. Savchenko, M.Rebryk, D. Kazarinov (2012)	Belarus, Kazakhstan, Russia, Ukraine	There are quite adequate financial conditions for monetary integration of 4 countries, there is only reservations on Belarus, as only 3 of 8 investigated indicators suggest a partial convergence of Belarus with the other three countries. However, the authors caution that definitive conclusions on this issue will be made on the results of further research
D. Mayes, V. Korhonen (2006)	Belarus, Kazakhstan, Russia, Ukraine	The Union will be very unequal, as Russia is the largest by different indicators. There is a need to develop an effective mechanism of balancing national interests
A. Ursu (2010)	Belarus, Kazakhstan, Russia, Ukraine	Check in of all four countries finds their partial convergence. As a result of the union formation the Dutch disease of Russian economy is quite possible to spread westward, therefore, the costs of formation of such a union will increase. If we exclude Ukraine from the model, three countries which remain will tend to complete cointegration

Source: Shumska S. (2013) Theory of optimum currency area: criteria and analysis of indicators of integration processes in Ukraine and the CIS, No 4, pp. 48-65 (in Ukrainian)

On December 18th - 24th of 2015, Razumkov Center conducted sociological surveys in all regions of Ukraine, excluding Crimea and the occupied territories of Donetsk and Luhansk regions.

The results have shown that the hryvnia to the dollar exchange rate has no impact on the standard of living of only 7.4% of the population, significant impact for 44.4 %, and is the determining factor for the welfare of 23.9% of the population.

In Ukraine, different approaches have been tested over the years of independence. Among them are: floating regime (1993), currency board (1994), managed floating exchange rate regime (1997), pegged exchange rate within horizontal bands (1998), fixing on the Ukrainian Interbank Stock Exchange (1999), floating (2000-2003), the gradual transition to free floating (2006-2007), as the weighted average of buyers and sellers rates on the interbank foreign exchange market on the previous day with the possibility of deviation  $\pm 2$  and its fixation (2009-2012). Currently, the NBU is trying to implement a free-floating exchange rate regime.

2014-2015 was real period of testing for Ukraine, which was marked by a series of economic shocks. The most painful among them was monetary crisis. Inability of the National Bank of Ukraine to cope with the challenges facing the country, including the result of Russian aggression, led to deep currency crisis, the most prominent appearance of which was the striking devaluation of national currency.

As a result, over the last decade, Ukraine's economy is again experiencing severe crisis caused by macroeconomic imbalances that were accumulated long before the 2008 and 2014 crisis. In addition to a number of factors that are prerequisites for both periods of crisis, the regime of de facto fixed exchange rate leads to increase in the trade deficit, that was financed mainly by FDI inflows and external borrowings in pre-crisis years. However, when access to international capital markets was deteriorated, capital inflows changed into outflows, resulting a powerful devaluating pressure on the national currency.

De facto, the National Bank switched to the inflation targeting regime in the beginning of 2016. Prior to this, preparatory work was underway to create all critical prerequisites for its implementation.

In the first phase (by 2015) technical prerequisites were created, in particular, macroeconomic models were built, a quarterly forecast cycle was developed. In the second phase (in the first half of 2015), institutional conditions were created, including ensuring the independence of the National Bank in using the instruments to achieve its goal, eliminating fiscal dominance, changing the decision-making process on monetary policy. Since the second half of 2015, the third phase has started – the implementation of all key elements of inflation targeting.

When choosing a currency exchange rate regime, it is important to form the hierarchy of goals to be achieved by it. Many authors emphasize macroeconomic objectives: economic growth (GDP), shadow economy reduction, full employment, investment growth, containment of inflation, stimulation of economic activity. Among the objectives of monetary policy are: achieving growth in foreign currency savings, improving the availability of loans, optimizing the balance of payments, increasing the flow of foreign investments, achieving an adequate level of gross reserves, servicing and payment of external debt.

Signing the Association agreement with the EU, Ukraine has committed itself to reform the financial sector, whose ultimate goal should be the complete liberalization of the currency market and cross-border capital flows. For the process of financial liberalization international experience should be researched to select the appropriate pace and sequence of reforms that will take benefits of free movement of capital and minimize the risks associated with the volatility of its flow. Experience of instant financial liberalization (e.g. in Israel, Argentina) clearly demonstrates that under the absence of appropriate macro-stability and developed financial markets, shock mechanisms can significantly enhance the economic crisis.

In Ukraine, the situation with three components of the "impossible trinity" are as follows: in the conditions of free movement of capital, support of the exchange rate implies the rejection of adjustment of monetary indicators. In other words, it is impossible to



target inflation and not to release hryvnia in the "free floating" and / or setting limits for movement of capital.

Recent studies of IMF economists also show that states which introduced capital controls before the global recession, were less affected by the sharp economic recession. The choice of regulatory instruments depends on many factors: economic conditions, the level of reserves, the stability of the national currency and so on.

It should be noted that monetary integration of Ukraine and the EU, under doctrine of the theory of optimum currency areas, does not assume introducing the single European currency into circulation for Ukraine (at least not during the nearest decades). This is particularly the convergence of institutions for national monetary systems and instruments of monetary policy, and coordination of monetary policy objectives to improve foreign relations. The tools of this process can be joint consultations, formation of mechanism for currency adjustment to the new paradigm, joining the international monetary and financial organizations.

Potential benefits of monetary integration of Ukraine and the EU could be: lower total monetary dependence on the US dollar; improvement of the currency structure of international reserves of the NBU and external borrowing; development of credit cooperation with the EU; increasing of market liquidity of the euro in Ukraine.

As of today, none of the above options for monetary integration of Ukraine – whether the creation of a single currency area in the CIS (not possible for political reasons) or joining the euro zone – are not practically feasible because of the potentially negative consequences for the national economy caused by different monetary transmission mechanisms, fiscal systems, stock markets. Currently Ukraine has no preconditions to pass through the integration process necessary for joining the monetary union. This prevents objectively insufficient development of industrial potential, very different social and economic structure, stratification and lack of polycentric structure.



CHAPTER 9.

**Achieving Better Air Quality in Cities  
through Changes in Transport  
Behaviours: Dream or Necessity for  
Contemporary Regional  
Development? Review of Trends and  
Studies**

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Preface

**D**ynamically growing road traffic seen as a source of air pollution is one of the major development challenges to contemporary cities and regions. Damages caused by road traffic generate real costs, which increasingly more often are brought to the economists' attention. Even if cost calculation is still far from perfect, it helps us realise how powerful and negative impact conventional motor vehicles have on our natural environment and health. However, although research studies have already revealed these detrimental effects, societies are still unaware of the scale of the prob-

lem. Public opinion takes either an ambiguous stance or even questions it (a case similar to, e.g., global warming) because methods used to measure the phenomenon are very complicated.

Despite the above, central government authorities, but also local governments in an increasing number of cities, are putting in place methods to ‘internalise’ external costs generated by transport into all sorts of charges and taxes and offer public support to those who use means of transport that are less environmentally harmful or neutral. Yet, different instruments used to reduce emissions produce different results. Thus, we may examine not only the costs of emission but also the efficiency of individual instruments of air protection policy.

The main goal of the Chapter is to present an overview of studies and solutions applied with a view to stimulate the growth of sustainable transport. We have focused on the identification of instruments of air protection policy and on measuring the efficiency of the policy aimed at improving air quality. The case study of Poland is also discussed. For many years the problem was neglected, also due to sectoral approach to transport management, which is why nowadays cities and regions are faced with a huge challenge in building sustainable mobility patterns in Poland. New, efficient instruments are needed, which – together with already validated tools – could help improve air quality and meet the EU standards. Suffices to say that for Poland, e.g., the National Exposure Reduction Target for suspended dust PM 2.5<sup>169</sup>, to be achieved by 2020, is 18  $\mu\text{g}/\text{m}^3$  while the target recommended by the World Health Organisation is 10  $\mu\text{g}/\text{m}^3$ . In fact, in recent years the indicator has been systematically decreasing (in 2011 it amounted to 26.9  $\mu\text{g}/\text{m}^3$ , while in 2016 22  $\mu\text{g}/\text{m}^3$ ),<sup>170</sup>

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<sup>169</sup> National Exposure Reduction Targets for PM2.5 for individual countries are identified based on national average exposure ratios. These targets must be met by 1 January 2020. Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (OJEU L. 152 of 11.06.2008 p. 1) Art. 15 para. 1 (the so called CAFE Directive), <https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32008L0050&from=pl> [accessed 05.09.2018]

<sup>170</sup> [http://powietrze.gios.gov.pl/pjp/content/exposure\\_dust\\_pm](http://powietrze.gios.gov.pl/pjp/content/exposure_dust_pm) [accessed 24.08.2018]

nevertheless the target seems little realistic within such a short period of time. Changes in Poland will be difficult, especially when we take account of the transport behaviour patterns of urban residents.

