

## **IMPACT OF ASYMMETRY OF POTENTIALS ON SUSTAINABLE DEVELOPMENT OF TRANSBORDER ECONOMIES**

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### **ABSTRACT**

Basic thesis of the paper is that main driving forces of development as well as economic stagnation, crises, shocks or catastrophes in transborder economies are the asymmetries of resources, capitals and potentials between neighboring regions or small areas belonging to different countries. In modern economy most important are the asymmetries of institutional regulations, laws and procedures binding different countries. The asymmetry of power of influence of some countries on other countries can be strengthened or weakened of national laws and institutions. Nowadays the institutional asymmetries are deciding how the transborder asymmetries between other resources, capitals and potentials – demographic, social, infra-structural, industrial, natural, etc. – influence on the sustainability of development of transborder economies.

In globalized world more and more important for sustainable development of transborder economies are the processes of the reduction of asymmetries introduced or extorted by the laws, directives or conventions of international or supranational organizations. Central governments of the member states of international organizations should evaluate these directives from the point of view of transborder processes, remembering that for micro, small and medium economies the transborder processes are of macroeconomic significance.

Common transborder information platform providing verified and complex data for all stakeholders (central and local governments, businesses, NGOs, research institutes, universities, individuals) are necessary for optimal cooperation and sustainable development of trans-border economies.

**Key words:** transborder asymmetry, transborder potential, institutional asymmetry, economic gravitation, transborder information platform.

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## 1. Formulation of the problem

In modern, open, market-driven and knowledge-based economy the driving forces of economic development and stimulation of social and economic activity in transborder economies are the cross-border asymmetries of the resources and capitals between countries, regions, branches of economy and between other domains of social and economic development, i.e.:

- asymmetry of institutional regulations, laws and governance procedures
- asymmetry of infrastructural, technological and economic resources and capital,
- asymmetry of demographic, social and human capital,
- asymmetry of information resources and capital.

These asymmetries and differences of potentials may positively influence economic cooperation and development between enterprises, non-profit organizations, national and regional economies generating the effect of complementarity of economies. The asymmetries of potentials, resources, capitals and regulations are generating the transborder complementarity of different activities. They are creating positive effect of comparative costs of economic and social activity and are strengthening the effects of synergy of cross-border cooperation and mutually and reciprocally profitable collaboration of businesses, non-profit institutions and population.

However –to the contrary – rather often the institutional, social, technological and economic asymmetries may also generate negative impact on transborder economic and social cooperation and development. One of most important reasons of blockades and difficulties in generating positive synergy from the asymmetries in economy, are

- a) the incomplete information on the economic and social asymmetries,
- b) international incoherence between laws, regulations and procedures generating the asymmetries,
- c) information gaps between subjects operating in asymmetric economic and social environments in neighboring countries,
- d) lack of informational transparency of markets and institutions.

In transborder functional areas the asymmetries between neighboring local economies of different countries are often deep and multidimensional – political, social, economic, ecological, etc. Main causes of these asymmetries are of political, social and informational nature. Also, the international and transborder differences of infrastructural development of countries and regions play important role in the generating and increasing of transborder asymmetries.

The international asymmetries of resources, capitals and potentials in transborder areas are deeply influencing all spheres of social and economic life.

Therefore, the identification, the understanding based on good theoretical foundations, the monitoring of asymmetries and the analysis of impacts of different types of asymmetries on economic and social life in transborder areas of neighbouring countries and regions is of utmost importance for governments, social organizations and businesses both on regional and national level.

In globalized world special attention should be paid to transborder civilizational asymmetries. Such asymmetries occur if in neighboring countries, on other sides of political borderlines, are living the societies belonging to different civilizations<sup>2</sup>. Main differences between civilizations concern the understanding of the concepts of truth, good and evil, freedom, social duties, law and order, fairness and honesty, beauty. The same terms used by people from different civilizations may have quite different meaning. Today international political and economic organizations and many countries officially use the concepts embedded in Latin civilization. However, in practice, in concrete situations, cooperating partners may understand and interpret the same terms according to different civilizational systems of values. In transborder economies, in which people from different civilizational systems are operating, proper identification of civilizational contexts of information is necessary.

Main thesis of this paper is that in globalized knowledge-based economy, the transborder regions may become the areas of more dynamic socio - economic cooperation and development than other regions apart from the borderlines. This specific dynamism can be achieved thanks to *positive asymmetries* i.e. the asymmetries generating *positive synergy* of institutional, social and economic resources and capitals concentrated in relatively small geographic space.

*Positive* and *negative transborder asymmetries of potentials* are generating positive or negative institutional, social, economic or ecological effects of synergy thanks to social and economic complementarity or substitution of potentials between branches, businesses, NGOs, other organizations and governments.

Active policy of transborder cooperation of central and regional governments, direct institutional involvement in the initiatives of building harmonized social and economic transborder infrastructures, institutional support for businesses and non-profit organizations, support of joint cultural, scientific and other social initiatives, is the precondition of development of transborder economies.

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<sup>2</sup> The typology of civilizations was originally formulated by Feliks Koneczny in: Koneczny F., *O wielosci cywilizacji*, Capital, Warszawa 2015 (reprint of original version published by Feliks Koneczny, Krakow, 1936). Simplified typology of civilizations was proposed by Samuel P. Huntington in: Huntington S., *The Clash of Civilizations and the Remaking of the World Order*, Publ. Simon and Schuster, 1996.

## 2. Basic concepts and definitions

Transborder economy needs specific theoretical, methodological and information foundations. Economic theories oriented for analysis of national economies as entire systems (based on the SNA model of national economy) are not sufficient for observation, measuring, evaluation and modeling of economic processes in transborder regions. Transborder economics as the discipline within economic science needs special conceptual framework.

Below there are presented the proposals of selected basic concepts and definitions relevant for elaborating transborder economics as the specialized discipline within economic sciences.

### Transborder system

- political, institutional, social, economic, monetary, financial, infrastructural, military or ecological system functioning in the transborder region, on the territory of two or more countries, e.g. transborder labor market, transborder retail trade, transborder wholesale trade, transborder energetic infrastructure, transborder road and railway infrastructure, transborder ecological infrastructural facilities, transborder information systems, system of legal services for businesses and organizations, etc.

### Transborder region

- region located on the territories of two or more countries, in which is taking place the interference of social, cultural, economic, ecological, infrastructural and political processes.

### Transborder area

- entire part of transborder region located on the territory of one or more countries delimited from the point of view of one specific criterion or a set of criteria, e.g. the area of border crossing, area of recreation, transborder area of health-resort serviced by the residents of transborder region of neighbouring countries, industrial area employing the inhabitants of cross-border region, transborder natural reserve area, etc.

### Transborder phenomena

- political, institutional, social, economic, infrastructural or ecological events or objects, that occur, exist or may happen in transborder regions of two or more countries, which have or may have the impact on transborder systems; special attention should be paid to the identification, forecasting, projection and monitoring of different kinds of cross-border shocks and catastrophes, both disasters and advantageous events for one or more stakeholders of transborder economy and society.

### Transborder processes

- political, institutional, social, economic, infrastructural or ecological processes conducted in transborder region, on the territory to or more

countries, in which are taking active part the subjects – residents (governments, NGO's, businesses, social institutions, etc.) of different countries.

#### Transborder economy

- Economic system functioning on the neighboring territories of two or more countries. Territorial space of the transborder economy is delimited by the area on which are realized the transborder social or economic processes.

#### Transborder resources

- The transborder potentials are the political, institutional, social, economic, infrastructural or ecological resources and capitals<sup>3</sup> that occur on the territories of neighboring countries, that are used, are ready to use or are potentially useful in transborder processes. For the development and sustainability of transborder economies the following types of resources are important:
  - demographic resources,
  - social resources,
  - human resources,
  - institutional resources,
  - economic resources,
  - technological resources,
  - infrastructural resources,
  - environmental resources,
  - information resources.

#### Transborder potential

- Social, human, cultural, natural, ecological, technological, productive and financial potential of governments, enterprises, NGO's, households, individuals and other subjects that are the stakeholders of transborder systems and transborder processes.

#### Institutional transborder potential

- Laws, regulations, administrative procedures and the governments, other organizations authorized by governments to the realizing of governmental functions and duties determined in laws and regulations, relative to transborder areas, systems, phenomena and processes.

#### Transborder asymmetry

- The qualitative or quantitative differences of social and economic resources and potential between national areas of transborder economy. The transborder asymmetry often leads to the complementarity of individual national parts of transborder economy.

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<sup>3</sup> The concepts of transborder capitals, see: Olenski J, Human Capital, Social Capital and Institutional Capital as Factors of Synergy of Economic Development of Transborder Regions in Knowledge-based Economy, in: Cierpial-Wolan M., Lasek D, Olenski J. (ed), Foundations of Transborder Economics and Statistics, Ch. 7, pp. 68–9, Publ. Carpathia, Rzeszow 2014.

#### Asymmetry of transborder potentials

- qualitative or quantitative differences between different potentials (resources and capacities) of regions, localities, enterprises or other organizations based in transborder areas of different countries. Institutional, organizational, technological, economic, social and human asymmetry are of special importance for complementarity of economies of transborder regions, systems and processes, stimulating more extensive of branches and transborder economy as a whole.

#### Economic transborder asymmetry

- qualitative and quantitative differences of economic capacities, economic infrastructure and market conditions; economic asymmetry can be measured using relevant statistical indicators (prices, wages and salaries, social insurance, costs of production, costs of trade, taxes, customs, etc.).

