

**ASYMMETRY OF ECONOMIC POTENTIALS
AS THE FOUNDATION OF DEVELOPMENT
AND INTEGRATION
OF ECONOMIES IN TRANSBORDER REGIONS**

1. Formulation of the problem

In modern, open, market-driven and knowledge-based economy the driving forces of economic development and stimulators of social and economic activity are the asymmetries of potentials between countries, regions and branches of economy:

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

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 in economy are necessary for creating the effect of comparative costs of economic and social activity and for generating the synergy effects of economic cooperation and mutually profitable collaboration for all parties.

However these social, technological and economic symmetries may also have negative impact on economic 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) incoherence between laws, regulations and procedures generating the asymmetries, (c) information gaps between subjects operating in asymmetric economic and social environment, (d) lack of information transparency of markets and institutions.

In transborder regions the asymmetries of neighboring local economies are extremely deep and multidimensional. Main causes of these asymmetries are of political, institutional, social and cultural nature. Often also the differences in development of infrastructural factors may play important role in generating the asymmetries.

In transborder regions the asymmetries are deeply influencing all spheres of social and economic life. Therefore good identification, understanding and 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 regional governments, social organizations and businesses.

Main thesis of this paper is that in globalized knowledge-based economy, the transborder regions are becoming the areas of more dynamic socio - economic cooperation and development than other regions apart from the borderlines. This specific dynamism is based in the asymmetry of social, institutional and economic potentials concentrated in relatively small geographic space.

The asymmetries of potentials are generating the effects of economic synergy thanks to social and economic complementarity of branches, enterprises and other organizations. Active policy of regional governments and their cooperation, direct involvement in the initiatives in building harmonized social and economic infrastructure, institutional support to the cooperation of enterprises and non-profit organizations, support to joint cultural, scientific and other social initiatives, is the prerequisite of the development of transborder regions in integrated Europe.

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 region

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

Transborder area

– entire part of transborder region located on the territory of one or more countries delimited from the point of view of specific criteria, e.g. area of border crossing, area of recreation and health services visited by residents of transborder region of neighbouring countries, industrial area employing the inhabitants of neighbouring cross-border region.

Transborder system

– social, economic or infrastructural system acting 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, services for non-resident businesses and organizations, etc.

Transborder process

– social or economic 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 economic potential

– Social, human, cultural, natural, ecological, technological, productive and financial resources of governments, enterprises,

NGO's, households, individuals and other subjects that are the stakeholders of transborder systems and transborder processes.

Institutional transborder potentials

– Laws, regulations, administrative procedures and organizational units (governments, other organizations authorize by governments to realizing the functions and duties determined in laws and regulations, related to transborder systems and processes.

Asymmetry of transborder potentials

– qualitative or quantitative differences of economic and institutional 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.

Economic transborder asymmetry

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

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

– qualitative and 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 transbordermarkets, 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

– qualitative and 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 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 economic potentials in transborder regions

The following types of asymmetries are of special importance for development of transborder regions:

- Institutional asymmetry,
- Economic asymmetry,
- Technological asymmetry.

The asymmetries listed above should be not only identified by scientists and practitioners, but it is also necessary to measure the impact of these asymmetries on economic processes and phenomena in transborder regions.

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 in 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. There are also differences of administrative procedures 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:

- (a) Different regulations of the same economic and social processes in the laws and administrative procedures of neighbouring countries;
- (b) 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 Poland, Ukraine, Slovakia, Hungary and Romania (*Carpatian Euroregion*) from the point of view of costs of labor, social insurance, stability of work, level of wages and salaries, conditions of work other rights and duties of employees and employers, as well as the regulations of employment of foreign citizens on the territory of other countries, may help the entrepreneurs to optimizing the policy of employment and the location

of different activities on the territories of different countries and shall help employees to take proper jobs.