### 9.1. Conventional motor vehicles as a threat to environment and health

Vehicles running on classical fuels from non-renewable sources are among the main causes of deteriorating ambient air quality and health of people living urban areas. Transport as a sector of economy is responsible for ca. 20% of emissions of carbon compounds to air in Europe.<sup>171</sup> Environmental pollution problem is particularly acute in cities, where the number of cars as sources of emissions and the population exposed to their harmful consequences are the biggest and the most condensed. Ambient air pollution and accompanying negative effects of road traffic, such as heat islands, noise, accidents or limited physical activity translate into significantly higher morbidity and mortality rates especially in urban areas.<sup>172</sup> Total costs of the above described phenomena in the EU Member States are estimated at EUR 502bn annually.<sup>173</sup>

Vehicles with diesel engines are the biggest emitters of nitrogen oxides (NO<sub>x</sub>) and suspended dust (PM 10 and PM 2.5), which are harmful to humans. Recent studies conducted in this area in the EU demonstrated that cars with 1.4 – 2.0 l petrol engines of Euro 2 class in rural areas generate costs in the range of 0.2 eurocents per car-ki-

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<sup>171</sup> See: Banister D. (2008). *The sustainable mobility paradigm*. "Transport Policy" 15, pp. 73-80; Brog W., Erl E., Mense N. (2004). *Individualised marketing: changing travel behaviour for a better environment*. In: Communicating Environmentally Sustainable Transport. The Role of Soft Measures. OECD, pp. 83-97

<sup>172</sup> See: Bhalla K., Shotten M., Cohen A., Brauer M., Shahraz S., Burnett R., Leach-Kemon K., Freedman G., Murray C.J.L. (2014). *Transport for Health: The Global Burden of Disease From Motorized Road Transport*. World Bank Group, Washington, DC <http://documents.worldbank.org/curated/en/2014/01/19308007/transport-health-global-burden-disease-motorized-road-transport>; WHO (2015). Global Health Observatory. [http://www.who.int/gho/road\\_safety/mortality/en/](http://www.who.int/gho/road_safety/mortality/en/). Accessed 26/10/2015

<sup>173</sup> INFRAS (2000). *Traffic congestion, pollution and accidents result in significant direct and indirect costs*. INFRAS Consulting Group for Policy Analysis and Implementation ([www.INFRAS.ch](http://www.INFRAS.ch)) and IWW, Universitaet Karlsruhe, Germany ([www.iww.uni-karlsruhe.de](http://www.iww.uni-karlsruhe.de))

lometer (calculations and prices from 2010) and costs generated by vehicles with diesel engines generate cost of 0.7 eurocents. In urban areas the difference drastically increases and reaches 0.7 eurocents for petrol engines and as much as 3.2 eurocents for diesel vehicles. More technologically advanced vehicles (Euro 6 class) generate lower costs, however, differences between costs generated by diesel engines are maintained (0.2 eurocents in rural areas compared to 0.1 for petrol engine vehicles and 0.7 eurocents in urban areas compared to 0.4 for petrol engine vehicles). For vehicles bigger than passenger cars these costs skyrocket.<sup>174</sup>

In Poland the problem is exacerbated by the increasing number of imported second hand cars, over 50% of which are 10 years or older. In 2015 almost 800k cars were imported to Poland and only as little as 8% were below 4 years and 39% below 10 years. In 2016 imports increased by almost 1/3, as a result we ended up with more than **1 mio. 'new' used cars in the market.**<sup>175</sup> Thus, typically second hand cars are the main body of automotive trade flows in Poland. In 2017 cars offered for sale in Poland were the oldest among the countries of the Visegrad Group. While the average age of a car offered for sale in Slovakia was 9 years, in the Czech Republic 10.4, and in Hungary 11.6, average age of a second hand car offered for sale in Poland was 11.9 years.<sup>176</sup>

The increasing number of cars on Polish roads forces out the elaboration of an efficient vehicle approval scheme. Experts in the field claim that Polish roads are full of cars which should never be approved and driven due to their poor technical shape. Yet, as evidenced by the number of registration documents seized by traffic inspectors, they are widely present in Poland. This is also the result of

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<sup>174</sup> For more see: Korzhenevych A., Dehnen N., Bröcker J., Holtkamp M, Meier H., Gibson G., Varma A., Cox V. (2014). *Update of the Handbook on External Costs of Transport, Final Report*. European Commission – DG Mobility and Transport, pp. 39-43

<sup>175</sup> *Import używanych samochodów osobowych do Polski w latach 2003-2016*, Polski Związek Przemysłu Motoryzacyjnego, <http://www.pzpm.org.pl/Rynek-motoryzacyjny/Import-uzywanych-samochodow/Import-samochodow-uzywanych-wg-MF/Import-uzywanych-samochodow-osobowych-do-Polski-w-latach-2003-2016> [accessed 24.08.2018].

<sup>176</sup> <https://moto.rp.pl/archiwum/5216-polacy-kupuja-najstarsze-auta-w-europie-wschodniej> [accessed 01.09.2018]

incorrect procedures at vehicle testing centres. Controls with respect to that have revealed cases of negligence on the side of diagnostic services, which do not test the content of flue-gases when flue-gas stack is on or take measurements at incorrect rpm/min which is why results in studies are unreliable and far from reality. The absence of efficient supervision over the technical condition of motor vehicles undermines safety and increases their negative environmental impact.<sup>177</sup>

Besides traffic, including intensive traffic in city centres, what counts are secondary emissions of dust particles (PM10 and PM 2.5) from open spaces, roads and streets. The issue is often overlooked while it significantly impacts the degree of pollution and its accumulation. Reduction of dust load deposited on street surfaces and put in motion by cars through systematic cleaning of streets (drive ways, preferably wet cleaning twice a week) is important.

## 9.2. Intervention for sustainable mobility and internalisation of environmental externalities

In the language of economics, costs generated by transport are called ‘negative externalities’ as they are effects of actions of one individuals having impact on the other individuals. However, the latter have no influence over their strength or direction. This situation leads to economic inefficiencies on the societal level.<sup>178</sup> Such effects entail costs borne by actors other than those who generate them.<sup>179</sup> It prevents us from reaching the social wellbeing optimum, since the improvement of individual utility (e.g., purchase of a new car) usually deteriorates the utility of others (by, e.g., worsening environmental

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<sup>177</sup> Information on the results of inspection „Dopuszczanie pojazdów do ruchu drogowego”, Department of Infrastructure, KIN.430.007.2016 Nr ewid. 184/2016/P/16/028/KIN, <https://www.nik.gov.pl/plik/id,13098,vp,15510.pdf> [accessed 10.08.2018].

<sup>178</sup> Sokołowicz M.E. (2015). *Rozwój terytorialny w świetle dorobku ekonomii instytucjonalnej. Przestrzeń-bliskość-instytucje*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego, pp. 43-44.

<sup>179</sup> Korzhenevych A., Dehnen N., Bröcker J., Holtkamp M, Meier H., Gibson G., Varma A., Cox V. (2014). *Update of the Handbook on External Costs of Transport, Final Report*. European Commission – DG Mobility and Transport, p. X.

conditions). That justifies a variety of public sector interferences, such as regulations (bans and orders), financial instruments (taxes, environmental charges, subsidies for those who purchase environmentally-friendly products or services, etc.), and investments in environmental solutions (e.g., the development of public transport to replace road transport infrastructure). These instruments, more or less directly, impact the accomplishment of the so-called utility function by a particular entity (a household or an enterprise). They influence profits, costs, utility, consumer welfare, etc.; in broad terms it is about the impact on economic choices made by individuals. Taking the scope of impact as a criterion we may distinguish instruments, which are:

- individual – dedicated to various users of the environment, i.e., residents, businesses, public institutions, etc.;
- institutional – instruments, which support the setting up of organisations and institutions, building up missions, structures, competences, human and financial resources, cooperation among organisations, institutions, and sectors;
- systemic – designed to provide regulatory and economic environment, within which residents, institutions and organisations can operate smoothly.

The nature of an instrument determines the scale and scope of its impact (Table 9.1). Regardless of the classification, key lies in complementarities, which help develop a system of sustainable mobility. Economic and market mechanisms deployed in the environmental policy are in fact ancillary to legal and administrative regulations since they:

- complement or foster the impact of legal and administrative instruments;
- work towards minimising environmental social costs;
- provide premises for taking economically rational decisions as to the allocation of resources for environmental goals and resource management at different levels, i.e., economic, social, and spatial.



While legal and administrative regulations are rather rigid and binding, other instruments are flexible and can be used depending on local and regional specificity. Activities based on ‘soft’ solutions resulting from a social contract (self-government authorities, corporations, employers) offer opportunities for developing environmentally-friendly attitudes.

Table 9.1. Instruments that stimulate sustainable mobility

		Legal and administrative instruments
Legal instruments	Certificates and permits	<ul style="list-style-type: none"> <li>• Environmental certificates</li> </ul>
	Performance-based standards	<ul style="list-style-type: none"> <li>• <i>Boosting the efficiency of mandatory vehicles inspection programmes</i></li> <li>• <i>Ambient air protection programmes, Environmental programmes</i></li> <li>• <i>Transportation demand management</i></li> <li>• <i>Local development planning with public transport in mind</i></li> </ul>
	Bans and restrictions	<ul style="list-style-type: none"> <li>• <i>Reducing traffic in city centres and in sensitive zones</i></li> <li>• <i>Restricted entry or ban on entry to downtown areas for vehicles not complying with specific environmental requirements</i></li> <li>• <i>Enforcement of emission quality control systems</i></li> </ul>
	Prescriptive standards	<ul style="list-style-type: none"> <li>• Emission standards for new vehicles</li> <li>• Fuel consumption standards (improved fuel efficiency)</li> <li>• Air-conditioning standards</li> <li>• <i>Standards for parking spaces</i></li> </ul>
		Market and fiscal instruments
Economic instruments	Emissions trading	<ul style="list-style-type: none"> <li>• Emissions trading in the automotive sector</li> </ul>
	Financial incentives	<ul style="list-style-type: none"> <li>• Financial incentives for the purchase of low emission vehicles</li> <li>• Financial incentives for reducing emissions from existing vehicles: programme of scrapping old, high emission vehicles; subsidies for retrofitting vehicles with emission control devices</li> <li>• <i>Subsidies for public transport</i></li> <li>• <i>Exemptions and allowances for using public transport</i></li> </ul>
	Charges and penalty fees	<ul style="list-style-type: none"> <li>• Penalty fees for failure to draft and implement air protection programmes</li> <li>• Higher fuel charges for high-emission and energy-consuming vehicles</li> <li>• <i>Charges for driving on highly congested roads</i></li> <li>• <i>Zone charges that limit free access</i></li> </ul>
	Support schemes (subsidies, taxes, tax allowances)	<ul style="list-style-type: none"> <li>• Environmental tax reform</li> <li>• Financial support for the production of micro-mobile vehicles (electric bicycles included)</li> </ul>