#### Political transborder asymmetry

- transborder economy consisting of the territories of the countries of substantially different political systems; in case of political transborder asymmetry the transborder processes are depending fully on political situation and institutional regulations of governments. Examples: (1) transborder labor markets of Palestine and Israel; (2) SAR transborder economy of Hong Kong and Shenzhen, (3) transborder economy of the free-trade zone of Krolewiec (Kaliningrad) exclave of Russian Federation and neighboring counties of Poland and Lithuania before 2014 (the local free trade zone was closed in 2014 because of the “special military operation” of the army of Russian Federation against Ukraine).

#### Institutional transborder asymmetry

- differences of legal regulations and administrative procedures officially adopted and practically used in economic and social activities on the territory of different countries in transborder regions; institutional asymmetry may be identified by comparative analysis of regulations related with concrete economic transborder processes or phenomena and by comparative simulation of impact of these regulations on economic conditions on the areas of different countries in transborder regions.

#### Positive transborder asymmetry

- The asymmetry is positive if the qualitative or quantitative differences of economic and institutional potentials that stimulate more extensive processes of cooperation and development thanks to the complementarity of economic processes and potentials.
- E.g. effects of direct contacts of subjects and citizens that are the residents of different countries (thanks to free transborder movement and free trade zones), differences of prices for the same products, differences of wages, differences of local demand and supply of products on local transborder markets, differences of quality of goods and services, differences of exchange rates of currencies, difference of quality of environment,

differences in institutional and legal regulations creating more convenient conditions for economic activity in one part of the transborder region for foreign subjects than in the country of residence, etc.

- Positive transborder asymmetry enables the subjects to optimize their activities by using the effect of comparative costs on wider transborder markets.
- Positive transborder asymmetry may be the result of asymmetries of all types of resources listed above, i.e. social, human, cultural, natural, ecological, technological, productive, financial resources and between institutional potentials, laws, regulations and procedures.

#### Negative transborder asymmetry

- The asymmetry is negative if the qualitative or quantitative differences of economic and institutional potentials that are discouraging the subjects, increase costs or create excessive administrative or economic difficulties of cooperation of businesses, individuals and governments (e.g. complicated border crossing system, excessive customs, excessive control of labor market, local cooperation of microbusinesses, excessively low limits for local transfers of goods and currencies, etc.).
- Main reason of negative transborder asymmetry is caused by incoherence of laws and administrative regulations of neighbouring countries (e.g. passport and visa regulations, currency exchange regulations, registration of foreign enterprises, etc.) and formal barriers of transborder cooperation and contacts of subjects.
- Negative transborder asymmetry may be the result of asymmetries of all types of resources listed above, i.e. social, human, cultural, natural, ecological, technological, productive, financial resources. In modern economies the most important role is played by the negative asymmetry of institutional potentials, i.e. laws, regulations and procedures and their implementing in practice by governments and other institutions acting in transborder regions.

### **3. Types of asymmetry of resources and potentials in transborder economies**

The following types of asymmetries are of special importance for transborder economies:

- 1) Institutional asymmetry;
- 2) Economic asymmetry;
- 3) Technological asymmetry;
- 4) Social asymmetry;
- 5) Ecological asymmetry;
- 6) Information asymmetry.

The analysis of the asymmetries listed above is important not only from scientific, but also from practical point of view. For politicians, governments, businesses, NGOs' it is useful and necessary to understand, to identify and – if possible – to measure the impact of these asymmetries impact on all processes and phenomena in transborder economies. In micro and small national economies and autonomic regions those asymmetries are of macroeconomic importance for countries as a whole.

### 3.1. Institutional asymmetry

Decisive and necessary factor of stimulation of development in transborder regions and complementarity is the *institutional asymmetry*. The *institutional asymmetry* in practice means that in one transborder region all economic, social and political activities are regulated by different legal systems. There are also differences of competences, functions and organization of regional and local governments, different competences of particular governmental units and other institutions, differences of rights and duties of economic subjects and physical persons determined by laws and realized in practice.

The differences of administrative procedures are realizing the same or similar functions, as well as their realization in practice. The subjects – businesses, NGO's, individuals - operating in transborder regions should be acquainted both with the laws, procedures and with real practical implementing and use of these laws in all fields of political, social and economic activity.

Laws and administrative procedures based on those laws are regulating the transborder systems and processes. National laws and procedures are “crossing” - in some sense – the borders and have the impact on the activities of economic subjects on the territories of neighbouring countries. This *transborder interference* of national laws and administrative procedures should be carefully analyzed by stakeholders (governments, businesses, social organizations, NGO's, households and individuals) from the point of view of the impact of institutional asymmetry between different national segments of multinational transborder region.

The subjects – as a rule – are acquainted with administrative procedures and the ways of their executing in their countries of residence. However, the subjects – non-residents do not have full information on the equivalent or similar regulations and procedures that are obligatory on the territories of neighbouring countries. In such situations the institutional asymmetry in transborder regions is creating the “legal traps” for businesses and all other groups of social and economic subjects. The reasons of those traps are:

- 1) Different regulations of the same economic and social processes in the laws and administrative procedures of neighbouring countries;
- 2) Lack of complete, clear information of laws and procedures, understandable for all stakeholders and easy interpretable in concrete cases and situations of subjects.



Common information platform collecting and disseminating all laws and administrative procedures and their presentation understandable and accessible for all subjects operating in transborder areas is necessary to the avoiding of the “legal traps” by the stakeholders and to use the institutional asymmetry as the positive factor of development of transborder areas, to achieving higher efficacy of economic and social transborder processes and cooperation of subjects from neighbouring countries.

For example, the asymmetry of laws regulating labor markets in the *Carpathian Euroregion* covering the neighboring borderlands of Poland, Ukraine, Slovakia, Hungary, Romania and Moldova, from the point of view of the costs of labor, conditions of social insurance of employees, stability of work, level of wages and salaries, conditions of work other rights and duties of employees and employers, as well as the asymmetry of the regulations of employment of foreign citizens on the territory of the countries of this Euroregion, may help the entrepreneurs and local governments to optimize the policy of employment and the location of different activities on the territories of different countries and shall help employees to take proper jobs.

For example, the monetary asymmetry between Poland, Ukraine, Slovakia, Hungary, Moldova and Romania (Polish *Zloty*, Ukrainian *Hryvna*, Slovakian *Euro*, Hungarian *Forint*, *Moldovan Lei* and *Romanian Lei*) in the hands of experienced economists in governments may be powerful tool of stimulating the development of transborder economy of the Carpathian Euroregion as a whole.

For example, the laws regulating the crossing of borders by people and the laws regulating the cross-border transportation of products may be changed quickly and unexpectedly by central governments of one country without the paying of attention on the consequences of those decisions for transborder economies of all interested countries. It could be both the liberalization of migratory movement and transit of products, as well as – just the opposite – the total or partial closing of the border-crossings, or the introducing of long-lasting control of people or the vehicles transporting some products

In the conditions of deep institutional interventionism the protection of the sustainability of development of transborder economies there is the necessity of international coordination and the stabilization of laws and procedures regulating the functioning of transborder systems. The coordination, or – at least – the orchestration of the laws regulating economic and social processes in the borderlands of neighboring countries, is the prerequisite of mutually advantageous development of transborder economies. Detailed comparative analysis of symmetries and asymmetries of tax laws, laws regulating social insurance and health insurance, environment protection, investments, etc., are of special importance.

Nowadays the protection of natural environment and ecological security are rather often used as the pretext for transborder interventions of some countries

against other neighboring countries. The comparative analysis of laws and institutions of neighboring countries regulating the environment protection from the point of view of the impact on social, economic and environmental phenomena and processes in the areas of transborder economy shall be helpful for optimizing the decisions of people, businesses and local governments, e.g. the decisions on the localization of economic activity on this or that side of the border, what technology or profile of investments were the optimal in the light of ecological policy and environment protection.

The transparency of institutional asymmetry of transborder economies is the prerequisite of their existence and development. The governments of countries interested in the development of their borderlands and broader transborder economies should organize and maintain international information systems storing all laws, regulations, administrative procedures regulating economic activities of businesses, activities of NGO's and other non-profit organizations, procedures adopted by governments and institutions responsible for supervision, control and monitoring of economic and social activities in transborder areas. The storing of information on administrative procedures and on real practices of local governments and their functionaries is helpful for businesses and population in transborder economies.

