

TRANSBORDER ECONOMICS
Vol. 1, No. 1, pp. 109–116

CORRELATION OF QUANTITATIVE AND QUALITATIVE EVALUATION METHODS OF MODERN TRANSBORDER PROCESSES

Serhii Ustych¹, Alex Rovt²

ABSTRACT

The presentation examines system-methodological issues of quantitative (primarily statistical) and qualitative analysis of the phenomenon of modern transborder processes, in particular, at the new Eastern EU border. We have substantiated the necessity of introducing to the scientific circulation the notion of "transborder system" and via it to identify the main components in the number of transborder phenomena. The basic techniques for expert' qualitative and quantitative assessment of those components that have been included by the authors of the system for indexation and monitoring of transborder processes, have been presented. Also, the value of the system statistical toolkit in the process of empirical sociological research of the borders and transborder phenomena has been analysed.

Key words: *qualitative and quantitative methods for assessing social phenomena; transborder processes; transborder system; indexation and monitoring; empirical sociological research.*

1. Introduction

As known, human activity as a social being in temporal and spatial dimensions is regulated. This regulation is natural or social. The phenomenon of the border is one of the most significant *social regulators of spatial human activity*. Introduction of the institute of the border that is *real or imaginary lines on the earth's surface, defining the boundaries of the land and water area of the state (state territory)*, was a radical intrusion of man to the natural world organization,

¹ The Institute for Transborder Cooperation, Uzhgorod, Ukraine, 88000. E-mail: ustich_si@ukr.net.

² The Institute for Transborder Cooperation, Uzhgorod, Ukraine, 88000. E-mail: ip@ibetrade.com.

in particular *to its spatial characteristics*. The border, by setting artificial interstate distinctions, "broke" the space politically.

The border is a static phenomenon. Transborder³ processes (flows⁴) are a dynamic form of border existence. *Transborder processes (TP) are subjective and natural interactions that take place across the border*. Transborder processes exist since boundaries exist. They can be limited by various parts of the spaces (in particular territories) of states, or can stretch over all their depth.

Given the radical technological, social and political changes that have taken place in the modern world, communication across borders transformed significantly. It became much bigger, more dynamic and pragmatic. As a result, the phenomena associated with the border, have a growing impact on the livelihood of people (Ustych, 2015).

Therefore, the problem of borders now and before has raised a significant cognitive interest in the society. The scientific community advanced a lot in analysing these or other aspects of border and related phenomena (Kolossof, 2005, Brunet-Jailly, 2005). In short, in studying the social life of transborder phenomena there are significant factual, conceptual and organizational achievements.

However, any knowledge is limited by time. Its scope and quality largely depends on the cognitive means used to obtain it. The more advanced, more efficient means, the more diverse and deeper, or, in other words, the richer the knowledge is. This fully applies to the theoretical reflection of transborder processes.

Today, in the author's opinion, there are a number of important issues affecting the very essence of modern border and transborder processes, which are still unsolved. These are not scholastic questions. Answers would allow avoiding confusion and errors in theoretical research, and hence the confusion in practice.

One of these very important, concerning theoretical and practical point of view issues, is the problem of quantitative and qualitative evaluation of transborder processes. It is known that even the outstanding scientist D. Mendeleev emphasized that *science begins since one is starting to measure*.

In the second half of last century the concept of social indicators has started to be used extensively for the study of social phenomena. In the work of C. Weiss information on social indicators can be found. This was due to the strengthening

³ «Transborder (transfrontier)» (Eng.) means "across the border, on the other side of the border".

⁴ The term "transborder flows" is commonly used in international official documents, including the European Union, and the research literature as a synonym of "transborder processes".

of pragmatic principles of the social sciences, with a focus in their practice on solving urgent problems of social development.

The concept of a synthetic indicator is used to measure the particularly complex, multifactorial objects. This concept (also called the rating) often expresses the quantitative and qualitative characteristics of the phenomenon. Today, the definitions of synthetic indicators of various aspects of social life are booming. It is difficult to imagine, for instance, the international relations or investment activity without using these universally acknowledged estimates.