Instruments of psychosocial impact and “nudges”	<b>“Negotiated agreements”</b>	
	Consultations and debates	<ul style="list-style-type: none"> <li>• <i>Social consultations in participatory budgeting procedure</i></li> <li>• <i>Instruments of social participation</i></li> </ul>
	Negotiated contracts/agreements	<ul style="list-style-type: none"> <li>• <i>Agreements negotiated with car manufacturers and dealers for the supply of low-emission vehicles</i></li> <li>• <i>Agreements negotiated with businesses concerning Mobility Plans for enterprises</i></li> <li>• <i>Agreements between local authorities and housing construction companies aimed at solving local transport problems</i></li> </ul>
	Voluntary governance and corporate social responsibility	
	Voluntary agreements	<ul style="list-style-type: none"> <li>• <i>Mobility plans for enterprises</i></li> <li>• <i>Fleet operators (company cars) buying low-emission vehicles</i></li> </ul>
	“House-in-Order”	<ul style="list-style-type: none"> <li>• <i>Fuel-saving driving styles (training courses)</i></li> <li>• <i>Changes in behaviour pattern</i></li> <li>• <i>Disseminating innovative solutions</i></li> </ul>
	Ancillary instruments	
	Code of Practice, good practices	<ul style="list-style-type: none"> <li>• <i>Benchmarking of cities in the context of sustainable transport</i></li> <li>• <i>New urban mobility culture</i></li> <li>• <i>Transportation demand management principles</i></li> <li>• <i>Eco-labels/stickers</i></li> </ul>
	Marketing, promotion	<ul style="list-style-type: none"> <li>• <i>Information campaigns</i></li> <li>• <i>Promoting innovative solutions</i></li> </ul>
	Information disclosure (information sources and flow)	<ul style="list-style-type: none"> <li>• <i>Databases (collecting, processing and making data available)</i></li> <li>• <i>Information flow system</i></li> <li>• <i>Coherent visualisation system</i></li> <li>• <i>Modelling of dispersion of air pollutants</i></li> </ul>
	Capacity building	<ul style="list-style-type: none"> <li>• <i>Building environmental awareness</i></li> <li>• <i>Improving social awareness with regard to the coordination of spatial and transport policies</i></li> <li>• <i>Incentives for changing the driving style</i></li> </ul>

*Instruments available to local authorities are in italics.*

**Source:** own compilation based on Air Quality Management Policy Tools Leading Practice Research, Alberta Environment, 2007, p. 5; <https://open.alberta.ca/dataset/27147ba3-d6cf-46c6-b720-e764df5e76aa/resource/fabbe8c7-529f-4ed3-8f11-ed4cf7d26d77/download/2007-airqualitymanagementtools-dec2007.pdf>, amended [accessed 13.08.2018].

Instruments that exert psychosocial impact cannot be overestimated in the context of environmental awareness building and for the approval of adopted legal and economic arrangements. Their wide array facilitates multi-track education for sustainable mobility and, consequently, active protection of air through adopting specific

behaviour patterns. Also, many psychological “nudges” designed to affect individual behaviour, can be applied.<sup>180</sup>

In principle, instruments are put in place to improve the environmental impact of entities to who they are addressed. Nevertheless, the above presented instruments vary as to their efficiency and efficacy in making enterprises and households exhibit environmentally-friendly behaviour. This, in turn, raises a question about the choice of solutions, which, given legal and institutional circumstances (considering also social attitudes towards environmentally-friendly actions) may be really effective.

By increasing the share of walking and cycling in the daily transport activities of city dwellers we can not only obviously reduce air pollutant emissions but also decrease the risk of road accidents, reduce noise from traffic, congestion, and the risk of illnesses caused by reduced physical activity.<sup>181</sup> Having these aspects in mind, in recent years European cities have been drastically reducing or even eliminating private transport as the main source of pollution to ambient air (Table 9.2).

The advancement of adopted solutions varies quite deeply across European cities, however, by looking at them we may find out where these changes are heading at. In some countries (Sweden, Germany, Norway, Denmark, and France), there is national framework for the organisation of road transport, which may be made more stringent at the local level depending on circumstances. In other countries although no solutions have been adopted at national level,

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<sup>180</sup> “A nudge (...) is any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not” (Thaler R. H., Sunstein C. R. (2008). *Nudge: Improving Decisions about Health, Wealth, and Happiness*. Yale University Press, p. 6).

<sup>181</sup> Nieuwenhuijsen M.J., Khreis H., Verlinghieri E., Rojas-Rueda D. (2016). *Transport And Health: A Marriage Of Convenience Or An Absolute Necessity*. “Environment International” 88, p. 151; *Unlocking new opportunities. Jobs in green and healthy transport*, 2014. Copenhagen; Kahlmeier, S., Kelly, P., Foster, C., Götschi, T., Cavill, N., Dinsdale, H., Woodcock, J., Schweizer, C., Rutter, H., Lieb, C., Oja, P., Racioppi, F. (2014). *Health Economic Assessment Tools (HEAT ) for Walking and for Cycling Economic Assessment of Transport Infrastructure*. Copenhagen

local authorities put in place their own procedures (Italy, Portugal, and the United Kingdom).<sup>182</sup>

Table 9.2. Overview of solutions adopted in zero-emission zones in Europe

Country, city	Proposed/implemented solutions
Belgium, Antwerp	Since 01.02.2017 Antwerp has implemented a Low Emission Zone (LEZ). Vehicles that do not comply with emission requirements may enter a LEZ not more than 8 times a year with a LEZ day pass. Vehicles that do not comply with emission standards but are retrofitted with a diesel particulate filter upon registration are allowed to enter the zone until 2019.
Belgium, Brussels	Since 01.01.2018 there is a LEZ closed for diesel cars manufactured before 1997. Vehicles can be modernised by installing a diesel particulate filter. As of 2025 emission parameters required of vehicles in the zone will be equivalent of gasoline Euro 3, diesel 6
Denmark	Since 01.09.2008 there is a national framework for environmentally-friendly zones that applies to all diesel heavy-duty vehicles (over 3.5 tons) and gives cities the possibility to make LEZ related regulations more stringent. Since 01.07.2010 vehicles that enter the zones must meet at least Euro 4 standard or have a certified particle filter installed.
France	There is a national system based on vehicles classification. Since 01.04.2017 a 'certificat qualité de l'air' (Crit'Air) sticker that covers 5 categories is mandatory for all vehicles. Entry into a LEZ depends on the category.
France, Paris	Authorities plan to ban entry to diesel vehicles since 2025, which is why regulations will be gradually made more and more stringent. Since 01.07.2017 LEZ is accessible only to cars with Crit'Air category 4 sticker. Private diesel cars must be first-time registered after 01.01.2001 (mostly Euro3). The zone applies from Monday to Friday between 08:00 and 20:00 hrs. Enforcement is supervised by the police. Modernised vehicles cannot enter the zone.
The Netherlands, Amsterdam	There is a national system. In Amsterdam since 01.01.2017 LEZ may not be entered by commercial vehicles and campers with diesel engines manufactured before 2000; since 01.01.2018 the ban includes diesel taxis manufactured before 01.01.2009 and buses manufactured before 01.01.2005.
Norway, Oslo	In Norway all LEZs operate within a national framework, which is identical for all cities. Local authorities in Oslo plan to implement a zero-emission zone in the city centre from 2019, meaning all private cars, vans, buses and trucks will be banned from the zone except electric vehicles.
the UK, London	From September 2020 in the Ultra LEZ (there are two types of zones: LEZ and Ultra LEZ) tighter standards will apply to motorcycles, motorbikes, etc. Euro 3; passenger cars, vans and micro-buses Euro 4 for petrol and Euro 6 for diesel engines; buses, coaches, and heavy-duty vehicles Euro 6.

Source: own compilation based on <http://urbanaccessregulations.eu/> [accessed 27.08.2018], Błaszczak G.A., *Strefy zeroemisyjnego transportu w Europie* [in:] *Biuletyn komunikacji miejskiej*, Sierpień 2017, no.145 pp. 58-59.

Other measures designed to reduce negative effects of private transport using petrol and diesel cars include taxes and environmental charges (higher for conventional cars, lower or zero for low- or

<sup>182</sup> Updated and complete information about such solutions is available at the website <http://urbanaccessregulations.eu/>

zero-emission cars), restrictions or bans on selling vehicles with pollutant emitting engines or on their entry to cities, as well as marketing activities promoting the development of alternative means of transport.

### 9.3. Towards sustainable mobility in Polish cities

The framework and directions of actions undertaken in most European countries/cities have been delineated by the European Union policy, international trends and good practices, however, regional and local circumstances (in national states and in cities) are also powerful determinants of individual solutions, identify their courses, as well as the scope and timeline for implemented instruments. Economic advancement of a country is crucial, together with the previously pursued transport policy and transport models, as well as the quality of the environment and environmental awareness. Poland must make up for many years of neglect and delay and the below presented review of currently implemented solutions is just a **narrow fraction of this ‘running against the time’ exercise.**

On 16 March 2017 Polish government adopted the Electromobility Development Plan that will be implemented in three stages designed for different degrees of market maturity and necessary engagement levels of the state. The first stage (2018) is a preparatory one and it is expected to create conditions for the development of electromobility on the regulatory side and secure targeted public funding. In the second stage (2019-2020) selected cities will be building infrastructure for electric vehicles and charging stations; also incentives will be intensified to encourage people to buy electric cars. At this stage it is also expected that the results of studies in the field of electromobility, which have been initiated in stage one, will be commercialised and new business models will be put in place to make electric vehicles more popular. In the 3<sup>rd</sup> stage (2020-2025) it is

assumed that electromobility market will be already mature and support instruments will be gradually withdrawn.<sup>183</sup>

The first stage has almost been completed; the Act on electromobility and alternative fuels, which provides the framework for, inter alia, individual solutions in cities has been adopted in 2018.<sup>184</sup> Cities, whose population exceeds 100, 000, will be able to create clean transport zones in their centres with limited access for vehicles other than electric ones or vehicles with hydrogen or natural gas engines. Such zones can be created only on roads that belong to the city. City authorities may set charges for driving into a clean transport zone; this charge will be municipal revenue that can be used exclusively for reducing low-emission transport, e.g., for: labelling the clean transport zone or purchasing zero-emission buses. Clean transport zone is established by a resolution, which is a binding act of local legislation. The resolution specifies the borders of a clean transport zone, organisation of restricted access to it and how the content of the resolution will be communicated to the public. This is modelled after standards applied in European cities (see Table 9.2).

The above mentioned Act contains important provisions on transition periods for public transport. Until 2025 the share of electric cars in the overall fleet of cars is expected to reach at least 50% of the total pool of used vehicles. In turn, until 2028 local government units with population not bigger than 50, 000 residents are expected to ensure at least 30% share of zero-emission buses in their fleets.<sup>185</sup> The share of zero-emission buses in the fleet of vehicles in individual years will reach at least 5% from 1 January 2021; 10% from 1 January 2023, and 20% from 1 January 2025.