### **3.2. Economic asymmetry**

*Caeteris paribus*, in legal and institutional frameworks in transborder regions, the *positive economic asymmetry* is the main driving force of mutually profitable cooperation and development of all national areas of transborder regions. Economic asymmetry between national parts of transborder economies, both positive and negative asymmetry, could be evaluated by following indicators measured and compared on local areas of transborder regions in different countries:

- Differences of prices of consumers' goods and services; special attention should be paid on extreme differences of prices for the same or similar goods and services;
- Differences of prices of investment goods, raw materials and services; also special attention should be paid on extreme differences of prices for the same or similar goods and services;
- Differences of wages and salaries in registered labor markets as well as in non-registered (shadow) economy on local areas of transborder regions in different countries;
- Differences of other components of costs of labor paid both by employers and employees; comparison of costs of labor paid by employers and by employees, e.g. social insurance, health insurance, costs of cross-border

commuting, real time of cross-border commuting, costs of accommodation of employees, social benefits supplied by employers;

- Availability and accessibility of work; demand for employees of concrete professions and skills on local areas of transborder regions in different countries;
- Real unemployment among people of concrete professions and skills on local areas of transborder regions in different countries;
- Availability of skilled employees of concrete professions and skills on local areas of transborder regions in different countries;
- Differences between demand and supply of goods and services in different areas of transborder region;
- Quality of produced and supplied goods and services in different areas of transborder region;
- Costs of transborder transfers of goods and services; transportation, work;
- Differences of costs of safety and security of economic activities and industrial safety in different areas of transborder region;
- Law and order of economic and social activities; differences of the levels of corruption;
- Costs of use of transborder infrastructure by businesses, employees and customers (energy, transportation, information services, attorney services, security services, etc.);
- Differences of reliability of banking and financial systems;
- Differences of legal regulations concerning environment protection, labor market, taxes and customs;
- Differences of taxes (all kinds: VAT, CIT, PIT, excises and duties) and deductions of taxes;
- Levels of custom rates and other forms additional of costs of cross-border exports and imports;
- Shadow economy – non-registered economic activities of businesses and individuals, level of corruption on different sides of the borders, especially the “institutionalized” shadow economy and corruption of local governments, functionaries of the institutions of justice, functionaries of border control and the NGOs’ unofficially cooperating with those institutions (e.g. so-called “social activists”, “eco-terrorists”, insurance companies), smugglers ea. Unfortunately, in many places the positive impact of shadow economy on the development of transborder economies is observed. Quite often the shadow economy in borderlands was the primal stimulus of development of transborder economies. Stepwise, thanks to realistic and wise policy of national governments, those “shadow transborder economies” were transformed into more “civilized” and law-based transborder economies.

Positive economic asymmetry is the most important stimulator of development of transborder trade, transborder labor market, optimal localization of production, mutually advantageous organization of cooperation of entrepreneurs within the existing legal and administrative environments of neighboring countries. Positive economic asymmetry is stimulating and accelerating the development of transborder economies in short term, as well as in middle term. At the same time the negative economic asymmetry is hampering the development of social and economic activities in the areas of transborder economies. For micro, mini and small countries the negative transborder economic asymmetry hampers the development and competitiveness of those national economies

### **3.3. Technological asymmetry**

In modern, globalized economy the technological level of industry is determined by the policy of national central governments and the efficacy of their institutions in supporting scientific researches, promoting of implementation of findings and inventions and their dissemination on global markets. Thanks to institutional interventionism and policy supporting technological progress by central governments, the national economies develop their infrastructures necessary for creating and implementing the effects of research and disseminating of technological progress in industry, governance and social life. Important role in technological progress have played the expenditures for armaments and the policy of transfer of the inventions for military sectors to society and economy<sup>4</sup>.

In transborder economies the international technological asymmetry is the consequence of differences of the level of technological progress, preferred or obliged technological standards and the level technological of production processes achieved in different countries before the creating of open transborder economic spaces. The differences of technological level of branches and production processes in transborder areas cause the differences in efficiency and quality of produced goods and services. It could be an important factor stimulating the cooperation and technological cooperation of enterprises in transborder regions.

In open social and economic space of transborder economy it comes up the opportunity of the use of technological asymmetry for mutually advantageous and

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<sup>4</sup> The countries that transfer ASAP the inventions originally elaborated for military sector to civilian branches of economy are gain the rent of priority on national of global markets. E.g. the ICT technology invented originally for the US Army on the orders of central government gave to some American branches the monopolistic position on global market. Just the opposite policy has Russian Federation. Technological findings and invention for Russian (in the past – Soviet) military sector are confidential and accessible only for special units and purposes fully controlled by central governments. Such policy causes the technological gaps between branches, enterprises and finally – between national economies.

sustainable development of neighboring national areas. These technological differences are strengthening the complementarity of production processes, the differences of quality of produced goods and services. Technological asymmetry is also the cause of differences of economic efficiency of production processes and of different impact of production processes on natural environment.

Technological asymmetry of the processes of production of goods, trade, transportation, industrial services as well as in different types of infrastructure, in the middle and long-terms is the factor actively influencing - positively or negatively – on the progress of technological level of all other economic and social activities in transborder areas. Technological asymmetry determines the most profitable directions of transborder cooperation between businesses located in neighboring countries.

Often the technological level of competing branches of economy in the areas of transborder economy belonging to different countries is qualitative quite different. This differences create deep technological gaps or even the qualitative gulfs between economic processes inside one transborder economy. In such cases the technological asymmetry may lead to the diversification and change of economic profiles and to the changes of the specialization of particular national areas of transborder economy.

The scale and dynamics of the diversification and economic specialization of different areas of transborder economy is determined by comparative costs of economic activities in national businesses competing in substitutional branches that are developing in particular national areas of transborder economy. Transborder technological asymmetry between businesses leads to branch specialization of particular national areas. Technological level of industry and trade depends on the investments of businesses in modern technologies and on the support of governments for technological modernization of economy. In many countries the accelerated modernization is based on the import of new technologies and know-how from highly developed countries.

For example, in Central and Eastern Europe for many years, before the transition in the beginning of the 90<sup>th</sup>, the technological progress in industrial branches depended on the policy of import of modern technologies and the policy of transfer of new technologies from developed countries. This policy has created deep differences of technological level of branches and enterprises in Europe. Thanks to the political changes in so-called Comecon countries after 1989 the processes of technological modernization of many branches of economy in Central and Eastern Europe have been accelerated.

However up to now in many transborder areas the technological asymmetry between countries is still visible. In some branches the transborder differences became even deeper, because many businesses in Eastern and Central Europe were not able to withstand the competition of more effective enterprises of developed economies. The processes of economic diversification of regions were

extremely quick and deep in transborder economies along the borders between CES and developed economies of Western Europe.

One should remember however that – in long term – the transfer of technologies between countries in open, market – driven economies is reducing the scale of technological asymmetry and abates the impact transborder technological asymmetry on the specialization of national areas of transborder economy. Measuring and monitoring of the impact of technological asymmetry on transborder comparative costs should be the component of transborder statistics.

### **3.4. Social asymmetry**

Social asymmetry in transborder economy concerns substantial qualitative and quantitative differences between social behaviors, situations, phenomena and processes taking place in national areas belonging to transborder economies.

The following domains of social asymmetry between particular national areas of in transborder economies and regions should be considered:

- 1) Civilizational gaps;
- 2) Ethnic structure of population, relations between ethnic groups, situation of ethnic minorities, ethnic policy of governments;
- 3) Migration trends;
- 4) Demographic potentials;
- 5) Social capitals;
- 6) Human capitals;
- 7) Institutional capitals;
- 8) Civil and political rights, protection of human rights;
- 9) Social security and safety, crime and justice, risk of violence;
- 10) Quality of natural environment, pollution, natural disasters and environment protection;
- 11) Housing;
- 12) Labor: employment, self-employment, unemployment, job creation and deletion;
- 13) Incomes of households, wages and salaries;
- 14) Commuting facilities;
- 15) Quality of nutrition
- 16) Health services
- 17) Education
- 18) Culture;
- 19) Wealth and poverty;
- 20) Social and political activity of the society, NGO's;
- 21) Situation of vulnerable social groups;
- 22) Social functions of governments and self-governments.

The information system of observation and monitoring of social asymmetries and their positive and negative impact on the development of transborder economies should be based on relevant concepts, precise definitions and pertinent indicators for each listed above domains of social asymmetry. Official statistical agencies of the countries that are the stakeholders of transborder economies should jointly develop the systems of monitoring of social phenomena and processes in the domains specified above. The observation and analysis of the following main aspects of social policy of countries beyond “pure” statistics are needed for understanding and explaining the role and impact of social asymmetry in transborder economies:

- 1) Social policy of central governments: objectives, priorities and methods of institutionalization of social policy of central and local governments;
- 2) Political models of states: role of NGO’s and of activities of population in the regions of transborder economy;
- 3) Typology of borders between states creating transborder economy: social transparency and cross-border diffusion of social processes, dynamics and territorial scope of particular internal social processes and phenomena;
- 4) Impact of transborder processes on social phenomena in the areas of borderland; in micro and small national economies, enclaves and exclaves – on the whole territory of countries;
- 5) Impact of external phenomena, processes and events, both national, foreign and global political, social, economic, financial, environmental, on societies in particular transborder economy.

The defining of uniformed list of social statistical indicators relevant for all transborder economies and for all countries is not realistic. Each transborder economy has its own specificity. Optimal approach to heterogenous information systems of monitoring of social phenomena and processes in transborder economics is the building of data warehouse storing statistical and factual (*factographic*) information. The scope of information stored in such data warehouse should meet the needs of the stakeholders interested in the analyses and in the building of generalized statistical simulation models of particular transborder economies. Those models shall be oriented to the describing the *cause – effect* relations between events, phenomena and processes taking place in different areas of transborder economy.

Transborder economies are dynamic systems. The same factors influencing transborder phenomena and processes may quickly and unexpectedly change their character from positive impact to negative, from cause to effect, or may become negligible. For example institutional decisions introducing minor economic changes in one country may have deep and long- lasting social, economic or ecological influence on the territory of transborder economy in neighboring countries and vice-versa. Institutional decision on investment or environment protection in one country may stimulate or – to the contrary – to hinder the

progress on the territory of neighboring country or even cause the regress. Institutional decision in one country may cause local shock or even local catastrophe on the territory of transborder economy of neighboring countries.