The comparative analysis of laws regulating the environment protection and their economic and ecological impact for economic activity may help to optimize the decisions on localization of economic activity, used technology and profile of investments in environment protection. 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.

The information system covering – for all countries of transborder region - all laws, regulations, administrative procedures regulating economic activities of businesses, social 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, is the prerequisite of transparency of institutional asymmetry of transborder areas.

3.2. Economic asymmetry

Catereris paribus, in given institutional frameworks in transborder regions, the economic asymmetry is the main driving force of mutually profitable cooperation and development in transborder regions. Economic asymmetry could be evaluated by following indicators measured and compared in the local areas of transborder regions in different countries:

- Prices of consumers' goods and services; special attention should be paid on extreme differences of prices for the same or similar goods and services.

- Prices of investment goods and raw materials; also special attention should be paid on extreme differences of prices for the same or similar goods and services.

- Wages and salaries in registered labor market as well as in non-registered (shadow) economy;

- Other components of costs of labor; comparison of costs of labor paid by employers and by employees, e.g. social insurance,

health insurance, costs of commuting, costs of accommodation, time of commuting, social benefits supplied by employers,

- Availability and access to work; real unemployment;
- Availability of skilled employees;
- Demand and supply of goods and services in different areas

of transborder region;

- Taxes (all kinds) and deductions;
- Customs and other forms of costs of exports and imports;
- Demand for goods and services – local and from other parts

of transborder region;

- Supply for goods and services – local and from other parts

of transborder region;

- Quality of produced and supplied goods and services;
- Costs of transborder transfers of goods, services,

transportation, work;

- Costs of safety and security;
- Costs of use of transborder infrastructure by enterprises

(energy, transportation, information services, attorney services, security services etc.).

Economic asymmetry is the most important stimulator of development of transborder trade, transborder labor market, localization of production, organization of cooperation with other entrepreneurs within the existing legal and administrative environments. It is influencing the development of transborder economies in short term, as well as in middle term.

3.3. Technological asymmetry

Technological asymmetry of economies in transborder regions is the consequence of differences of technological standards between countries and the level of technology of production processes. These differences are strengthening the complementarity of production processes and differences of technological level and quality of produced goods and services. Technological asymmetry is also the cause of differences of economic efficiency of production processes and of the impact of production processes on natural environment.

Technological asymmetry in industrial production, trade, transportation, is the middle – term factor that may positively stimulate the development of transbordercooperation between enterprises of different countries.

Technological level of industry and trade is dependent on investments of businesses in modern technologies, most of them imported from highly developed countries. Therefore in central and eastern Europe for many years, before the transition inthe beginning of the 90th, the technological progress was depended on the policy of import of modern technologies. This policy has created deep differences of technological level of branches and enterprises between countries. After 1990 the processes of technological modernization of many branches of economy have been accelerated. However up to now in transborder areas the technological asymmetry between countries is still visible. The difference of technological level of branches and production processes in transborder areas causes 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.

One should remember however that - in long term - the transfer of technologies in open, market - driven economies is reducing the scale of technological asymmetry and its impact on stimulation of cooperation.

3.4. Complementarity vs. substitution in transborder regions

In transborder regions the complementarity of economic and social capacities, technologies and branches of economy is an important factor mutually profitable cooperation. The more complementary are the economies the stronger is the propensity to establishing middle-term and long-term cooperative links. The complementarity is based on the asymmetry of natural resources, social and human capital, financial capital, technological level and

infrastructural capacities. Economic complementarity is the foundation of strong positive asymmetry.

However often in transborder regions the relation of substitution between some branches, capacities, technologies or natural resources are observed. In market driven economy the substitution is generating the competition between businesses. Competition is also stimulating progress thanks to modernization of technologies, better management and more offensive marketing. From this point of view transborder markets create better conditions of development based on competition.

Regional governments should resist the temptation to using the national administrative tools 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. Such approaches of “coordinated competition” and joint development of infrastructure for mutual benefit of all stakeholders is adopted in touristic areas in transborder regions.