These ambitious plans are backed up with economic instruments, which are designed to provide incentives for shifting to low-

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<sup>183</sup><http://bip.me.gov.pl/files/upload/26453/Plan%20Rozwoju%20Elektromobilno%C5%9Bci.pdf> [accessed 09.03.2018]

<sup>184</sup> Act of 11 January 2018 on electromobility and alternative fuels, Dz. U. [Journal of Laws] of 2018, items 317, 1356. Art.39.

<sup>185</sup> Act of 11 January 2018 on electromobility and alternative fuels, Dz. U. of 2018, items 317, 1356, Arts. 34 & 35.

emission vehicles and energy in the transportation sector and to modernise the fleets more frequently. The list of target programmes includes, inter alia:

- E-Bus, the first programme in Poland which supports the development of electromobility. Its goal is to create in Poland a market for electric buses estimated at PLN 2.5 bn annually. Electric buses, manufactured in Poland from mostly Polish components, will be efficient and offered at affordable prices. Their planned sales until 2025 should be ca. 1,000 buses a year.<sup>186</sup>

- “GEPARD – Zero-Emission Public Transport” (2017-2020) (preceded by two programmes: “GAZELA” and “GAZELA BIS” – Low-emission urban transport in the period 2012-2016). The programme aims at the elimination of pollutant emissions to air through subsidising or offering preferential loans to ventures intended to reduce energy and fuel consumption in public transport (e.g., purchasing new, electric buses, training drivers, modernising or building charging stations for public transport). The programme is carried out within the framework of the priority *Green Investment Scheme* (GIS).

In order to develop a viable market of electric vehicles and meet the required transition periods we need to observe sustainable development principles set out for public procurement in the EU. Substantial portion of public procurement comes from local authorities hence shifting to low-emission alternative energy sources for public transport vehicles, such as, e.g., buses, depends mainly on them.

In Poland we are witnessing a heated debate arising around the development of electric vehicles market, which concerns charging strategies and energy potential. Electromobility will be strongly determined by energy policy defined at national level, also by the advancement in the development of renewable energy sector. There is

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<sup>186</sup> <https://www.mpit.gov.pl/strony/strategia-na-rzecz-odpowiedzialnego-rozwoju/kluczowe-projekty/program-e-bus-polski-autobus-elektryczny/> [accessed 02.09.2018]

an issue of optimising electricity supplies when transmission infrastructure is outdated and power generation sector is based on fossil fuels. According to experts, low-emission mobility may increase demand for electricity exerting undue pressure upon the energy sector stimulating its decarbonisation within the framework of the EU Emission Trading System.<sup>187</sup>

A number of legislative initiatives have been put forward to improve air protection efficiency. They addressed, inter alia: widening the scope of periodical vehicle inspection at inspection centres with a procedure developed to check the presence of diesel particulates filter. Following the change of regulations, cars with removed DPF cannot pass technical inspection.<sup>188</sup>

Practical ‘struggle’ with air pollution sources often underestimates the existing instruments, which may importantly guide transport policy and activities towards sustainable mobility. That is the case of air protection programmes developed at regions which are legal instruments of local law.<sup>189</sup> The programme contains remedy activities going beyond mandatory actions required by specific regulations and includes a material and financial timetable for each task plus identifies administrative bodies and subjects responsible for these tasks, implementation deadlines, costs, and sources of funding.<sup>190</sup> Potential remedy activities include, e.g.:

- establishing car-free zones

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<sup>187</sup> European Strategy for Low-Emission Mobility, COM (2016)501 final

<sup>188</sup> The procedure has been included in legislative works on draft act amending the Road Traffic Act and some other acts. <https://tvn24bis.pl/moto,99/wycinanie-filtra-czastek-stalych-dpf-rzad-szykuje-zmiany,866085.html> [accessed 05.09.2018].

<sup>189</sup> Framework EU Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management; Act of 27 April 2001, Environmental Law, Dz.U. 2001, No. 62, item 6271 as amended, Art. 91. In zones where at least one allowable or target level has been exceeded for substances covered by the assessment when identifying air quality, the Board of the Region, within 15 months after it has achieved the assessment of substances in air and zone classification, presents vogts, mayors or heads of county councils with a draft resolution on air protection programme aimed at achieving allowable levels of substances in air and exposure intensity ceilings for particulate matter.

<sup>190</sup> Regulation of the Minister of Environment of 8 February 2008 on detailed requirements to be met by air protection programmes, Dz. U. No. 38, item 221



- in peak hours, traffic lanes designated solely for public transport and cars with minimum 3 (4) people inside
- road checks for meeting emission standards, penalties for not complying with standards
- subsidies for new low-emission fuels and technologies, in particular in public transport and for municipal services (bio-fuels, natural gas, liquid gas, electric and hybrid drive, fuel cells).

Air protection programmes of operating nature have not lived up to our expectations. Although the instrument has been in operation for over 10 years, it has not produced expected outcomes. That is due to the specificity of air protection but also to the quality of the document itself. Main shortcomings of air protection programmes are too lengthy descriptions not always to the point and poorly documented remedy actions. Besides clearly stated strategic actions what seems to be missing are precise data on local remedies. The accomplishment of real environmental effects through such remedies is prevented by legal barriers. The main such barriers to effective remedies are: inability of local authorities at regional level to impose the duty to carry out remedies upon administration in counties or communes.<sup>191</sup>

Environmental impact assessment and forecasting environmental effects are mandatory for strategic documents and investment projects that might be detrimental to the environment because they identify potential adverse impact of decisions, reveal mistakes, shortcomings and external effects that may be eliminated while planning as well as propose alternative solutions and remedies. Unfortunately, both instruments do not provide sufficient impulse for action, which is evidenced by haphazard suburbanisation and transportation problems entailed by it.

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<sup>191</sup> Updated principles for drafting remedy air protection programmes in zones, Ministry of Environment, Warsaw 2008, [https://www.mos.gov.pl/fileadmin/user\\_upload/mos/srodowisko/lesnictwo/Aktualizacja\\_zasad\\_sporzadzania\\_naprawczych\\_programow\\_ochrony\\_powietrza\\_w\\_strefach](https://www.mos.gov.pl/fileadmin/user_upload/mos/srodowisko/lesnictwo/Aktualizacja_zasad_sporzadzania_naprawczych_programow_ochrony_powietrza_w_strefach) [Updated principles of drafting remedy air protection programmes in zones].pdf [accessed 02.08.2018].

In Poland tax is paid on means of transport,<sup>192</sup> whose maximum total weight exceeds 3.5 t. Tax rates are decided by the commune council within limits stipulated by the Act on local taxes and charges (which specifies maximum taxes and charges and, for some vehicles, minimum taxes). From the point of view of reducing low-emission it is important that a commune council may differentiate tax rates taking account of, inter alia, environmental impact of a vehicle.<sup>193</sup> In practice the provision is a dead letter. Obviously, such individual decisions would be heavily criticised and transport companies would most probably move to communes/towns with more relaxed regulations, yet, they are potentially an instrument of air protection.

Besides public and local administration, city users are fully fledged participants of building sustainable mobility. Increasingly more often bottom-up initiatives, which either exert pressure or actively participate in urban life, provide key impulse for changes. Participatory budgeting may be an example of an instrument that helps residents initiate and carry out investments in the city in line with their needs. Studies conducted in 3 big cities in Poland: Łódź, Katowice, and Poznan<sup>194</sup> showed that, besides green infrastructure, most projects concerned ambient air protection. In Łódź and Katowice, 1/3 of submitted projects dealt with this issue, in Poznan 1/4. Most applicants equated air protection measures with the development of cycling infrastructure. Proposed projects focused on investment in cycling routes, racks for bicycles or bike check-out stations. On the one hand, it informs about real residents' needs but, on the other

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<sup>192</sup> Taxes on means of transport are paid by: private individuals and legal persons who own means of transport, organisational units who are not legal persons but for whom a means of transport has been registered, owners of means of transport registered in the territory of the Republic of Poland as vehicles entrusted by a foreign individual or legal person to a Polish subject.

<sup>193</sup> Legal basis: Art. 8 -12b of the Act of 12 January 1991 on local taxes and charges; Dz. U. of 2017, item 1785 as amended.

<sup>194</sup> Bernaciak A., Rzeńca A., Sobol A. (2017), *Participatory Budgeting as a Tool of Environmental Improvements in Polish Cities*. "Economic and Environmental Studies", 17(4). DOI10.25167/ees.2017.44.16

hand, it is the reflection of insufficient saturation with such infrastructure.

Functional areas and regions are following in the footsteps of cities, which develop bike sharing schemes. In Tricity (Gdańsk-Gdynia-Sopot) there is a Metropolitan Bike Sharing System while in the Łódź region the system is being built.<sup>195</sup> Summing up citizens engagement in ambient air protection, we may conclude that, like in the snowball effect, by starting with small initiatives that promote public transport alternative means of transport and encourage using them up to systemic solutions we may achieve desired environmental and social effects.

#### 9.4. Measuring the efficiency of policy intended to improve air quality

Measures adopted to improve the quality of air still face the challenge of how their efficiency and effectiveness can be monitored. While results of studies on negative environmental impact of road transport and its adverse effect on health leave no room for major doubts, research on policy performance in this area are much less conclusive. That is mainly due to fragmentary and non-systemic interventions (e.g., cities increase parking fees but they do not offer financial incentives to use public transport) as well as the absence of reliable monitoring of effects of adopted measures.<sup>196</sup>

Limited body of scientific evidence is also caused by a simple fact that it is hard to estimate the impact of elimination or drastic reduction of the number of vehicles on air quality since no city has put such solutions in place yet. On top of that,

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<sup>195</sup> As a result, there will be in total 1,002 bicycles in 10 towns in the region. Each commune (Łódź, Pabianice, Zgierz, Koluszki, Kutno, Łask, Zduńska Wola, Sieradz, Skierniewice, and Łowicz) will have several check-out stations, over one hundred in total. The scheme will ensure connections with railway stops and will complement local transportations systems. The agreement is worth less than PLN 24 mio; PLN 3.75 mio is the cost of supply and start the network of rental points; their maintenance for 6 years has been calculated by Nextbike at PLN 20.1 mio.