In the conditions of political stability and good coexistence between countries the social asymmetries liberate social and economic potentials and stimulate more fruitful economic cooperation and better quality of life of nations, groups of interest, different ethnic groups or other social groups living in the borderlands of neighboring countries

Example (1). Despite the concentration of main military activities of Russian – Ukrainian war, that had been started by the Russian Federation against Ukraine in 2014 on the eastern and southern regions of Ukraine (Crimea, Donbas, Lugansk, Kiev), and extended in 2021 on the whole territory of Ukrainian state, the war had changed completely the profiles and all cross-border processes of the transborder economies of the Carpathian Euroregion covering wide borderlands of Poland, Ukraine, Slovakia, Hungary, Moldova and Romania. The profile of extensive positive mutual stimulation of economic and social transborder cooperation of countries was suddenly replaced by the profile of anti-shocks and anti-catastrophe cooperation of people, governments, NGOs' and businesses focused on the minimization of social, economic and infrastructural shocks and catastrophes causes by Russian hybrid aggression.

Example (2). Thanks to political decisions of governments establishing free trade zones in many regions of the world, in the borderlands of neighboring countries there have been developed many transborder economies of new, different social and economic profiles. In many cases the political decisions of liberalization of cross-border traffic and so called “small cross-border movement” have played the role of accelerators stimulating mutually profitable, new forms and scope of cross-border cooperation of businesses and societies. E.g. in Western and Central Europe the processes gradual liberalization of international trade and transport after World War II brought quickly the fruits in the form of transborder economies (so called *Euroregions*) that sprang up like mushrooms along all borderlands of neighboring countries. Similar processes are observed in all continents.

In the conditions of deep political and institutional interventionism on national and international level, taking into account multidimensional and multidirectional dynamics, instability and uncertainty of transborder economies, scientific and political stakeholders need many statistical indicators dynamically adjusted to current and predictable situations in transborder economies. Moreover, the description and documentation of statistical indicators, surveys and methods used for the monitoring of social processes should be stored in uniformed standard form in one metadata base for each particular transborder economy. The stakeholders should be delivered any time the information, what meaning has this or that indicator in one or other transborder economy and in one of other country.



Common *metainformation system of monitoring of social processes* covering all countries may help national statisticians to identify "better statistical practices" (if not "best statistical practices") and exchange of experiences between statisticians of the post-transition countries. It may be also good form of the realization of the Commandment 10 of the *Fundamental Principles of Official Statistics*<sup>5</sup> on global scale and the statistical monitoring of the United Nations *Millennium Development Goals*<sup>6</sup>.

### **3.5. Complementarity vs. substitution of potentials in transborder economies**

In transborder economies the complementarity of economic and social capacities, industrial technologies, branches of economy and environmental resources is an important factor mutually profitable cooperation. The more complementary are the capacities and resources between national parts of transborder economies, the stronger is the propensity to establishing middle-term and long-term international cooperative links between businesses, NGOs' and social communities living in the borderland. The relations of complementarity are the results of the asymmetries of natural resources, social and human capital, financial capital, technological level and infrastructural capacities of national parts of transborder economy. The complementarity relations are usually the foundation of strong positive asymmetry stimulating the progress and development in transborder economies and – in case of micro and small countries – the development of countries as a whole.

Another side of the same coin is the substitution between the resources and capacities in different national parts of transborder economy. One should remember that the relations of substitution of economic and social capacities, industrial technologies, branches of economy and environmental resources may generate positive as well as negative effects for harmonized and sustainable social and economic development of transborder economies and countries.

In open, market driven economy, the substitution is usually generating the competition between businesses. The competition is stimulating the progress thanks to modernization of technologies, better management, more offensive marketing. From this point of view transborder markets create better conditions of development based on competition, then the markets inside the territories of countries. In case of micro and small countries the whole territories of countries are the entire parts of transborder markets.

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<sup>5</sup> See: *United Nations Fundamental Principles of Official Statistics*, Resolution of the General Assembly of the United Nations, A/RES/68/261 from 29 January 2014. <https://unstat.un.org/fpos/>

<sup>6</sup> See: *Millennium Development Goals*, <https://www.un.org/millenniumgoals/stats/shtml>. Resolution adopted by the General Assembly on 25 September 2000, 55/2001. *Transforming our world: the 2030 Agenda for Sustainable Development*. Sustainable development goals and target. MDG Indicators.

In the situation of deep political and institutional interventionism the influence of substitution of social and economic factors is much more complicated and uncertain. Political decisions and administrative interventions of central governments of countries may change the impact of the relations of substitution and complementarity any time. For sustainable development of transborder economies all central and regional governments should resist the temptation to the using the national laws and administrative procedures for controlling and limiting the competition of resident entrepreneurs with the businesses from other countries. Regional governments may also encourage the businesses operating in competing branches to coordinate their activities. Happily, in some domains of social and economic life we can find many examples of positive “coordinated competition”. E.g. the approaches of “coordinated competition” and joint development and maintenance of infrastructure for mutual benefit of all stakeholders are adopted in transborder touristic areas of many countries.

### **3.6. Integration vs. disintegration of national segments of markets in transborder economies**

In transborder regions two contradictory trends of development of economies are observed:

- 1) integration and concentration,
- 2) disintegration and dispersion.

Ad (1) Integration of existing structures of economic and social activity by creating more stable forms of cooperation of organizations and units, for example international consortia of national subjects – residents on the territories of neighbouring countries (enterprises, NGO’s, local governments, social organizations). Integration and coordination of activities of national subjects is also realized by signing bilateral or multilateral agreements of cooperation and coordination of activities, in different forms: letters of intent, organization of joint task forces and working groups, coordinating councils, etc. The integration processes help to achieve the synergy effect by concentration of complementary capacities of subjects operating on the territories of two or more countries and supporting to choosing optimal forms and places of the activity in transborder regions. Transborder outsourcing is one of effective tool of reaching the effects of synergy as the specific form of integration of economic and social activity<sup>7</sup>.

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<sup>7</sup> Czech-Szkie E., Transborder outsourcing – new method of synergizing the resources of national economy, in: Cierpiał-Wolan M, LasekD., OlenskiJ. (ed), Foundations of transborder economics and statistics, Publ. Carpathia, Rzeszow 2014.

Ad (2) The disintegration of activities by supporting independent local social initiatives and NGO's, non – profit organizations that are realizing their own goals on local level is also an alternative approach to the optimizing economic and social activities and processes. Disintegrated forms of cooperation in transborder areas are efficient for realization of social, cultural and local ecological initiatives on local level. These decentralized forms of cooperation may stimulate the activity of citizens and micro-entrepreneurs on local level. Good results of disintegrated cooperation of many independent units may be achieved within bilateral agreements of partnership cooperation of regional governments, small towns, villages, local cultural initiatives. These agreements create political and legal conditions of reliable cooperation of many independent businesses and organizations, especially in such domains like culture, social activities, health, education, research. The prerequisite of achieving mutual effects of disintegrated forms of activity is the transborder information transparency achieved by developing and maintaining common transborder information platforms for interchange of information between subjects and citizens.

While in economic processes the integration gives better effects thanks to the economy of scale, in case of social processes the effects achieved thanks to the liberalization and stimulation of initiatives and ambitions of local communities, are much better and more effective than the concentration of activities and resources in limited number of bigger organizations.

### **3.7. Asymmetry of social and cultural potentials**

Social and cultural variety of societies living in transborder regions is an important potential of regional development. Cultural and social asymmetry should be used by regional governments as the field of cooperation of social and cultural organizations. This cooperation is creating political and social atmosphere of cooperation in other domains, especially in economic activities.

Good example of positive effects of social and cultural asymmetry is the transborder economy of Carpathian Euroregion. In Carpathian Euroregion this positive asymmetry seems to be well understood by regional and local governments, NGOs' and other social organizations and institutions in all countries of this Euroregion. Many joint cultural events and social initiatives are undertaken, stimulating the development of tourism, local culture and strengthening social capital on local level of all countries. Direct contacts between inhabitants of villages and towns and cooperation of social organizations are facilitating the development of transborder cooperation in many other domains.

Partnership agreements between self-governments of cities, towns and other local governments are also important contributions to the creating of better conditions of cooperation in all domains of economic and social life in transborder regions.

#### **4. Methodological problems of delimitation of transborder functional areas**

Important practical problem for all active stakeholders of social and economic systems and processes in transborder regions is the delimitation of transborder areas. For efficient use of positive effects of economic asymmetry by governments, entrepreneurs and non-profit institutions in transborder areas it is necessary to identify properly geographic space of transborder systems and processes for specific types of social and economic phenomena, processes and systems.

From theoretical and practical reasons each transborder economy should be identified not as a single, precisely delimited geographic space, but as a set of geographic areas delimited from the point of view of different criteria. The criteria of delimitation of transborder regions are defined for practical purposes, for the needs of politicians, entrepreneurs, social organization, cultural institutes and researchers. Delimitation of transborder areas should be based scientific methodology and on solid statistical and factographical information.

Scientific methodology of delimitation of transborder regions, areas and local territorial units is an important integral part of transborder economics. Geographic space of transborder regions should not be delimited by taking into account only one criterion - the distance from the borderline to the places. The delimitation of transborder regions should be multi-criterial and multi-dimensional. That means that the criteria of delimitation and identification in transborder economies into regions, sub-regions and local areas should take into account the interference of all political, economic, social and ecological processes that have the impact on the stimulation or strengthening of different kinds of asymmetry of transborder areas: institutional, technological, economic in the strict sense, social and cultural, etc.

In the delimitation of transborder areas from the point of view of different criteria special attention should be paid to the asymmetries that are generating the complementarity of social and economic resources (human capital, social capital, natural resources, industrial resources), complementarity of different types of infrastructures, complementarity of political, social and economic conditions of economic activity and of the production capacities of complementary goods and services in different national parts of transborder economy.