According to the author, in order to solve this crucial problem, *one should be guided by the methodology of system study of society (system methodology), that is a set of methods, techniques or operations aimed at a systemic theoretical and practical acquisition of social reality.*

This choice is conditioned by two main factors. Firstly, this methodology allows us to identify the main component range of transborder processes, without which it is impossible correctly explore the transborder phenomena. Secondly, depending on the nature of transborder phenomenon, it provides the researcher with a particular effective toolkit for quantitative and qualitative analysis.

The author finds it necessary to identify the system nature of transborder phenomena by using a specific term – “transborder system of society” [304]. *This concept can be defined as the self-organized set of components of objective and subjective origin that interact with each other in connection with special spatial separations (the borders) outlined by the states.*

A horizontal slice of transborder system is the main component row, which includes transborder needs and interests, the subjects of transborder activity, in particular this activity and its objects and tools, as well as the transborder relations.



Figure 1. The components of transborder processes and their interrelation

A vertical slice of TB system has formed by its major subsystems: the techno-industrial, economic, political, and spiritually specialized.

According to the size of transborder processes, the transboundary systems can also act on four levels: micro- (local), meso- (regional), macro- (national) and inter- (transnational, glob).

Hence, integral and correlative measurements have become an integral part of any social control, a powerful factor in increasing its efficiency.

Management of such a complex object as transborder flows are no exception. The index of transborder flows is a synthetic indicator, a concept that characterizes the relative importance, place and weight of transborder flows and the level of their development in different spatial segments.

The algorithm for analysis of indices of transborder flows:

1. Conduct a system research based on the methodology of transborder flows.
2. Identify indices (general, special, individual).
3. Their quantitative and qualitative evaluations.
4. Formulation of theoretical and practical conclusions.

On the basis of this algorithm has been developed the System for indexation and monitoring (SIM) of transborder cooperation (Ustych, 2014).

A. System for indexation and monitoring of TBC (SIM) – is a set of theoretical activities that ensure *correct analysis and comparison of common and distinctive features and development trends of cross-border cooperation (CBC) aimed at improvement of its performance, primarily by optimizing management.*

- The SIM is based on the developed by the Institute for transfrontier cooperation (Uzhgorod, Ukraine) system of indexation and monitoring of transborder cooperation in Europe (MIS) which is *a universal model for analysis and optimization of cross-border cooperation* both at the new Eastern border of the European Union as a whole and in certain other its individual segments, in particular. This system was presented and discussed at the International scientific conference "The effectiveness of cross-border cooperation through international monitoring and coordination of national entities", held in the framework of the project "Borders for people" of the ENPI CBC Program Hungary-Slovakia-Romania-Ukraine 2007-2013 (Uzhgorod, April 8-9, 2011). Having considered comments and suggestions made by experts the SIM was fine-tuned and approved by the project partners.
- The set of indices which is used, as well as their quality and quantity indicators, maximally considers methodological approaches approved by the European Union institutions (in particular, of General Directorate on Regional Policy) and which are used by them in project design at the new Eastern border, and in ENPI Program development in the first place.

- However, the SIM is not limited by only this set of information. For the first time, it provides for the *synthetic analysis* of quality and quantity sides of transfrontier cooperation development, allowing by this to obtain *maximally full and adequate information* about this phenomena.
- Having this information, management subjects at various levels are able to develop and adopt *most efficient* political decisions.
- The proposed *set of evaluation criteria* (e.g., statistical evaluations) in the medium and long-term monitoring studies may be somewhat modified. But to *ensure the accuracy of comparative analysis* of the level of transborder cooperation its key criteria in all cases of practical application *should be uniform*.
- The chronological frameworks for the *starting* study of this or that index are identified by experts depending on the characteristics of the latter.

B. Definition of basic notions

- The **object** of indexation is transborder cooperation of neighbouring regions of Hungary, Slovakia, Romania, and Ukraine.
- **Indexation of TFC** is a tool of political analysis of transfrontier cooperation based on index construction method.