<sup>196</sup> Nieuwenhuijsen M.J., Khreis H., (2016). *Car free cities: Pathway to healthy urban living*. "Environment International" 94, p. 254

results of research are questioned by automotive lobby, which challenges their credibility similarly to what tobacco companies used to do with studies on negative impact of smoking on health.<sup>197</sup>

There are also methodological difficulties in measuring the efficiency of policies designed to improve air quality. Negative externalities by definition cannot be measured explicitly. The measurement consists in looking for indirect links between emissions and aspects of social life, such as (see Table 9.3):

- increasing demand for new transport infrastructure caused by too rapid increases in the number of its users,
- accidents,
- deteriorating health condition,
- reduced availability of natural resources,
- worsening landscape quality,
- noise, etc.

The above aspects are hard to evaluate because the causal link between emissions from transport and mortality or human health and many other cost categories emerge in different places and are paid by many entities. For this reason, it is not enough to base research on statistical data only. We need to carry out studies to find new data, often collected from questionnaire studies, in which respondents are asked about their willingness to pay for hypothetical measures adopted to improve environmental performance or about a concrete amount that would compensate the acceptance of the absence of such measures (WTA – *willingness to accept*) (Table 9.3).

Such studies entail high costs, they are conducted within long-term horizon and have to cope with difficulties in reaching out to respondents whose answers could be considered representative for the entire population.<sup>198</sup>

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<sup>197</sup> See Douglas, M.J., Watkins, S.J., Gorman, D.R., Higgins, M. (2011). *Are cars the new tobacco?*, „Journal of Public Health”. 33 (2), pp. 160-169

<sup>198</sup> For more about valuation of the environment and natural resources as well as estimating costs of environmental pollutions, see: Sumarga E., Hein L., Edens B., Suwarno A. (2015). *Mapping monetary values of ecosystem services in support of developing ecosystem accounts*.

Table 9.3. Methods most often used to measure negative externalities caused by transport

Cost by type	Most often used measurement methodology
Costs of new infrastructure	<ul style="list-style-type: none"> <li>• Willingness to pay (WTP) for the time spent in traffic jams expressed in monetary terms; tested by stated preference method in questionnaires</li> <li>• Willingness to accept (WTA) time wasted in traffic jams expressed in monetary terms; tested by stated preference method in questionnaires</li> <li>• Willingness to pay (WTP) for new infrastructure that will reduce congestion, expressed in monetary terms; tested by stated preference method in questionnaires</li> <li>• Willingness to accept (WTA) not building new infrastructure that would reduce congestion, expressed in monetary terms; tested by stated preference method in questionnaires</li> </ul>
Accident costs	<ul style="list-style-type: none"> <li>• Costs of eliminating consequences of accidents to human life and health – cost-based approach often based on data and risk estimated by insurance agencies</li> <li>• Willingness-to-pay (WTP) for the reduction of risk in transport, a concrete amount; tested by stated preference method in questionnaires</li> <li>• Willingness to accept (WTA) the absence of reduction of risk in transport, a concrete amount; tested by stated preference method in questionnaires</li> </ul>
Cost of air pollution and deteriorating human health	The impact pathway approach based on asking about monetary equivalent of willingness to pay for being healthy (WTP) or willingness to accept the loss of health (WTA). Approach based on the valuation of hypothetical value of one year of human life
Cost of air pollution and material damage inflicted	The impact pathway approach based on estimating costs of repair of damaged buildings and materials
Cost of air pollution and losses in natural resources	The impact pathway approach based on estimating costs of lost natural resources and crops
Noise	<ul style="list-style-type: none"> <li>• Estimating annoyance cost by studying statistical dependence between noise emissions and the value of real estate in the city (the so called hedonic pricing)</li> <li>• Estimating annoyance cost by asking about the willingness to pay for noise reduction or the willingness to accept noise (WTA, WTP, stated preference method)</li> </ul>
Climate change	<ul style="list-style-type: none"> <li>• Avoidance cost approach based on reduction scenarios of GHG emissions</li> <li>• Estimating losses generated by global warming</li> <li>• Estimates based on emission trading prices (the so called shadow prices [dual])</li> </ul>
Damage to landscape	Compensation cost approach based on virtual repair costs

**Source:** Korzhenevych A., Dehnen N., Bröcker J., Holtkamp M, Meier H., Gibson G., Varma A., Cox V. (2014). *Update of the Handbook on External Costs of Transport, Final Report*. European Commission – DG Mobility and Transport, p. 4.

“Ecosystem Services”, vol. 12, pp. 71-83; Gómez-Baggethun, E., et al. (2014). *State-Of-The-Art Report on Integrated Valuation of Ecosystem Services*. EU FP7 OpenNESS Project Deliverable 4.1; TEEB (2011). *The economics of ecosystems and biodiversity. Manual for cities: Ecosystem services in urban management*. UNEP and the European Commission; Czajkowski M. (2010). *Nierynkowe metody wyceny*. In: Kronenberg J., Bergier T., *Wyzwania zrównoważonego rozwoju w Polsce*. Kraków: Fundacja Sendzimira, pp...; Breidert Ch., Hahsler M., Reutterer Th. (2006). *A Review of Methods for Measuring Willingness-to-Pay*. “Innovative Marketing (hybrid)”, 2(4), pp. 8-32

However, such studies are doable and feasible and they are conducted at an increasingly bigger scale. Yet, despite the fact that their number is increasing, due to difficulties involved in their implementation they are still rather scarce.

The studies are complex and difficult to understand for the general public. Their results often cannot be presented in a clear and understandable manner, which is why they cannot be easily visualised by the recipients. Hence problems with successful convincing people to restrict or give up driving private cars also depend on psychological and social factors. These factors condition transport habits that depend on social norms, attitudes and lifestyles, which are hard to modify even when restrictions are imposed on conventional cars and incentives offered to use other forms of transport.<sup>199</sup> Mobility is a system of interlinked practices involved in moving across a city that co-exist with other elements of everyday urban life, such as going to work, school, doing shopping, coming back home, etc. Types of these practices, their repeatability as well as the attitude of society to different forms of travelling in the city depend on available transport technologies, institutional conditions (which impact profitability and availability of different means of transport), and spatial management in cities.<sup>200</sup>

These are social practices. They are replicated as a result of behaviour patterns observed in other people. They are also routines as they are repeatable and observable in what the majority of other people do; they are seen as social patterns.<sup>201</sup> Changing these patterns takes a lot of effort deployed, on the one hand, to make people aware of benefits of a lifestyle different than the previous one and, on the other hand, to ensure noticeable benefits in return. For that reason,

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<sup>199</sup> Cairns, S., Harmer, C., Hopkin, J., Skippon, S. (2014). *Sociological perspectives on travel and mobilities: a review*. "Transportation Research Part A: Policy and Practice", pp. 107-117

<sup>200</sup> Aro, R. (2016). *Normality against Sustainability - mobility practices of well-to-do households*. "Environmental Policy and Governance". 26, pp. 116-128; Shove, E., Watson, M., Spurling, N. (2015). *Conceptualizing connections: energy demand, infrastructures and social practices*. "European Journal of Social Theory" 18, pp. 274-287; Warde, A. (2005). *Consumption and theories of practice*. "Journal of Consumer Culture". 5, pp. 131-153

<sup>201</sup> Southerton, D. (2013). *Habits, routines and temporalities of consumption: from individual behaviours to the reproduction of everyday practices*. "Time & Society". 22, pp. 335-355

benefits of changing the way we move around a city to more environmentally-friendly and healthy should be clearly stated.<sup>202</sup> An effective way of achieving this goal is to ‘convert’ individual benefits of shifting to another mode of transport into monetary units, which can have powerful psychological impact. This is what they did, inter alia, in Barcelona where it was stated that the increase in active forms of transport (on foot, by bicycle) in the total body of transport activities reduced mortality risk by 1%, which translated into EUR 57.8 mio of savings. Economic benefits connected with reduced number of cases of civilisation diseases reported over this period reached EUR 47.3 mio for the dissemination of walking and EUR 4.7 mio for cycling.<sup>203</sup> In Ireland it is assumed that the limitation on sales of diesel cars starting from 2018 and the total ban on selling diesel vehicles from 2025 will reduce in 2030 NO<sub>x</sub> emissions to 47% of their amount in 2015 and PM2.5 dust to 52% of their amount in 2015. It will produce economic benefits totalling ca. EUR 43.8 mio.<sup>204</sup>

From users’ point of view, instruments of emission reduction policy that must be paid ‘here and now’ are the most efficient (e.g., emission charges are more efficient than indirect taxes)<sup>205</sup>. Moreover, efficiency can be enhanced by differentiating charges and tax rates depending on the scale of emitted pollution (e.g., CO<sub>2</sub> emissions)<sup>206</sup>. Political approval for such decisions is also relevant. For instance, taxing new cars is socially more acceptable than taxes on fuel, which

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<sup>202</sup> Very often, the so called ‘breakthrough’ moments in one’s life, e.g., moving out of parental home, moving to a new place, changing a job or retiring are excellent opportunity to change mobility patterns. By targeting people who undergo such moments we can the most effectively encourage them to change the mode of transport and successfully implement the idea of sustainable urban transport (see Laakso S. (2017). *Giving up cars – The impact of a mobility experiment on carbon emissions and everyday routines*. “Journal of Cleaner Production”, 169, pp. 136-137).