3.5. Integration vs. disintegration

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

- a) integration and concentration,
- b) disintegration and distribution.

Ad (a) 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.

Ad (b) Disintegration of activities by supporting independent local social initiatives and NGO's, non – profit organizations realizing concrete goals on local level is also an alternative approach to optimizing economic and social activities. 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.

3.6. 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.

In the Carpathian Euroregion this positive asymmetry seems to be well understood by regional and local governments of all countries. Many joint cultural events and social initiatives are undertaken, stimulating the development of tourism, local culture and strengthening social capital on local level. Direct contacts of

organizations and people is facilitating the development of cooperation in other domains.

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

4. Methodological problems of delimitation of transborder areas in the light of economic asymmetry

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 region should be identified not as a single 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.

Methodology of delimitation of purpose – oriented transborder regions, areas and local territorial units is an important integral part of transborder economics as the discipline within economic science. Geographic space of transborder regions should not be delimited taking into account the geographic distance between localities, towns and cities. The delimitation of transborder regions should be multicriterial and multidimensional, taking into account the interference of economic and social processes stimulated and strengthened by different forms of economic asymmetry: institutional, technological, economic *sensu stricto*, social and cultural etc. Special attention in the delimitation of transborder areas from the

point of view of different criteria should be paid to asymmetries that generate the complementarity of goods and services, complementarity conditions of economic activity and of the availability of social and economic resources (human capital, social capital, technical infrastructure, natural resources etc.).

For practical purposes of policy making, social and economic activity, as well as for scientific research, the following objective – oriented transborder areas are or should be delimited:

- A. Transborder ethnographic and cultural areas
- B. Transborder labor markets
- C. Transborder retail trade markets
- D. Transborder consumer services
- E. Transborder services for businesses
- F. Transborder tourist areas
- G. Transborder education systems
- H. Transborder health services systems
- I. Transborder ecological and environment protection areas
- J. Transborder cities and metropolies
- K. Areas of border crossings

For practical needs of concrete groups of economic units and socio – political organizations active in transborder areas, also other criteria of delimitation of specific transborder sub-regions and local areas may be defined.

For research, for analytical purposes and for decisions taken by stakeholders, the geographic space of a transborder region may be defined as the concatenation of purpose – oriented transborder areas delimited on the basis of selected political, cultural, social, economic and ecological criteria.

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

The areas delimited from the point of view of specific criteria in transborder regions are creating common domain - oriented

transborder spaces. E.g. for cultural institutions of national minorities for delimiting the transborder area relevant to their activities the methods used by historians, social anthropologists, linguists shall help to define *common transborder cultural space*. For the *common transborder labor market space* the delimitation shall be based on the analysis of complementarity of demand for labor and supply of potential employees, concatenated with the commuting infrastructure, border crossing facilities and laws regulating the work of foreigners on the territory of other country and on statistics of local labor markets along the borderlines.

For *common ecological transborder space* there should be used the variety of different methods of delimitation of transborder water resources (rivers, lakes, seas), the conditions of water resources use and protection, threat of water pollution, air pollution and other environmental risks. Also the impact of investments in infrastructure and industry on natural environment and tourist, health and recreation resources 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. This set of many criteria and factors is necessary for proper delimiting of *common transborder ecological space*.

Methodology of delimitation of transborder regions and specific transborder areas still needs more research. Elaboration of scientific foundations, criteria, methods and information of delimitation of transborder regions and spaces should be the domain of joint research projects of multinational teams of experts from universities and institutes of collaborating regions.

5. Multiplier's and accelerator's effect of asymmetry of potentials in transborder regions

The bigger is the difference of potentials and 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 are the processes of mutually

effective interchange of resources and cooperation of all types of subjects operating in transborder regions.