For practical purposes of transborder policy, social and economic activity, as well as for scientific research, the identification and delimitation of the following types of transborder functional areas may be useful:

- transborder ethnographic and cultural areas;
- transborder labor markets;
- transborder retail trade markets;
- transborder consumer services;
- transborder area of services for businesses

- transborder tourist areas
- transborder areas of education systems
- transborder areas of health services systems
- transborder areas of the exploitation and use of natural resources
- transborder ecological and environment protection areas
- transborder cities and metropolises
- functional areas of border crossings
- communication networks of geographically dispersed areas of transborder economy – important for transborder economies of archipelagos of micro and small islands, micro and small overseas territories, dispersed exclaves and enclaves.

In larger transborder economies the multilevel structure of the delimitation of transborder areas is needed chiefly by institutional stakeholders – by regional and local governments, economic units, social and organizations operating in transborder areas. For practical needs the building of tree-structured delimitation criteria of delimitation of specific transborder sub-regions and local areas may be defined.

For researchers, analysts as well as for stakeholders realizing practical activities, the geographic space of a transborder region it is rather convenient to identify and delimit on the territories of transborder economies many functional areas on the basis of single criteria – political, demographic, ethnic, cultural, social, economic and ecological. The concatenation of many mono-criterial functional areas gives more complete depiction of transborder economy. It also facilitates the analysis and interference of social and economic processes, e.g.

- impact of transborder labor market on cross-border migrations of population or on cultural development of transborder economy as a whole;
- impact of asymmetric regulations of the environment protection laws on the investments in the branches extensively using natural resources or devastating natural environment;
- impact of asymmetry of development of high level education and research institutions on the migration of most valuable human capital and social capital between countries, the most important factor of progress and development in knowledge based economy in long term.

Regional and central policy makers, social organizations and economic units need the defining and delimiting of “their own” monocriterial, functional transborder areas, taking into account the criteria relevant to their fields of activity, responsibility and interests. For each transborder functional area specific methods of identification and delimitation should be adopted.

For analytical and managerial purposes it is convenient to delimit the transborder functional areas using the monocriterial approach. E.g. the criterion

of ethnic structure of population living in the borderlands used by demographers, historians, social anthropologists could be most relevant for the delimiting the transborder functional areas relevant to the needs of cultural institutions of national minorities. The criterion of linguistic structure of population may help to define the *transborder educational functional area*.

For the delimitation of the functional area of *common transborder labor market* the monocriterial approach based on the map of transborder commuting of employees may not be sufficient. The delimitation of *common transborder labor market* should rather be based on statistical map of complementarity of supply and demand for labor, i.e. the demand for labor in concrete small areas and the supply of potential employees. Moreover those data should be concatenated with commuting infrastructure in transborder economy, the border crossing facilities, differences of wages and salaries, laws regulating the work of foreigners on the territory of other country and statistics of employment and unemployment in the borderland.

For *common ecological transborder functional areas* the variety of different methods of delimitation should be used, e.g. spatial localization and distribution of transborder water resources (rivers, lakes, seas), quality and quantity of water resources, legal and real conditions the use and protection of water resources, threat of water pollution. The same approach refers to air pollution protection, cultivated land, forests and other environmental resources, health and recreation resources. The impact on natural environment of the investments in infrastructure, industry, urban policy and tourism, should be taken into account. Special attention should be paid to analysis, monitoring and simulation of “exports” and “imports” of pollution of water, air and land through the borders. The multicriterial approach seems to be necessary for proper delimiting of *common functional ecological areas* in transborder economies.

Methodology of delimitation of transborder functional areas needs more research. The elaboration of scientific foundations, methods, criteria and information necessary for the of delimitation of transborder economies. These topics should be the domains of joint research projects of multinational teams of experts from universities and institutes of collaborating regions.

## **5. Multipliers’ and accelerators’ effect of the asymmetry of potentials in transborder regions**

The bigger is the difference of resources and the bigger is the asymmetry of potentials in all spheres of social and economic life and in all kinds of resources: human and social capital, cultural potential, institutional capacities, infrastructure, industrial and technological potential, natural resources, etc., the stronger is the complementarity of the capacities of different areas of transborder economy. This complementarity is strengthening the processes of mutually effective interchange

of resources, capitals and is stimulating the cooperation of all types of subjects operating in transborder regions.

The asymmetry of potentials is generating the multiplier effects and accelerator effects in different domains of economy and in social and cultural activities. For example, difference of level of prices between countries stimulates additional, sometimes excessive, demand for products that are cheaper in one country and more expensive on the other side of the border. Higher level of wages and salaries in one country will encourage people from one side of the border to take jobs abroad, mainly in transborder regions easily accessible thanks to good commuting infrastructure. The bigger are the transborder differences of wages and salaries, the vaster is the space of transborder local labor market. Better quality and reliability of financial services on one side of the border may encourage the entrepreneurs to locate their assets and to make use of financial services of foreign banks and insurance companies offering their services on other sides borders.

If the differences of potentials are creating the syndrome (complex of interrelated economic, social, environmental and political factors) of interrelated complementary factors, the accelerator's effect may be set in motion. For example, the concatenation of the differences of wages and salaries, exchange rates of currencies, prices for some goods, good commuting facilities, open border crossing and "friendly" laws for transborder trade and work, may stimulate the development of underdeveloped economic local areas into the areas of high economic dynamism and technological progress. Such syndromes do not appear outside the transborder region.

Multipliers' and accelerators' effects in selected branches of economy are generating the synergy effect of transborder cooperation of businesses. However these effects of transborder synergy appear only in specific *local functional transborder areas*, that have specific legal, economic or social features distinguishing them from other regions of national economies of neighboring countries e.g. local transborder labor markets, technological parks, local areas of border crossings, transborder free trade zones, local markets of labor, retail and wholesale trade, special economic zones formed around the exclaves, etc.

The harmonization of the policy of central governments of neighboring countries should be oriented towards the creation of positive asymmetries, on the strengthening of the multipliers' and accelerators' effects profitable for all main stakeholders. The businesses and households in the borderlands expect from their governments the liberalization of the crossing of the borders between states, more opened local transborder labor markets, free retail and wholesale trade for small businesses and households, special laws and procedures facilitating the cooperation of the SME (small and medium businesses) based in transborder regions.

For proper development of transborder economies and for the preventing negative phenomena and processes, that may also occur in the regions of

accelerated development (e.g. shadow economy and activities prohibited by law) Active policy of central and regional governments, especially of local self-governments, the establishing of common institutions coordinating and regulating the transborder processes is necessary. Systematic, harmonized statistical monitoring of transborder phenomena and processes is the task of official statistical agencies of countries. Statistical measurement of multipliers' and accelerator's effects as the results of economic asymmetry in different branches of economy should be the topic of systematic researches of official statistical agencies, scientific institutes and universities in transborder regions. The international scientific consortia have proven their usefulness and high efficacy.

## **6. Statistical measuring of impacts of transborder asymmetry of potentials**

As it was mentioned above, for each branch of economy, each field of social and economic activity, specific methods of monitoring, measurement and analysis of effects (especially multipliers, accelerators and effects of synergy) are necessary. For practical use most useful are simple quantitative statistical indicators. They should be easy for the interpreting by practitioners – politicians, government officers, businesses, journalists. Simple and interpretable indicators are more helpful for monitoring of the consequences of economic asymmetry between identical or similar phenomena and processes that are taking place in transborder areas of neighboring countries.

For monitoring, analysis and evaluation of transborder economic asymmetry the following types of indicators seem to be useful:

- 1) Indicators measuring the intensity of transborder relations and the power of transborder integration of branches and subjects (e.g. number border crossings, number of individuals crossing the border, number of foreign customers of businesses, turnover between businesses based of other sides of the borderline, number of foreign employees working in businesses in transborder region, value of joint investment projects realized by regional governments, etc.);
- 2) Indicators measuring the effects of *positive transborder asymmetry* e.g. the differences between economic potentials that are stimulating mutually profitable cooperation and trade (e.g. transborder differences of prices, differences of wages and salaries, impact of the fluctuation of exchange rates of currencies on transborder markets, etc.);
- 3) Indicators measuring the impact of *negative transborder asymmetry*, e.g. the differences in laws and administrative regulations that hamper transborder cooperation of governments, entrepreneurs and citizens, the measuring of the consequences of those regulations for citizens, businesses and governments on other sides of the borderline;



- 4) Indicators measuring the development or the underdevelopment of transborder infrastructures and the impact of infrastructural asymmetry on transborder processes, e.g. time spent by individuals, trains and vehicles on border crossing, direct and indirect costs of underdevelopment of cross-border contacts, administrative costs of transborder operations, custom duties, border taxes and other payments, costs of juristic services paid by businesses and individuals, full costs of visas and other formal requirements, etc.

Selected examples of indicators measuring (a), (b), (c) and (d):

(a) Intensity of transborder relations:

- Number of residents of transborder economies crossing the border (frequency: daily, weekly, annually, seasonal changes of border crossing, costs of commuting through borders);
- Number of issued visas (by duration, type of visa, class of applicants for visas), total costs of visas,
- Intensity of transborder telecommunication contacts of residents of transborder regions (telephone, internet; by types of subjects, frequency, seasonal frequency, costs);
- Number of subjects (businesses, NGO's, non-profit organizations) cooperating with partners from other parts of transborder regions (profile and type of cooperation, type of subjects);
- Value of turnover between cooperating businesses – residents of transborder regions;
- Number of enterprises registered in transborder areas of two or more countries;
- Quantitative indicators measuring the scale of transactions between businesses registered in different countries of transborder economy (turnover, sales, imports, exports, employment, wages and salaries, investments, fixed assets);
- Transborder consortia created by residents of neighbour countries (number, forms, profile of activity, scale of activity);
- Qualitative characteristics of types, profiles and intensity of cooperation of regional and local governments and NGOs.