<sup>203</sup> Pérez K., Olabarria M., Rojas-Rueda D., Santamariña-Rubio E., Borrell C., Nieuwenhuijsen M. (2017). *The health and economic benefits of active transport policies in Barcelona*. “Journal of Transport & Health”. 4, pp. 320-321

<sup>204</sup> Dey S. , Caulfield B., Ghosh B. (2018). Potential health and economic benefits of banning diesel traffic in Dublin, Ireland, in press. <https://doi.org/10.1016/j.jth.2018.04.006>

<sup>205</sup> Ciccone A. (2018). Environmental effects of a vehicle tax reform: Empirical evidence from Norway. “Transport Policy” 69, p. 142

<sup>206</sup> COWI (2002). Fiscal Measures to Reduce CO<sub>2</sub> Emissions from New Passenger Cars. Study contract for the EU Commission. DG Environment, Brussels

exert stronger impact on everyday expenditure.<sup>207</sup> The structure of public levies and taxes should be well thought and sophisticated enough to help avoid ‘side effects’ of new regulations. The case of Norway shows that when back in 2007 in an attempt to reduce CO<sub>2</sub> emissions, vehicle purchase tax for private cars were made dependent on the ‘certified’ rate of CO<sub>2</sub> emissions (previously it was determined based on the cylinder volume component), which shifted the composition of new cars acquisition in the direction of diesel engine passenger cars. The government successfully reduced CO<sub>2</sub> emissions, yet at the cost of increasing the emissions of suspended dust and nitrogen compounds (NO<sub>x</sub>), which are particularly dangerous at the local level. That triggered the tax reform in 2013, after which the nitrogen oxides (NO<sub>x</sub>) emissions are also taken into account.<sup>208</sup>

Studies carried out in the United Kingdom on a sample of 675 drivers demonstrated that the mere awareness of environmental issues does not significantly impact the will to shift from cars running on petrol or diesel oil to electric or hybrid cars. Much more important are price and tax incentives as well as, although to a smaller extent, the awareness of impact of these decisions upon health.<sup>209</sup> In California, based on research conducted in 2012, it was found out that households choose not to own a car because of economic constraints rather than as a result of their voluntary choice. A voluntary decision of not owning a car, backed up with a declared awareness of environmental benefits, is made by less numerous, usually more affluent and better educated social groups. These groups declare their will to more extensively use cycling infrastructure so the development of the latter combined with promoting this mode of transport

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<sup>207</sup> Greene D. L., Patterson, P.D., Singh M., Jia L. (2005). *Feebates, rebates and gas-guzzler taxes: a study of incentives for increased fuel economy*. “Energy Policy”. 33, pp. 757-775

<sup>208</sup> Ciccone A. (2018). Environmental effects of a vehicle tax reform: Empirical evidence from Norway. “Transport Policy” 69, pp. 149-150

<sup>209</sup> Bennett R., Vijaygopal R. (2018). *An assessment of UK drivers’ attitudes regarding the forthcoming ban on the sale of petrol and diesel vehicles*. “Transportation Research Part D” 62, p. 330



can produce lasting changes in transportation habits and attitudes.<sup>210</sup> However, these groups were clear minority amongst the researched sample. Usually, people were much more susceptible to economic arguments. It confirms the thesis, according to which individual benefits of changes in transportation habits are much more effective than appealing to socially valid but less tangible benefits, such as clean air or better health condition of society.

## Conclusions

The review of research and the case study of Poland presented in this Chapter have led us to formulate some conclusions about the efficiency performance of various instruments. We have been inclined to conclude that by making costs clear in monetary terms, due to psychological effect, is more effective than talking and writing about environmental costs without quantifying them. Moreover, it turns out that instruments, which translate into individually borne costs or tangible benefits to those who emit or reduce the emissions of pollutants in transport are the most effective. We also need to observe that the efficiency of the policy designed to reduce emissions is enhanced by adapting instruments to different user groups. Instruments aimed at encouraging people to give up using traditional means of transport should be tailored and different for elderly and young people, for more and less affluent people, they should also vary for different stages of life of urban population. Air quality improvement policy should be integrated with other sectoral policies, including local development policies in cities and health care policy. And finally, this policy framework needs to be founded on participatory culture and striving for finding consensus amongst often contradictory interests of groups using different modes of transport; it should also be strengthened with frequent and continuous promotion and information campaigns.

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<sup>210</sup> Brown A. E. (2017). *Car-less or car-free? Socioeconomic and mobility differences among zero-car households*. "Transport Policy" 60, pp. 152-159

Apparently, social approval seems to be conditioned by reaching out to communities with a clear message and deploying instruments that skilfully highlight aspects of negative externalities, which can be experienced by them. The point is to focus on messages which will not only fuel collective imagination but also explicitly target individual benefits. Without linking social benefits with individual utility, decision makers will be having hard time trying to achieve set objectives. As shown by the studies, financial incentives and market-based solutions, which ‘internalise’ negative externalities (by transforming them into costs borne by emitters in the form of charges, taxes, restrictions, etc.) are much more effective than other types of incentives.<sup>211</sup> Equally effective are instruments, which make using low- or zero-emission transport more profitable (lower taxes and first-time registration fees for electric cars, cheap public transport and high parking fees, priority given to low-emission cars, *car-sharing*, trams, bicycles and pedestrians in urban traffic, etc.).

On top of that, instruments geared towards changing transportation habits should fit clearly defined target groups. First of all, we should reach out to groups, who potentially guarantee the highest probability of changing their transportation habits, that is those who e.g., undergo breakthrough moments in their lives (e.g., retire, come back to the labour market following a long unemployment, have come to the city to study, live parental homes, move out, etc.). Communication channels and argumentation should also be carefully selected if we want to persuade people to opt for alternative transport modes in cities.<sup>212</sup> Different methods are required for youngsters and students, different for the working population, and different for the retired residents. For those who strongly oppose giving up driving, car sharing schemes could be an interesting option.

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<sup>211</sup> Korzhenevych A., Dehnen N., Bröcker J., Holtkamp M, Meier H., Gibson G., Varma A., Cox V. (2014). *Update of the Handbook on External Costs of Transport, Final Report*. European Commission – DG Mobility and Transport, p. X.

<sup>212</sup> Brog, W., Erl, E., Mense, N. (2004). *Individualised marketing: changing travel behaviour for a better environment*. In: *Communicating Environmentally Sustainable Transport. The Role of Soft Measures*. OECD, pp. 86-85

As demonstrated by studies, changing transportation habits is difficult and may be faced with strong social resistance, which is why it may often be done through experiments. Changes may be implemented temporarily or as trial tests to encourage people to test new arrangements.<sup>213</sup> The city of Jyväskylä in Finland can be an example, where a group of several hundred people were offered free travel cards to buses in return for giving up cars.<sup>214</sup> Cities are also experimenting with more radical solutions, such as car-free cities.<sup>215</sup> These examples demonstrate, however, that the implementation of ideas such as zero-traffic in cities should be introduced as a long-term perspective exercise and comply with a number of conditions. First of all they need to: 1. Cover relatively small areas (ca. 0.35-0.5 km<sup>2</sup>); 2. Provide for efficient public transport 24/7 available to people with reduced mobility within the range of 400 m (5-7 minute walking distance); 3. Be preceded with the development of a dense network of pedestrian and cycling routes arranged into a coherent system; 4. Ensure urban facilities available in the vicinity within the walking distance; 5. Enliven car-free districts by organising events that integrate local communities, and 6. Be supported with broad information and educational campaigns.<sup>216</sup> Sometimes repairs or reconstruction of parts of urban transportation infrastructure are good moments for experimenting. The period when a particular area is traffic-free for repair purposes is a good opportunity to change traffic arrangements in the future.

It is of paramount importance not to boil down the discussions on sustainable transport to oversimplified arguments or false conflicts ‘drivers-cyclists’ or ‘pedestrians-drivers’. They blur the perspective and obscure the fact that one and the same city dweller, even

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<sup>213</sup> Evans J.P. (2011). *Resilience, ecology and adaptation in the experimental city*. “Transactions of the Institute of British Geographers”. 36, pp. 223-237

<sup>214</sup> Laakso S. (2017). *Giving up cars – The impact of a mobility experiment on carbon emissions and everyday routines*. “Journal of Cleaner Production”, 169, pp. 135-142

<sup>215</sup> E.g. the district of Vauban in Freiburg (Germany) or Hammarby Sjöstad in Stockholm (Sweden).

<sup>216</sup> Quang Minh N. (2016). *Application of “Car-Free City” and “City of Short Walks” to Living Quarters in Hanoi Towards Sustainable Mobility and Logistics*. “Procedia Engineering” 142, p. 286

within one day, is usually a driver, bus or taxi passenger, a cyclist and, above all, a pedestrian. Disputes evolving along these lines sometimes create conflicts and intensify the impression of playing one mode of transport against the other, where benefits offered by transport policy to one mode of transport are seen as detrimental to the remaining ones making a number of desirable changes unfeasible due to social resistance.<sup>217</sup>

Finally, measures favouring the development of sustainable transport will fall short of efficiency unless they are complementary and ensure synergy between transport policy and environmental, social or spatial development policies.<sup>218</sup> We need comprehensive and **powerful actions that will bring about a positive and bold ‘dive into the future’**.<sup>219</sup>

Research carried out in Poland in 2017 on the knowledge and awareness of air quality and sources of contamination clearly demonstrate that respondents are aware of pollutions caused by the dynamically developing transport sector. They pointed to engine exhaust gases from passenger and heavy-duty vehicles (63.4% of respondents) as the main sources of contamination, while we need to bear in mind that the answer was given by almost 65% of respondents who own a car. Further on the list of answers there are industry and combustion in boilers/stoves. Remedies seen by respondents as effective solutions to air pollution problem include rigid controls and checks of, e.g., emissions from vehicles (30.8 % of answers) and restrictions imposed on traffic by delimitating limited road traffic zones in cities (27.4 %). To what extent these are declared preferences and how much they reveal the real stance and approval for restricting or eliminating air pollution from transport remains an open question.