The asymmetry of potentials is often generating the multiplier's effects and accelerator's effects in different domains of economy, in social and cultural activity. For example, difference of level of prices between countries is creating additional demand for products that are cheaper in one country. Higher level of wages and salaries in one country will encourage people from other side of the border to take jobs abroad, especially in transborder region. The bigger are the differences of wages and salaries, the wider will be the area 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 activity in that country.

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 many branches of economy are generating the synergy effect of development in transborder region as a whole. However often the multiplier's and accelerator's effects appear only in *specific common transborder spaces*, e.g. local labor markets, technological parks, local spaces of border crossings etc.

Economic regional policy, local liberalization of crossing of the borderlines, local labor market, more free trade for small businesses and individuals, special facilities for cooperation of SME based in transborder regions, should be oriented on the creation of positive asymmetry, on strengthening the multipliers' and accelerators' effect. Active policy of regional governments and establishing common coordinating institutions as well as systematic scientific statistical

monitoring is necessary for proper development of economies and preventing negative phenomena and processes, that may also occur in the regions of accelerated development e.g. shadow economy and activities prohibited by law.

Analysis and 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 cooperating scientific institutes and universities in transborder regions. The form of international scientific consortia has proven its usefulness and high efficacy.

6. Main indicators of economic integrity stimulated by the 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. Useful are simple quantitative indicators that are helpful for measuring economic asymmetry between identical or similar phenomena and processes of the areas of transborder regions of different countries.

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

a) Indicators measuring the intensity of transborder relations and integration of branches and subjects (e.g. number of individuals crossing the border, number of foreign customers of businesses, turnover between businesses based on other sides of the borderline, number of foreign employees working in businesses in transborder region, value of joint projects realized by regional governments etc.).

b) Indicators measuring positive economic asymmetry i.e. the differences between economic potentials that is stimulating mutually profitable cooperation and trade (e.g. differences of prices, wages and salaries, .

c) Indicators measuring negative asymmetry, i.e. the differences of regulations that hamper transborder cooperation of governments, entrepreneurs and citizens, and the consequences of those regulations for citizens, businesses and governments on other

sides of the borderline (e.g. time spent by individuals, trains and vehicles on bordercrossing and losses for individuals and businesses resulted by that, informal costs of crossing borders, administrative costs of transborder operations, custom duties, border taxes and other payments, costs of juristic services paid by businesses and individuals, costs of visas, etc.) .

Selected examples of indicators measuring (a), (b) and (c) are proposed below:

(a) Intensity of transborder relations

– Number of residents of transborder region crossing the border (frequency: daily, weekly, annually, seasonal changes of border crossing, costs of commuting through borders);

– Number of visas (by duration, type of visa, class of applicants for 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 subjects – residents of transborder regions

– Number of enterprises registered in transborder areas of two or more countries and quantitative indicators of the scale of their activities in different countries (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;

(b) Positive economic asymmetry

– Wages and salaries (differences by type of work and employers);

- Demand for employees on local labor markets (profile, seasonability, stability of work offered);
- 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) 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.

Positive asymmetry is generated mainly by the differences of economic and technological factors (comparative costs, differences of prices, wages, insurance rates etc.). Positive asymmetry stimulates the processes of cooperation and competitions.

Negative asymmetry is generated mainly by the difference of legal and administrative regulations and practices of administration. Information gaps, rigid language requirements 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 asymmetry caused by incoherence of laws and regulations and by lack of information transparency is generating excessive costs for all stakeholders and may also create the conditions for corruption and for the development of shadow economy.

7. Methodological problems of measuring transborder economy

Identification and proper use of positive asymmetry of transborder economies by governments, entrepreneurs and individuals needs the measuring of complex of quantitative indicators of differences of potentials. Some examples of those indicators are listed above. Official statistics shall include to the programs of surveys the collecting and compiling of the indicators characterizing transborder asymmetry of most important economic, social and administrative factors of regional development.