(b) Factors of positive asymmetry:

- Wages and salaries (differences by type of work and employers);
- Demand for employees on local labor markets (profile, seasonability, stability of work offered);
- Supply of labor;
- Unemployment rates (on local labor markets);
- Differences of retail trade prices for goods and services on local markets;
- Differences of wholesale prices for goods and services on local markets;

- Taxes: VAT, CIT, PIT, etc.;
  - Custom duties for exports and imports;
  - Comparative costs of production and trade;
  - Exchange rates of currencies (national and international currencies exchange rates).
- (c) Factors of negative asymmetry:
- Administrative formalities of border crossing and their costs for enterprises and individuals (e.g. visa requirements and their costs, formalities connected with transport by vehicles and trains and their costs etc.);
  - Administrative limitations of economic activity for foreign citizens (licenses and permissions, national certificates for occupations and professions);
  - Incoherence of laws regulating the conducting of economic activity by foreign subjects on the transborder territory of other country;
  - Information gaps and lack of transparency necessary for economic and social activity and cooperation;
  - Linguistic barriers, especially concerning the laws, documentation, primary registers, contracts.
- (d) Indicators measuring the integrity and adequacy of transborder infrastructures serving all stakeholders in the whole transborder economy:
- Energetic infrastructure,
  - Transport infrastructures: roads, railroads and water transport, airports supporting the whole transborder economy,
  - Industrial infrastructure,
  - Urban infrastructure,
  - Safety and security infrastructure,
  - Social infrastructures,
    - Social aid,
    - Education,
    - Health,
    - Culture,
  - Ecological infrastructure,
  - Tourist infrastructure,
  - Financial infrastructure (banking, insurance).

It is necessary to define the indicators describing and measuring both the positive and negative asymmetries.

*Positive asymmetry* is generated mainly by the transborder differences of economic and technological factors: comparative costs of production, differences of prices, wages, insurance rates, ). Positive asymmetry stimulates the processes of transborder cooperation and market-driven competitions.

*Negative asymmetry* is generated mainly by civilizational differences and by the differences of legal and administrative regulations and practices of administration between countries. Information gaps, differences of official languages and the linguistic literacy of people not relevant to the needs of transborder markets, causing difficulties of proper understanding and interpretation of administrative procedures and laws in broader institutional conditions of other country, are also important forms of negative asymmetry for most of stakeholders.

*Negative transborder asymmetry* generated by the incoherence of laws and regulations and by the lack of information transparency is generating excessive costs for all stakeholders operating in transborder economies. The fuzziness of transborder information environment is creating favorable conditions for corruption and for the development of shadow economy.

## **7. Methodological problems of measuring transborder economy**

Identification and proper use of positive transborder asymmetry by governments, entrepreneurs and individuals needs detailed and coherent information on all areas of transborder economy. The factors creating the asymmetries can be measured by quantitative statistical indicators. Some examples of such indicators are listed above. Official statistics shall include to the programs of statistical surveys the collecting and compiling of the complex of coherent, comparable indicators characterizing transborder asymmetry.

However up to now the transborder surveys and indicators are not the priority for official statistics of countries. Even in official statistics of small scale national economies, which territories as a whole are under the influence of transborder processes, official surveys do not include the indicators measuring the transborder factors and enabling the monitoring and analysis of transborder processes and economies.

Official statistical agencies of countries conduct the surveys according to national programs. They adopt the methodology and organization of surveys to specific conditions of countries. The differences of economic and social concepts and indicators defined in national laws and incorporated into national statistical surveys. Because of that it is difficult to complete full sets of relevant, comparable, methodologically integrated statistical information on transborder areas of all interested countries. Serious methodological problem is the transborder comparability of time series and comparable delimitation and identification of territorial units in national areas of transborder economies. The classification of

territorial units NUTS used in the European Statistical System of the European Union is not sufficient for the needs of good transborder statistics.

Transborder functional areas are relatively small. Central governments and the businesses based outside the territory of borderlands, outside the territories of transborder functional areas, are often perceiving the transborder processes and regions as the negligible peripheral phenomena of national economies. The describing and measuring of transborder phenomena, processes and functional areas is not the priority for information systems of central governments and the information management systems of many businesses.

To the contrary, for local governments and businesses involved in cross-border processes the information on “their” transborder economies is of utmost importance. The stakeholders of transborder processes and phenomena need detailed territorial identification and precise information on small areas, even on very small areas of the borderlands.

Information gaps on transborder phenomena, processes and functional areas should be filled by official statistics. National statistical offices and regional official statistical agencies, cooperating with the managers of the information systems of local administration and other regional information services, shall delimit in transborder economies the functional areas as small as possible – local sets of plots, small localities, districts of towns, functional areas composed of plots located along the railways and roads, areas of border crossings, functional areas of airports used by the whole transborder economy, etc.

Another problem that should be solved by official statistics or by administrative information systems is the inconsistency of statistical data and administrative records referring to small areas of transborder economies belonging to different countries. It seems that the problem of inconsistency and incomparability of information in transborder economies could be alleviated by the building of the systems of monitoring of phenomena and processes creating transborder economies.

The organizations predestined to the developing of such monitoring systems are regional or national (in case of micro and small economies) statistical offices and the institutions managing administrative information systems. These systems of monitoring of transborder economies may need special statistical surveys and administrative registers and their harmonization by regional statistical agencies and local governments responsible for the information on transborder economies. The harmonized transborder surveys should be oriented on the measuring the differences of potentials important for decision making of businesses, for local economic policy of governments and for evaluation of administrative procedures by local governments and – if necessary – by central governments.

Methodological harmonization of official statistics is an important task of official statisticians. Therefore the cooperation of regional statistical offices in transborder regions is an important prerequisite of information transparency of

transborder economies. Transborder statistics should become an integral layer of European official statistics. Good cooperation of statistical agencies and local governments of transborder areas of neighboring countries is the *conditio sine qua non* the comparable, timely, consistent and complete information on transborder economies.

## **8. Impact of the asymmetry of potentials on economic processes in transborder regions – selected examples**

### **8.1. Labor market**

Common, transborder local labor market is the most important economic domain of optimization of the use of asymmetry of human capital and social capital. The differences of wages and salaries are encouraging both entrepreneurs and employees, to take jobs in neighbouring localities of other countries.

The territorial scope of transborder labor market are shaped by transborder commuting infrastructure, the localization and efficacy of the crossing of borders by people, trucks, railways and ferries. Nowadays (2020<sup>th</sup>) the open border-crossings, trans-national highways, railways and ferries, lower costs and shorter time of cross-border transportation of people extend the territorial scope of transborder labor markets<sup>8</sup>.

There are following main factors influencing the development and territorial expansion of transborder labor markets:

- supply of complementary human and social capital in different national parts of transborder economy;
- transborder asymmetry of wages and salaries;
- regulations supporting the work of citizens of other countries on the territory of transborder region (e.g. free transborder movement of people and goods, deduction of PIT and VAT taxes for foreign commuting employees, bonuses and reduced prices of accommodation, lower travel fares for transborder commuters, better conditions of social and health insurance, etc.);
- efficient and relatively cheap commuting infrastructure (highways and railways, shorter time of travel to workplaces);
- asymmetry of the regulations of social and health insurance of employees in transborder regions;
- regional governments supervision of transborder labor markets, oriented to the stimulation of their development and the elimination of pathologies (e.g. shadow labor markets, excessive exploitation of foreign workers).

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<sup>8</sup> E.g. in the Euroregions along the Rhine (the borderland of Germany and France) it is popular slogan: *Live in France – work in Germany*. Daily commuting on the distance of 100 km between the residence and the place of work of an employee is rather a rule, not an exception.

## 8.2. Retail trade

The transborder retail trade is – as a rule – the first leading factor stimulating the development of transborder economies. Retail trade in transborder regions is stimulated by the asymmetry of two kinds of asymmetry between the areas on other sides of borderlines:

- 1) Transborder differences of comparative costs of production and sale of substitutive products,
- 2) Transborder complementarity of products, i.e. some products are not available on one side of the border, while they are accessible and cheaper on the other side.

Referring to asymmetry of comparative costs of substitutive products, the transborder retail trade is stimulated mainly by (a) the differences of costs of production and shipment (including administrative costs, taxes, insurance, marketing, etc.), (b) the differences of prices of equivalent goods and services in neighbouring areas on other sides of the borderlines, and (3) transaction costs connected with the foreign trade, i.e. trade between different economic and legal environments of neighboring countries. The development of transborder local retail trade is also stimulated by the bonus for the risk of changes of exchange rates of currencies, in case of different national, official currencies of neighboring countries.

Micro, small and medium businesses are trying to increase the profitability of transborder retail trade by the conducting the trade of goods imported from nearest regions, and at the same time exporting goods from the country of residence to nearest regions of neighbouring countries. The differences of exchange rates of currencies and the use of international currencies (Euro, USD) as the intermediary currency may also increase the profitability of transborder retail trade, although the profitability based only on exchange rates of currencies has high level of uncertainty. It depends on the fluctuation of exchange rates of currencies and shocks on monetary markets in short term.

In some branches the transborder retail trade and wholesale trade are more effective if the exchange of goods is based on barter. However for transborder barter trade more advanced organizational and legal forms of cooperation of businesses are necessary, e.g. international joint ventures, consortia, transborder clusters.