Indexation and conducted on it base monitoring of transborder cooperation are information base and guarantee for a significant improvement in activity coordination of national entities of TBC both in different spheres (political, economic, humanitarian, informational) and different levels (macro- , mezzo -, and micro).

For example, in political and administrative area at the macro level - the level of interstate relations – it can significantly increase the effectiveness of existing coordinating bodies, such as Interstate commissions on CBC).

- **Index (from Latin indicio – I indicate) of TBC** is an indicator (relative value, expressed in unit fractions or percent) that *quantitatively characterizes dynamics of transborder cooperation as well as serves for its comparison in various regions of Europe*.
- **General index of TBC** – indicator of the level of *object development in general*.
- **Special index of TBC** – indicator of level of development of *one or another group of characteristics (parameters) of an object*.

- **Single index of TBC** – indicator of *level of development of specific (individual) characteristics of an object*.
- **Relevance of index** – *importance of index, its share in sets of other, sequent indexes*. The necessity to consider the relevance of particular index arises due to the fact that sequent indexes play in transborder cooperation development *unequal system forming role*. This should be reflected in its assessment by establishing *the difference in the number of points*, which measure particular index.

C. Index construction

- **General index** “Level of transborder cooperation development between neighbouring regions of Hungary, Slovakia, Romania and Ukraine” is constructed on the basis of special indices by way of their composition and calculation of average index. It is defined on a scale of 1 to 10.
- **Special indexes** are based on single indices by way of their composition and calculation of average parameter. It is defined on a point scale. In relation to general index the special indices are regarded as sub-indices.

Special indexes of general index are the following:

- *Geographic and demographic environment*
- *historic, political and spiritual factors*
- *legal basis*
- *conflict-causing factors – risks and challenges*
- *infrastructural characteristics*
- *contacts between people*
- *economic cooperation*
- *integrated borders management and its safety*
- *improvement of environment quality*
- **Single indices** are constructed on the basis of *quantity and quality measurements (assessments)* of specific object features. It is assessed on a point scale. Single indices are sub-indices in relation to general and special indices.

Single indices are concretized by minimal amounts – **indicators**.

It should be noted that the kind of expertise of the project was its presentation at the European Forum on CBC, which is co organized by the Institute for

transborder cooperation. The first such Forum attended by the Vice-President of the European Commission held in October 2010 in Uzhgorod (Ukraine) and Kosice (Slovakia), the second - in November 2011 in Kaliningrad (Russia) and Elbląg (Poland). Results of the project will be also presented at the third European Forum that will be held in November 2012 in Chisinau.

The project was also highly positive assessed by the Result oriented Monitoring Committee of the Programme ENPI. In addition, the project was submitted to the contest, held in 2011, by one of the most prestigious European institutions in the field of cross-border cooperation - Association of European Border Regions. According to the results of the contest the Institute received an award "for outstanding achievements in European cross-border cooperation."

So, the package of methodology and techniques on indexation and monitoring of TBC, created during the project "Borders for people", can be regarded as an original and innovative product.

3. Conclusions

To sum up, the following conclusions can certainly be made:

- 1) System methodology provides the necessary theoretical prerequisites for effective use of modern tools for quantitative and qualitative analysis of transborder processes.
- 2) The ratio of quantitative and qualitative methods for evaluation of any transborder phenomenon depends on its nature.
- 3) One of the greatest advantages of the system research methodology is its practical orientation. This is proved by the findings of the international project, dealing with modern transborder processes' analysis and management.

REFERENCES

- Ustych, S., (2015). "System theory of borders and transborder processes" – Saarbrücken: Scholars' Press, 492 P.
- Kolossov, V., (2005). "Border Studies: Changing Perspectives and Theoretical Approaches," *Geopolitics*, 10, 601–615.

Brunet-Jailly, E., (2005). “Theorizing Borders: An Interdisciplinary Perspective,” *Geopolitics*, 10, pp. 620–634.

Ustych, S., (2014). “The Indexation and Monitoring of the Modern Transborder Processes”, *Journal of Mathematics and System Science*, 3, pp. 37–44.