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

Moreover, because of the autonomy of official statistical systems of countries it is difficult to collect complete sets of comparable information from the transborder areas of countries from regional statistical data. Additional difficult methodological problems of comparability of information are caused by the differences of economic and social concepts and indicators defined in national laws and incorporated into national statistical surveys.

Transborder regions are relatively small and need detailed information on small areas (localities, towns, areas along the railways and roads, areas close to the border crossings etc.) Furthermore, there are also gaps and inconsistencies of statistical data referring to relatively small areas of transborder regions.

It seems that for transborder regions there should be conducted special harmonized surveys, oriented for collecting statistics necessary for monitoring transborder processes on all sides of borders. Such harmonized transborder surveys should be oriented on the measuring the differences of potentials important for decision making, for local economic policy 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.

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

8.1. Labor market

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

Transborder labor market is usually shaped by the transborder commuting infrastructure crossing the border. There are following main factors influencing the development of transborder labor markets:

- Supply of complementary human and social capital in different parts of transborder regions;
- Asymmetry of wages and salaries;
- Regulations supporting the work of citizens of other countries on the territory of transborder region (free transborder movement of people and goods);
- Efficient and relatively cheap commuting facilities (short time of access to jobs);

- Harmonization of social insurance of employees in transborder regions;
- Supervision of transborder labor market by regional governments, oriented for the stimulation of its development and elimination of pathologies.

8.2. Retail trade

Retail trade in transborder regions is stimulated by the asymmetry of two factors:

- 1) Differences of comparative costs of substitutive products
- 2) Complementarity of production and supply of products

Referring to the factor of comparative costs of substitutive products, the transborder retail trade is stimulated mainly by the differences of costs of production (including administrative costs, taxes, marketing etc.), differences of prices of equivalent goods and services in neighbouring areas on other sides of the borderlines, and transaction costs connected with the trading abroad, in different economic and legal environment. The efficiency of local retail trade is also stimulated by the premium for the risk of changes of exchange rates of currencies.

Microbusinesses, small and medium businesses are also trying to increase the profitability of transborder retail trade conducting the trade of imported goods in the region of residence, and at the same time exporting goods from the country of residence and trading in transborder region of neighbouring country. 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 it also increases the risk of fluctuation of exchange rates of currencies in short term.

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

Referring to the factor of complementarity of goods, liberalization of trade, reduction of customs, reasonable tax policy of all countries of transborder region may create positive synergy of development of production and trade effective for all parties.

The governments should resist the temptation of “overloading” complementary goods by excessive taxes and customs, and should support the development of cooperation of subjects producing and trading complementary goods.

8.3. Consumer services

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

- 1) supply of consumers services by type of service, volume and value,
- 2) demand for consumer services of non –residents,
- 3) complementarity of products offered in the form of consumer services in transborder areas of countries,
- 4) asymmetry of comparative costs of production,
- 5) asymmetry of prices for services,
- 6) differences of total costs of access to the services on local markets of transborder areas paid by consumers,
- 7) transborder transport infrastructure for consumers and costs of transborder transport,
- 8) quality of consumer services offered on local markets in transborder areas

8.4. Services for businesses

Foreign subjects need support from the part of specialized firms offering services for businesses: marketing, financial and tax advisory services, information services, juristic services.

The availability of these services for foreign subjects operating in transborder areas of neighbouring countries is necessary for the safety and stability of economic processes and subjects, especially for non-residents operating in the transborder areas of other countries.

Important problem for businesses that are potential clients of companies offering the services necessary for conducting the activities on the territories of other countries is the verification of professionalism of suppliers of those services

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.

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 services for businesses are similar to those used for measuring of consumer services, e.g.

- 1) supply of services for businesses by type of service, volume and value,
- 2) demand for services for businesses of non –residents,
- 3) complementarity of products offered in the form of services for businesses in transborder areas of countries,
- 4) asymmetry of comparative costs of production,
- 5) asymmetry of prices for servicesfor businesses,
- 6) differences of total costs of access to the services on local markets of transborder areas paid by businesses,
- 7) transborder transport infrastructure for businesses and costs of transborder transport,
- 8) quality of services for businesses offered on local markets in transborder areas.