Referring to the factor of transborder complementarity of goods, liberalization of international trade, reduction of customs, reasonable tax policy of all countries of transborder economies may create positive synergy creating favorable conditions for production and trade profitable for all parties. Taking that into account the governments should resist the temptation of “overburdening” goods and services that have high indexes of complementarity by excessive taxes and customs. Good transborder policy means rather the supporting of businesses and entrepreneurs to develop the forms of cooperation stabilizing the transborder markets and optimizing the use of the relations of complementarity and substitution of products and resources in transborder economies.

## 8.2. Consumer services

Main factors of development of the branches of consumer services in transborder areas are:

- transborder supply of consumers services by type of service, volume and value,
- transborder demand for consumer services of non –residents,
- transborder complementarity of products offered in the form of consumer services by foreign businesses,
- transborder asymmetry of comparative costs of production of services,
- transborder asymmetry of prices for services,
- differences of total costs of access to the services on local markets of transborder areas paid by consumers,
- transborder transport infrastructure for consumers and costs of transborder transport,
- quality of consumer services offered on local markets in transborder areas

## 8.3. Services for businesses

Foreign businesses operating in transborder economies need support from the part of specialized firms offering services for businesses: marketing services, financial services, tax advisory services, information services, legislative services, etc. The availability of these services for foreign subjects operating in transborder areas of neighbouring countries is necessary especially by non-residents operating in the transborder areas of other countries.

Proper, good quality of services for businesses in transborder areas requires high level of professionalism of firms offering these services. Attorneys, solicitors, legal advisors, tax advisors and other subjects supplying different kinds of know – how in the field of law and organization of activity in transborder areas should well know the laws, procedures and habits of all countries of transborder regions. The same requirements of high level of professionalism, professional ethics and trust is expected from other subjects in such areas like logistics, financial services, certification, supervision of technological processes, quality control of products.

Important problem for businesses that are potential clients of providers delivering the services for businesses on the territories of other countries is the verification of professionalism of suppliers of those services by potential clients. Central and regional governments should monitor the quality of services offered for foreign and national businesses and react in case of low quality of those services.

Indicators measuring the costs and prices of services for businesses are similar to those used for measuring of consumer services, e.g.:

- supply of services for businesses by type of service, volume and value,

- demand for services for businesses of non –residents,
- complementarity of products offered in the form of services for businesses in transborder areas of countries,
- transborder asymmetry of comparative costs of production,
- transborder asymmetry of prices for services for businesses,
- differences of total costs of access to the services on local markets of transborder areas paid by businesses,
- transborder transport infrastructure for businesses and costs of transborder transport,
- quality of services for businesses offered on local markets in transborder areas.

#### **8.4. Financial services**

Banks, insurance companies and other institutions of financial sectors of economy are operating on global financial markets. Financial institutions are rather well prepared and experienced in offering different financial products needed and expected by economic and social subjects operating in transborder areas.

The strengthening of international cooperation of national institutions of supervision of financial sector focused of the specificity of transborder regions seems to be necessary – cooperation of governments and central banks of countries in the field of the supervision of banking sector, including supervision of para-banking activities, supervision of insurance companies, supervision of companies providing financial intermediaries services on the market of financial products issued by banks, insurance companies and other financial institution.

#### **8.5. Social services: health, education, culture**

Social services are the domain of joint cooperation of governments, NGOs and businesses. In transborder economies the relations of complementarity and substitution in different domains of social services are very important for the societies of the borderlands.

The synergy of development of social services in neighboring areas of countries is based mainly on the complementarity of those services from the point of view of availability and quality of these services offered for the population of transborder region as a whole by local governments and self-governments, non-profit subjects and businesses.

The quantitative and qualitative capacity of subjects offering social services in transborder areas, the economic and technical conditions of supply of those services should take into account the social and economic transborder diversity of potential users, the differences of effective demand in transborder areas and the capabilities of absorption of social services by different ethnic, economic and professional populations in regions as a whole.



Regional governments are predestined to stimulate optimal development of different domains of social services in different areas of transborder economy for the benefit the population of the whole borderlands. Regional and local governments of transborder economy should take jointly the responsibility for development and maintenance of transborder infrastructure for social services and for reliable information on social services available for inhabitants of the territories of neighbouring countries.

## 8.6. Tourism

The role of tourism in economic development of transborder areas is correlated with the level of wealth and incomes of households. Nowadays many countries have reached the level of economic development and wealth of population, in which tourism is becoming the integral part of household budgets and style of life. The demand for tourist services is continuously growing, new, more expensive forms of tourism are becoming popular. In many countries the national economies are tourism-dependent.

Tourism in transborder regions is based on ecological, cultural and social asymmetry of subregions of the areas and on the complementarity of tourist products: natural environment, culture, sports, recreation, health services, etc. Special form of tourism is are the services connected with pilgrimages, especially mass pilgrimages to holy places, the activities of international organizations and political organizations, scientific conferences and congresses, education,

Tourism as the sector of national economy in many transborder economies has special, in some sense privileged position. This position depends on the type of borders between countries. Historically many borders between countries were demarcated along the natural objects or phenomena: rivers, lakes or sea shores, mountain ranges. Some countries were delimiting the borders by constructing special buildings, like famous Great Wall in China. In such situation the areas of borderland are often becoming the regions of extensive tourism. For many micro, mini and small countries in such types of borders and in certain political and environmental conditions, transborder tourism is becoming the main branch of their national economies.

The prerequisites of sustainable profitability of tourism in transborder economy as a whole are following:

- creation and maintenance of *infrastructures necessary for tourist activities*: tourist information infrastructure, environment protection, transport infrastructure, hotels and accommodation facilities, safety and security of tourists, standards of quality of services for tourists,
- *cooperation of businesses* involved in tourism in transborder economies, especially the coordination of supplying of complementary tourist services using optimally the tourist resources, capacities as well as natural, social and urban environments in the areas of transborder regions,

- *coordinated transborder competition* between businesses and other organizations supplying substitutional tourist services in different areas of transborder economy,
- transborder cooperation businesses and organizations delivering the services and goods that are the *supplementary products of main tourist services*, e.g. the organizing in tourist regions cultural events and entertaining, sports events, social and business meetings, education and training, scientific conferences, etc.
- maintenance of cultural, recreation and health facilities, e.g. museums, theaters, parks, pump-rooms, spa, health clubs, casinos, etc.

Cooperation and active coordination of tourist policy in transborder areas is one of important tasks of regional and local governments in transborder economies. The harmonization of activities of businesses and protection of transborder economy against unfair competition, poor quality of tourist services, frauds, deceiving of tourists is the task both of governments and of the chambers of businesses and other organization of subjects operating in transborder tourist areas.

Scientific analysis of asymmetry, substitution and complementarity of tourist resources and capacities of transborder areas from requires the creating of transborder information system on tourism. The system should deliver to all stakeholders in all interested countries, especially to governments, businesses and non-profit organization, the reliable and pertinent information necessary for optimal policy in tourism, elaboration of methods of cooperation of governments, businesses, NGOs. The system should inform the transborder stakeholders on tourist infrastructure, covering all layers: protection of nature, ecology, cultural wealth of regions, civilizational attractions, recreation facilities, and technical infrastructure: transportation, accommodation, tourist information, etc. It should also help the governments, businesses, non-profit organizations and NGOs to react immediately in case of shocks and catastrophes (ecological, political, social) in tourist regions.

## **8.7. Border crossings**

Specific types of functional areas in transborder economies are the border crossings. In the European Union, in the Schengen zone, many border crossings disappeared. The advantage of that was the reduction of costs of social and economic mobility of people and businesses, of goods and services inside the Schengen zone. One may expect that this process of making the borders more “permeable” will be continued. However, in case of changes of political, social or ecological stability, in case of shocks, catastrophes or in case of special events and phenomena, the “traditional” control on the borders inside the Schengen zone may be restored any time. It happens from time to time.

In most of countries in the world the border crossings are specific businesses that are supplying the services of control of the transfer of goods, means of transportations and migratory movement between countries. The development single markets and free trade zones, the development of international trade of goods and services, and the development of transborder economies have created the need of change of role and functions of border crossing. Today (2023) the most of the border crossings are the functional transborder areas, different from the surrounding economic and social environments. In some sense the functional areas of border crossings can be treated as specific *transborder microeconomies*. The border crossings are becoming the organizations using most modern technologies and ICT for better and faster providing of control of the processes of the crossing of borders between countries by people, goods and services. Moreover, in the border crossings as specific transborder microeconomies operate many different organizations: governmental control services (military control, police, customs, taxes), the enterprises supervised by governments, realizing different kinds of control, e.g. sanitary and epidemiological control, technical control of vehicles and boats, technical control of transported goods, etc.

In border crossing as specific transborder microeconomy are operating many businesses providing wide range of services on commercial basis: banking and insurance, car service, restaurants, accommodation, health services, information services, legal proceedings, other different services for businesses.

For businesses and people residing in transborder areas the border-crossing business is first of all an additional, excessive cost of transborder cooperation and contacts (e.g., time lost for crossing the border by cargo and people, costs and time lost for getting the visas, etc.). From the point of view of entire development of transborder economies the processes of crossing border should be minimized. Modernization of border crossings is the condition of the development of transborder economies.