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<sup>217</sup> Sokołowicz, M.E (2013). *Wokół koncepcji zrównoważonego transportu. Ślepe tory polemik*. „Kronika Miasta Łodzi” nr 2, pp. 21-22

<sup>218</sup> Hall, R.P., Gudmundsson, H., Marsden, G., Zietsman, J., 2014. *Sustainable Transportation*. Sage Publications, Incorporated

<sup>219</sup> See, e.g., Klein N. (2018). *No is Not Enough. Resisting Trump’s Shock Politics and Winning the World We Need [Polish edition]* Warszawa: Muza

In summing up considerations outlined in this Chapter, we can formulate some general conclusions:

1. Road traffic generates costs which can be, and increasingly more frequently are, measured;

2. These costs are very high and even if calculations are far from perfect they make us aware of the powerful negative impact of conventional vehicles upon the environment and human health;

3. Although research studies that make us aware of how harmful conventional vehicles are continue to develop, the scale of the problem is being embraced by the public opinion very slowly. Response to them is ambiguous or they are even challenged (similarly to, e.g., global warming), because methods used to measure them are very complex;

4. Public authorities at central and urban levels try to ‘internalise’ external costs generated by transport, however, the efficiency of such solutions varies. Not only costs are examined but also the efficiency of air protection policy;

5. Transport at local level is the best place to see how the pollution prevention ‘at source’ principle works in practice, where we can do the most and, on the other hand, effects of negligence, i.e., doing nothing are also digested ‘at source’;

6. In accordance with the ‘polluter pays’ principle for air pollutants originating from private transport we all pay with our health;

7. Public transport organisation at infrastructural and institutional levels is crucial for reducing emissions. Modern, environmentally-friendly, and well performing public transport is an argument for leaving one’s private car at home;

The review of studies and proposed instruments has helped us formulate some general recommendations. The most important amongst them suggest that, above all, we need to:

1. Deploy instruments that materialise as costs and benefits of individuals who, by shifting from one transport mode to another, either emit or reduce the emissions of pollutants

2. Clearly make people aware of costs, often in monetary terms, because then their psychological impact is the most powerful
3. Adjust instruments to target groups (e.g., by age, environmental attitude, affluence, stage of life [breakthrough moments]) with particular attention paid to sensitive groups
4. 'Experiment' with transport and implement 'transport nudges' to show how environmentally-friendly arrangements work and work towards permanent changes in habits
5. Follow an integrated approach to consider different sectoral policies
6. Pursue an open policy founded on participatory culture and striving for reaching consensus assisted by frequent and continuous promotion and information campaigns.

CHAPTER 10.

**Electronic monitoring of offenders in  
the Visegrad countries:  
overview, European and  
economic aspects**

*Peter MIHÓK*

Introduction

**E**lectronic monitoring (EM) of offenders is a general term the most often referring to forms of surveillance used to monitor location, resp. often also movement and/or specific behaviour of persons accused or convicted of conducting a criminal deed (see for ex.: Council in Europe, 2014; Nellis and Lehner, 2012). Currently, the EM of offenders or accused persons is the most often implemented using radio frequency (RF) or global positioning system (GPS) based technologies, sometimes accompanied by biometric and/or voice recognition technologies, and/or the remote forms of alcohol consumption measurement. EM has been practiced in Europe for about thirty years, with at least twenty seven countries making use of it, “at a range of points in the penal process. More seem

likely to adopt it in the future. Few countries use it on a very large scale, compared to prisons and other community sanctions” (Nellis, 2014).

In an indirect response to the political decision to launch a permanent EM program in Slovakia since January 2016, the research team at the Matej Bel University in Banská Bystrica prepared the research project titled ‘**Interdisciplinary approach to electronic monitoring of accused and convicted persons in the Slovak environment**’ (acronymed IAEMPS), whose implementation started in July 2016 and is planned to be concluded in June 2020. The IAEMPS project aims to explore and evaluate new theoretical and practical approaches to EM of accused and convicted persons across the broad spectrum of scientific methods. The project’s key objectives are to analyse and evaluate the process of resocialization of EM convicted persons, research and explain the impact of EM crime prevention, and to use the results and available data to assess efficiency and cost effectiveness of the Slovak national EM program. Despite that the IAEMPS project primarily concerns Slovakia, some of its capacities have been decided to be devoted to the research of the European context of EM.

In this Chapter, we summarise the relevant research results of the IAEMPS project that concern the so called Visegrad four countries (Czech Republic, Hungary, Poland and Slovakia) and may be the most relevant for dissemination in Ukraine. Preparation of this paper resulted from the outcomes of the stay of the author at the Ternopil National Economic University on 31 May – 4 June 2018, supported by the Visegrad fund within the V4EaP Visegrad University Studies Grant No. 61450002 ‘Innovative Strategies of Territorial Development of V4: Experience for Ukraine’.

The aim of this Chapter is threefold: (1) to summarize the results of desk research concerning the introductions of national EM programs in the Visegrad four countries (Czech Republic, Hungary, Poland and Slovakia), (2) to summarise the results of the IAEMPS



project research concerning the economic aspects of the relevant national EM programs, and (3) to outline the European context of EM and potential implications for Ukraine.

The material used in our research was composed of:

- the reports of the Confederation of European Probation (CEP), in particular (1) the results of questionnaire surveys carried out prior to the CEP EM conferences (Beumer and Kylstad Øster, 2016); Nellis, 2013; Pinto and Nellis, 2012 and 2011, and Albrecht, 2005), further referred as ‘CEP EM questionnaires’ reports, and (2) the national reports prepared within the project(s) titled ‘Probation in Europe’;

- the national factsheets prepared within the EU co-funded project titled ‘Probation Measures and Alternative Sanctions in the EU’ (further referred as ‘the EU probation project’);

- the report by ‘European Institute for Crime Prevention and Control, affiliated with the United Nations (Heiskanen (eds.), 2014)’;

- individual academic journal papers (quoted accordingly).

We have also used articles from the press as a source of data (quoted accordingly).

The key methods used in a preparation of this paper were the desk research, analysis and synthesis. Several scientific papers which are the outcomes of the IAEMPS project were used in a preparation of this paper, a preparation of which involved other scientific methods such as economic analysis, statistical regression etc. (referred accordingly in the quoted scientific papers).

### 10.1. Electronic monitoring of offenders in the Visegrad countries

In this section, we summarise the relevant results of our desk research activities within the the IAEMPS project that concern the Visegrad countries.

In the *Czech Republic*, the legal system provided the possibility to use EM to monitor house arrests already in 2010 (Heiskanen et al.

(eds.), 2014). According to the reports of surveys conducted by/for the CEP, the Czech nationwide pilot scheme was implemented from 1 August 2012 to 30 November 2012 (Nellis, 2013), for both the so called front door and back door schemes, but not the pre-trial (Beumer and Kylstad Øster, 2016). On 20 March 2017, the division of Israel-based provider M2M was selected by the Czech Republic's Ministry of Justice to deploy its PureSecurity Electronic Monitoring Suite, a solution aimed at increasing public safety, reducing prison overcrowding and lowering recidivism by tracking and monitoring **public offenders**. ... The comprehensive nationwide program, set to encompass electronic monitoring of offender programs within the country, is planned to monitor up to 2500 enrollees simultaneously. SuperCom will deploy its PureSecurity electronic monitoring solution which will include home detention, GPS tracking, domestic violence and alcohol monitoring of offenders” (SuperCom, 2017). The Office for the Protection of Competition ended the appeal procedure concerning this tender in August 2017. After some delay in the testing phase, the Ministry of justice announced that the first Czech nationwide permanent program of EM of house arrests would start in July 2018 (ČTK, 2018).

*Hungary* did not respond to any of the ‘CEP EM questionnaires’ in 2011 – 2016, and moreover CEP’s webpage did not provide any information about EM in Hungary within the ‘Probation in Europe’ project. According to the National factsheet published within the ‘EU Probation Project’ in 2011, Hungary had a Law allowing application of EM as alternative method of two coercive measures: home curfew and house arrest (i.e. not as a penal sanction alternative to imprisonment), but in practice the EM was not used in 2011 “because the technical means of implementing such measure is missing”. Nagy (2016) stated that “release from prison can occur [in Hungary] in several ways: ... reintegration custody with electronic monitoring (from 1 April 2015)”. We were unable to find any English language source of information of the data sought by means of academic or general internet search engines. According to the Annual

Penal Statistics of Council of Europe (the so called SPACE survey), there were 88 persons held under EM in 2015 (Aebi, Tiago and Burkhardt, 2017). The previous report contains the inputs 'No' and '\*\*\*' for Hungary in the section 8 of the Table 1.1 titled '(8) Persons under electronic surveillance/EM' (Aebi, Tiago and Burkhardt, 2015). Taking this into account, we assume that the EM implementation in Hungary started in 2015 as a pilot program.

*Poland* was one of the first central and eastern European countries that have implemented EM of offenders. According to Jaskóła and Szewczyk (2017), "it was decided to pass an Act about the serving a sentence of imprisonment outside prison in the system of EM, which entered into force on 1 September 2009", even though "EM was entirely regulated by the Act of 7 September 2007". Nellis (2014) mentioned that "Poland introduced EM as a full substitute for a six month custodial sentence in 2009, and for the last six months of a 12 month custodial sentence, later making it a substitute for a full 12 month sentence". The Polish pilot EM project lasted until December 2011 (Pinto and Nellis, 2011). Jaskóła and Szewczyk (2017) explained the changes in the Polish EM program implemented after the amendment of the legislation which was in force since 1 July 2015: "until July 2015, the system of EM was an important alternative to the imprisonment. The system of EM as one of the form of the penalty of restriction of liberty was not so interesting. Therefore, the legislator decided not to use EM in relation to the penalty of restriction of liberty, but in relation to imprisonment or penalty measures and detention order, which was reflected in amendment of 15 April 2016. In conclusion, we can ask a question, whether the amendment of 15 April 2016 has given the final shape of electronic monitoring, or should we expect further legislative changes" (Ibid.).

*Slovakia* is not mentioned in any of the 'CEP EM questionnaires' reports in 2011 - 2016. The report from the Probation in Europe project from 2017 mentions that "EM was tested and is in use" (Lulei and Cehlár, 2017). This report mentions that "in 2015, new legislation in relation to EM came into force" (Ibid.) and this can

be attributed to the “new Act No. 78/2015 Coll. On Controlling of Execution of Selected Decisions by Technical Means (legislative base of electronic monitoring)” (Ibid.). This new legislation was valid as of the beginning of 2016, and “two weeks after the launch of a fully operational electronic bracelet system for monitoring accused and convicted people, a court decided to put the bracelet on the leg of a first convict” (TASR, 2016). According to the press, the Ministry of Justice and the company ICZ Slovakia (winner of the public procurement) signed the contract on 28 April 2014 concerning the EM project worth €22.04 million without VAT and financed through EU structural funds (SITA [newswire], 2014). The above referred project passed the pilot operation that lasted five weeks (TASR [newswire], 2015) in 2015, and the first nationwide permanent EM program started on 1 January 2016. Until the end of June 2018, i.e. within the first 18 months of the operation, there were 113 people monitored within this program, including 23 “protected persons” (i.e. the former victims of sexual or domestic violence under the so-called bilateral EM which also includes monitoring of former offenders sentenced to a ban from approaching former victims). The Ministry of Justice established the new working group in 2018 with the primary aims to evaluate the existing and to elaborate opportunities for a wider use of EM in Slovakia (Ministry of Justice, 2018).