8.5. *Financial services*

Banks, insurance companies, and other subjects of financial sectors of economy are operating on global 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.

However the strengthening of international cooperation of national institutions of supervision of financial sector focused of the

specificity of transborder regions seems to be necessary (supervision banks, insurance companies, and especially the intermediaries offering products of banks, insurance companies and other financial institution).

8.6. Social services: health, education, culture

Synergy of development of social services in transborder areas is based on the complementarity of those services from the point of view of quality and detailed profiles of services offered by resident businesses and non-profit subjects for the population of transborder region as a whole.

The capacity of subjects offering social services in transborder areas, technical and economic conditions of supply of these services should be oriented for potential userstransborder regions as a whole.

Regional governments may stimulate the development of social services by harmonization of the development and maintenance of the infrastructure of social services, marketing and technical information on the supply of social services available for inhabitants of transborder areas on the territories of neighbouring countries.

8.7. Tourism

The role of tourism in economic development of transborder areas is correlated with the level of wealth and incomes of households. In Europe all countries have reached the level of economic development in which tourism is becoming the integral part of household budgets. The demand for tourist services is growing continuously, new forms of tourism are becoming popular.

Tourism in transborder regions is based on ecological, cultural and social asymmetry of subregions of the areas and on the complementarity of tourist products: nature, culture, sports, recreation, health services etc.

The development of tourism in transborder regions should be based on the principle of “co-ordinated competitions” of substitutional products and on creation and maintenance of the infrastructure 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, tourists products offered as a supplementary products, e.g. to business meetings, education processes or scientific conferences.

Co-operation and active coordination of tourist policy in transborder areas is one of important issues in which regional governments of neighbouring areas of countries may play an important role. Also co-operation of chambers of businesses and subjects active in tourism is necessary.

Scientific analysis of asymmetry and complementarity of transborder areas from the poin of view of tourist capacity is the prerequisite of creating of information for identification optimal policy in tourism, elaboration of methods of cooperation of governments and businesses and for long term policy of development and maintenance of 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.

8.8. Border crossings

Specific kind of activity and business in transborder areas are border crossings. In the EU, in the Schengen area, the border crossing disappeared. The advantage of this decision was the reduction of costs of transportation for citizens and businesses. One may expect that this process of making the borders transparent will be continued.

However in most of the countries the border crossings are specific “enterprises” that are supplying specific services of control of the process of transfer of goods, means of transportations and people between countries. The development of international trade and tourism needs the supply of these specific services. The border crossing are becoming the enterprises using most modern technologies and ICT for better and faster providing of control services and related financial services.

For businesses and citizens of transborder areas the border-crossing business is first of all an additional, excessive cost of transborder cooperation and contacts (costs of visas, time lost for crossing the border by cargo and people etc.). From the point of view of entire development of transborder regions the processes of crossing

border should be minimized. The only forms that should be still maintained are the forms of the control necessary for safety and security of economies and people.

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

In transborder regions complicated processes of border crossing are limiting the possibilities of effective use of economic asymmetries and complementarily economies in transborder areas. Therefore regional governments in transborder areas should identify – 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 replaced by more simple forms or eliminated. 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.

8.9. Complementarity of infrastructure

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

Harmonization and coordination of all types of infrastructure for transborder areas is the prerequisite of cooperation in other field of economy. The neighboring areas of transborder regions may optimize the development of infrastructures using the effects of complementarity. Modern technologies enable to build infrastructural constructions which capacity may meet the needs of enterprises, households and individuals, towns and villages located in transborder areas on both sides of the border. The optimizing of resources and reduction of costs is achieved thanks to the effect of scale. For example the border crossing could be built as one investment operated jointly by officers of both countries, one sewage treatment plant may be sufficient for towns located on both sides of the border, one highway along the borderline may be sufficient for the traffic of inhabitants of localities on both sides of the borderline, 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 regions is the “non - zero sum game”. If governments and enterprises cooperated jointly, all parties will win, although some may gain more, and the other less. However without the cooperation in the field of building and maintaining common infrastructures in transborder areas, all parties will lost.