On the other side, the border crossings are important enterprises for local communities creating jobs for people. The processes of crossing the borders are generating the demand for many auxiliary services: accommodation and gastronomic services for drivers waiting days and night in the queues on the border, parking services, security services, financial service (currency exchange, banking services, insurance services, etc.), retail and wholesale trade for people and businesses as well as many other social and cultural services. For local communities the “border crossing business” may be rather attractive. Many border crossings are the biggest businesses on local or regional level. The less effective is the process of crossing a border, the higher is the demand for auxiliary services for the stakeholders – people and subjects crossing borders. However in long term more effective for national and transborder economies is simplification and – finally – the elimination traditional control on political borders of countries.

In transborder economies complicated, expensive and long-lasting processes of the crossing of borders are limiting the possibilities of effective use of economic asymmetries in transborder areas. Therefore regional governments in transborder areas rather should be interested in the identifying – with the help of scientists and experts representing economic practice – the branches and kinds of activity for which the traditional control on the borders should be eliminated or replaced by more simple forms of control. Local, free trade zones, zones of free movement of people, special economic zones in transborder areas have already proven their efficacy and positive impact on local economies. The development of these forms of local economic and social integration needs support of regional and local governments and respective legal foundations.

### **8.8. Complementarity of infrastructures**

In modern economies the development and progress in transborder areas is based on the quality of infrastructural systems: energy, transport (roads, railways, ferries, airlines, pipelines ea.), telecommunication, environment protection infrastructure, municipal infrastructures, social infrastructures (health, culture, education, information systems).

Harmonization and coordination of all types of infrastructure in whole transborder areas is the prerequisite of transborder cooperation in many branches of economy. The borderland areas of neighboring countries may optimize the development of infrastructures using the effects of complementarity. Modern technologies enable to adopt infrastructural constructions and systems to the needs of enterprises, households and individuals, towns and villages located in transborder areas, on different sides of the borders.

In any economic activity the optimizing of resources and reduction of costs is achieved thanks to the effect of scale. The effect of scale can be achieved by businesses, governments and other organizations, as well as for infrastructures, if they operate on larger territories of transborder economies. For example, the border crossing could be built as one investment operated jointly by officers of all interested countries, one sewage treatment plant may be sufficient for towns located on the sides of several borders, one highway along the borderline may be sufficient for the traffic of inhabitants of localities on both sides of the borderlines, etc.

Harmonized development of common infrastructures for transborder areas optimized on the basis of effect of complementarity is the tasks of regional governments with respective support of central governments of countries. The development of common infrastructural capacities in transborder economies is the “non – zero sum game”. If governments and enterprises cooperate jointly, all parties win, although some may gain more, and some other may gain less. However without the cooperation in the field of building and maintaining common infrastructures in transborder areas, all countries and local communities will lose. That truth should be remembered both by governments, businesses and local societies in transborder economies.

## 9. Synergy effects of asymmetries of potentials in transborder functional areas

The asymmetry of economic and institutional potentials in transborder regions is creating the conditions for synergy of different factors of economic and social development. As it was mentioned above, the effect of synergy may be positive or negative. Here are some examples of effects of synergy.

- (a) Synergy effect generated by the creating of the *zones of free transborder movement* of inhabitants in delimited areas on both sides of the borderline is the effect of concatenation of *inter alia* following factors:
  - transborder local retail free trade,
  - extension of the market of wholesale trade,
  - transborder local labor market in the zone,
  - open access of inhabitants and businesses to complementary services,
  - higher profitability of businesses based on the difference of costs,
  - optimization of localization of enterprises,
  - effects of scale achieved by businesses and other units thanks to the extension of market on the territory of two or more countries.
- (b) Synergy effect generated by the *coordination of infrastructural projects and investments* for the use of the transborder areas, especially in transport, energy, environment protection, is achieved thanks to the following factors:
  - Lower costs of investments for each country,
  - Lower costs of exploitation and maintenance of infrastructural facilities for the subjects (businesses, individuals) achieved thanks to the effect of scale,
  - Better infrastructure makes the transborder areas more attractive for investors,
  - Multiplier's effect of increase of investments in the area in the form of development of SME offering services for investors and other businesses,
  - Higher budgetary incomes of local and regional governments enable them to improve the quality of life of inhabitants (communal investments, education, health care, culture, safety and security, etc.)
- (c) Synergy effect generated by *transborder harmonization of laws and procedures* and cooperation of regional and local governments is achieved thanks to the concatenation of following factors (e.g.):
  - Lower costs of administrative procedures and lower costs of legal services for businesses,
  - More possibilities of extension of economic activities within the frames of existing laws and procedures,
  - Higher safety and security of running businesses thanks to the transparency of laws and procedures for entrepreneurs,

- More possibilities of more profitable cooperation in the fields regulated by national laws, e.g. health care, social aid, education, financial services (banking, insurance),
- Cooperation of NGOs and other non-profit organizations is extending the possibilities of mutually profitable cooperation.

The identification of potential effects of synergy generated by the asymmetry of economies in transborder areas is an interesting and important task for scientists, research institutes and universities conducting the researches concerning transborder economics and economies. For each factor generating the synergy it is recommended the elaboration of models explaining the processes of transborder synergy, both positive and negative, simulating the effects that may appear and identifying the prerequisites of positive as well as negative synergy caused by economic asymmetries between countries in transborder regions.

## 10. Selected conclusions

- 1) In the conditions of globalization of social, political, economic and informational processes the spatial asymmetry of resources and capitals is generating the transborder flows of these resources and capitals changing economic and social capacities of countries, regions and societies, stimulating or – *vice versa* – hampering their social and economic development.

Special attention should be paid to the impact following asymmetries:

- institutional asymmetries, including differences of laws and procedures;
- technological asymmetries,
- economic asymmetries,
- asymmetry and level of compatibility of information systems,
- differences of development of technical infrastructure,
- differences of development of social infrastructure,
- identification of factors generating the synergy effects, stimulating the effects of multiplier's and accelerator's in specific economic processes.

In transborder economies the spatial asymmetries of resources and capitals are of utmost importance.

- 2) Nowadays most of social, political, economic and informational processes are controlled by international and national institutions laws and institutions. The laws and procedures of total, deep institutional interventionism are formulated by global or international organizations and central governments of states, especially the states that have the status of global or regional superpowers. These laws and procedures usually do not take into account the specific

conditions and needs of micro, mini and small countries and of transborder economies.

Main objective of democracy is the sustainable social and economic development and equal treatment of all countries and societies. In democratizing world the institutional interventionism should defend and strengthen the impact of transborder asymmetries

- 3) In the conditions of deep institutional interventionism the development in transborder areas depends on political decisions of central governments of countries, on the competences of regional governments and self-governments, on the power and efficacy of governmental institutions and on the power of shadow economy and shadow organizations.

Proper use of instruments of deep institutional interventionism on the level of transborder processes needs well informed and experienced stakeholders. These stakeholders, i.e. the central and regional governments, NGOs, other non – profit organizations, organizations of businesses and the businesses operating in transborder areas should be delivered full, pertinent knowledge and current information that represents in relevant way the specificity and situations in transborder regions and economies. The governments and other subjects shall take their decisions taking into account the factors specific for concrete regions, subregions and areas.

The maintenance *common transborder information platform* (governments, enterprises, other organizations including research institutes and universities, individuals) providing verified and complex data for all stakeholders, is one of the tasks that shall be realized jointly by research institutes and regional governments of transborder regions.

- 4) Transborder economies need specific theoretical foundations, methodological approaches, information base and special statistical methods and surveys. The development of *transborder economics* as special discipline in economic sciences is an urgent task for researchers, both theoreticians and scientists involved in application analyses, prognoses and modeling of processes in transborder regions.

The transborder clusters integrating universities, research institutes and experts involved in practical activities shall increase the resources of knowledge, the human capital and social capital of transborder economy as a whole.

- 5) The relations of complementarity and substitution between social and economic phenomena and processes in transborder areas are decisive for short and middle term development of transborder economies.

The monitoring, statistical measuring, analysis and projection of possible effects of complementarity and substitution of resources and capitals in transborder areas belonging to neighboring countries is an important task for scientists and official statisticians in transborder economies.

- 6) The areas belonging to national economies in transborder regions are developing in different way and influenced by different factors than other regions of national economies. As it was explained above, main factors of development of economic activities in transborder regions are the asymmetries and the differences of potentials of geographically close areas, but regulated by laws and administrative procedures of different countries. There are also qualitative and quantitative differences of the level of development of different branches of economies, technological level and economic efficacy of enterprises in particular countries.

Transborder economies are covering large part of the territory not only in European megaregions, but in all other parts of the world. They are of high importance for small – scale national economies, as well as for regional development of many other countries.

The policy of democratic states, their central governments and supranational organizations should create the conditions of equal, sustainable development of all relevant transborder economies.

- 7) In globalized, knowledge-based economies, total and deep institutional interventionism and seemingly market-driven, but in reality deeply regulated economy the prerequisites of the policy of truly democratic governments towards their transborder economies are the transborder information environments creating the resources of social and professional knowledge adequate for the needs of stakeholders from all interested countries.

The polluting of information environment by the dissemination of the information that do not meet quality criteria of truth and social utility, should be prohibited by law and penalized in the way similar to the penalization of polluting of water, air or land and adequately to social, economic or political damages caused by the misleading of users living in such environment.

The concern for "clean" information environments is the task of local governments, NGOs and other institutions acting in transborder economies. International transborder cooperation of producers and disseminators of social, political, economic and other information of public interest is supporting the protection of transborder information environments.

International and national laws and institutional procedures regulating the information processes of national, international, supranational and transborder information environments should be similar to the laws and procedures protecting the quality of natural environment. Not only in transborder economies.



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