## 10.2. Economic aspects

Economic aspects are often mentioned amongst the reasons of introduction of EM of offenders, the most often in the context of significant rises of prison populations that caused demands to construct new prisons (see for ex.: Clear and Braga, 1995; Morris and Tonry, 1990). Within the research in the IAEMPS project, we have found out that economic reasons were mentioned amongst the reasons, resp. impetuses of EM introduction in the three Visegrad countries: Czech Republic, Poland and Slovakia; while for Hungary we could not find any relevant academic or official source in the Eng-

lish language. In the Czech Republic, economic benefits were considered as a precondition for launching the national EM program (Drexler, 2012; ČTK, 2012), and the economic analyses resulted in the finding that economic benefits can be utilised with ca. 500 offenders sentenced to an EM house arrest (Boledovičová, 2012; ČTK, 2012). In Poland overcrowding of prisons and costs of the EM were, together with the issues concerning legislation, the key issues discussed prior to the national EM program introduction (Jaskóła and Szewczyk, 2017). In Slovakia, the impetus to consider EM of offenders came from the Ministry of Finance in 2010, in the initiative document approved by the Government which, amongst others, stated that “the increased number of prisoners significantly raises the costs of prison system - not only with regards to operation of prisons, but also with regards to a need to cover the capital costs necessary to construct new prison capacities. Despite that the security of citizens is the priority of the Government, it is possible to seek the ways to deal with this issue in the most efficient way” (Ministry of Finance, 2010).

The key role played by prison overcrowding in introduction of EM of offenders in the Visegrad countries can be illustrated by means of comparing prison occupancy levels between the Visegrad countries and selected relevant Eastern European states, which we present in the Figure 10.1 below.

The research in the IAEMPS project contained also an attempt to gather the available data about the costs of existing European national EM programs and compare then with the available data on the costs of imprisonment. However, this data were available only for one of the Visegrad countries, the Czech Republic, which moreover concerned only its pilot project (Krištofík et al., 2017).

### 10.3. European aspects

Despite that the IAEMPS project primarily concerned only the Slovak national EM program, its secondary research activities concerned also the European aspects of EM of offenders.

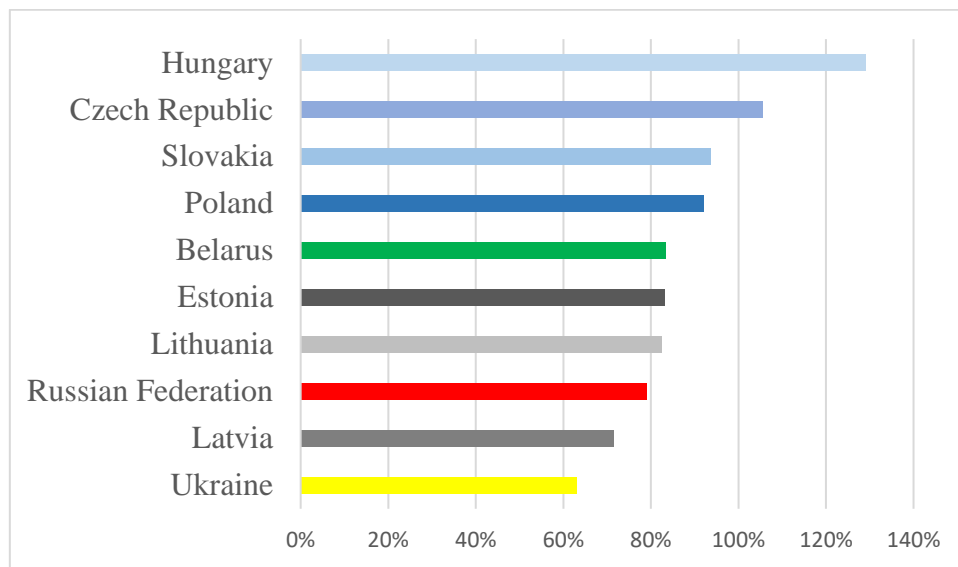


Figure 10.1. Prison occupancy level in the Visegrad and selected European states (2015)

Source: [http://www.prisonstudies.org/highest-to-lowest/occupancy-level?field\\_region\\_taxonomy\\_tid=14](http://www.prisonstudies.org/highest-to-lowest/occupancy-level?field_region_taxonomy_tid=14)

The results of these secondary IAEMPS project research activities suggest that national programmes of EM of offenders in Europe “resemble ‘live organisms’ in a way that they adjust their aims, intentions and methods in time to respond to changing ‘social climate’” (Borseková et al. (2017). In the other words, not only that generalisations cannot be made concerning the content of the EM programs in the European countries, but moreover the content of national EM programs changed in time in several states. “While some countries preferred punishment based approach predominantly focused on restriction of liberty (for ex. Sweden), other countries preferred to focus on rehabilitative and reintegrative aims (for ex. Netherlands), and development in some other countries has been characterised by a transfer from the former to the latter (for ex. Scotland) or by the mixed focus on both the former and the latter (for ex. England). In contrast to all the above mentioned, Germany decided to limit EM to such offenders of sexual or violent crimes that need to be controlled after their release from prisons, both in order to foster their rehabilitation and to protect their former and/or potential new victims” (Mihók, 2018).

In the review of foreign academic literature carried out within the IAEMPS project, the key European Law found to relate to EM was the Council in Europe's (CoE) in Recommendation CM/Rec(2014)4 of the Committee of Ministers to member States on electronic monitoring (see for ex.: Nellis, 2014, pp. 502 – 503). The CoE Recommendations are “a type of non-binding ‘soft law’ which may be used by member states to guide and critique their national policies, and by the European Court of Human Rights to inform its legal judgement” (Ibid., p. 502). The other European Law found to be relevant was the ‘Council Framework Decision 2008/947/JHA on the application of the principle of mutual recognition to judgments and probation decisions’, as amended by the Council Framework Decision 2009/299/JHA, has been transposed (Ibid.). Lulei et al. (2013, p. 114) mention that the Council Framework Decision 2008/947/JHA was the first EU Law in the field of probation measures and alternative sanctions, and also that its transposition into the EU member states’ national legislation faced significant challenges and delays. When analysing the documents related to the Slovak EM Act, we have found out that the Ministry of Justice (2014, *Doložka zlučiteľnosti* [Compatibility clause, p. 1) mentions only one European Directive amongst the EU Law that Slovakia was obliged to transpose to the EM Act – the EU Directive on the protection of individuals with regard to the processing of personal data and on the free movement of such data. Within our review of official and academic literature, we have been unable to find any other EU, European or International laws transposed or used in a different way in preparation or implementation of the Slovak EM Act. The IAEMPS project research of the European context of EM resulted in the finding that “a common approach in introducing/implementing national EM programs has not been considered in the EU. The recent experience with the EM Law adoption in Slovakia suggests that the EU seems to give a *carte blanche* to its member states in this regards, with the exception of personal data collection and processing (Mihók, 2018).

#### 10.4. Concluding remarks (and potential implications for Ukraine)

The aim of this paper was threefold: (a) to present the beginnings of EM of offenders in the Visegrad four countries, (b) to briefly summarise the results of research carried out within the IAEMPS project concerning the related European and economic aspects, and (c) to outline potential implications of these research results for Ukraine. We have found out that prison overcrowding and the related public finance issues were amongst the key reason behind introduction of the EM in the Visegrad countries. As we have shown in the Figure 1 above, the 'V4 states' ended up at the four top positions in the ranking of the selected Eastern European member states by prison occupancy levels in 2015. On the contrary, Ukraine was at the bottom of that list, with ca. 60 % prison occupancy level. High prison occupancy rate can therefore hardly be considered amongst the key reasons or impetuses of introduction of EM of offenders in Ukraine.

The legal grounds for the introduction of EM of offenders in Ukraine were introduced by means of amending the Ukrainian Code of Penal Procedure (hereinafter acronymed CPP) in 2013 (The centre for political and legal reforms, 2013; Kiikov, 2014). The one of specific peculiarities of CPP was the introduction of house arrest as preventive measure and the introduction of EM as of a technology to carry out the Court decisions concerning surveillance facilitation over offender abiding of imposed restrictions (Kiikov, 2014). "Although the Courts imposed the home arrest in 5104 cases in 2013", "from available 527 tracking devices [only] 140 were in use in 2014, and since May 2013 the equipment were administered [only] 303 times (Ibid.). This situation with the rather low use of EM devices is similar as in Slovakia, however in Slovakia the low use of EM can be attributed to equally low sentencing of house arrests (which was not the case in Ukraine).



As we have briefly explained in the section dedicated to the European aspects, the EM has been applied in Europe from several different reasons, some of which are not related to house arrests, but instead related to attempts to increase effectiveness of implementation of the probation measures. As a functioning probation system is one of the prerequisites for accession into the EU, the efforts to introduce probation in Ukraine intensified in the recent decade, also under the financial support from the EU within the project titled ‘Support to reforms in the sphere of justice in Ukraine’. “In February 2015 the Law of Ukraine on Probation was adopted. The law on probation aims to ensure public safety through a reformed prison system, reduction/prevention in cases of repeat offenders through effective rehabilitation, and monitoring those that are subject to probation. The law makes provisions for social and educational rehabilitation measures and alternate sentencing” (DCAF ISSAT, 2015). “Despite the fact that the Probation Law was passed in 2015, the Probation Service itself was not operational until January 2017, when the legislative amendments to the Criminal and Criminal Procedure Codes came into force and the probation staff was recruited”. As of 2018, “it is difficult to talk about the results and effectiveness of the probation service in Ukraine, as natural functions for probation, such as risk assessment and needs, implementation of social programs, the application of electronic monitoring has not yet been put into effect or implemented within the pilot project (Danish Helsinki Committee for human rights, 2018).

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