9. Synergy effects of asymmetry of potentials in transborder regions

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 zone of free transborder movement of inhabitants in delimited areas on both sides of the borderline is the effect of concatenation of i.a. following factors:

- (1) transborder local retail free trade,
- (2) extension of the market of wholesale trade,

- (3) transborder local labor market in the zone,
- (4) open access of inhabitants and businesses to complementary services,
- (5) higher profitability of businesses based on the difference of costs,
- (6) optimization of localization of enterprises
- (7) 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 coordination infrastructural investments for the use of the transborder areas, especially in transport, energy, environment protection, is achieved thanks to the following factors:

- (1) Lower costs of investments for each country,
- (2) Lower costs of exploitation and maintenance of infrastructural facilities for the subjects (businesses, individuals) achieved thanks to the effect of scale,
- (3) Better infrastructure makes the transborder areas more attractive for investors,
- (4) Multiplier's effect of increase of investments in the area in the form of development of SME offering services for investors and other businesses
- (5) 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.):

- (1) Lower costs of administrative procedures and lower costs of legal services for businesses,
- (2) More possibilities of extension of economic activities within the frames of existing laws and procedures,

- (3) Higher safety and security of running businesses thanks to the transparency of laws and procedures for entrepreneurs,
- (4) More possibilities of cooperation in the fields regulated by national laws, e.g. health care, social aid, education, financial services (banking, insurance),
- (5) Cooperation of NGO's and other non-profit organizations is extending the possibilities of mutually profitable cooperation in many fields etc.

The identification of possible effects of synergy generated by the asymmetry of economies in transborder areas is an important task for scientists, research institutes and universities interested in the development of transborder economics. For each identified field of synergy it would be recommended to elaborate models explaining the processes of synergy, simulating the effects that may be achieved and identifying the prerequisites of positive synergy based on proper use of asymmetries in transborder regions.

10. Conclusions for research of transborder economies

The economies in transborder regions are developing on the basis of different processes and mechanisms than national economies as a whole. As it was discussed above, main factors of development of economic activities in transborder regions are the asymmetries and differences of potentials of geographically close areas, but regulated by different laws and administrative procedures. There are also qualitative and quantitative differences of the level of development of different branches of economies, technological level and economic efficacy of enterprises.

Transborder economies are covering large part of the territory of Europe. The transborder processes are also important for economic development in 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.

Nowadays, in globalized, more open economy the specificity of transborder processes should be taken into account for proper analysis, evaluation and monitoring of economic development on

regional level. And for small – scale national economies the analysis, evaluation and monitoring transborder processes is essential for macroeconomic policy.

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.

11. Conclusions for social and economic policy of governments and NGO's in transborder regions

Regional governments, enterprises, NGO's and other non – profit organizations operating in transborder areas should be delivered the information that properly presents the specificity of transborder regions and economies. They shall take their decisions taking into account the factors specific for concrete regions, subregions and areas. Special attention should be paid to the impact on the economies on regional and local level, as well as on enterprises, social organizations and households, of:

- (a) Institutional asymmetries, including differences of laws and procedures;
- (b) Technological asymmetries;
- (c) Economic asymmetries;
- (d) Asymmetry and level of compatibility of information systems
- (e) Differences of development of technical infrastructure;
- (f) Differences of development of social infrastructure;
- (g) Identification of factors generating the synergy effects, stimulating the effects of multiplier's and accelerator's in specific economic processes;

The implementing and 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.

12. References

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