

Processes In Transborder Areas – Significant Impact On The Economic Growth

Marek Cierpial-Wolan, PhD
Statistical Office, Rzeszow, POLAND
m.wolan@stat.gov.pl

Abstract

Due to globalisation the economy is becoming a blurred system in many cases. On the one hand we can observe integration processes, with the extended Schengen zone as the most recognizable one in Europe, on the other, disintegration tendencies are visible, such as tightening of rules on crossing the border. Integration and disintegration processes cause failures in the functioning of the information system concerning transborder areas. Therefore, it is essential, in countries in transition in particular, to create a coherent research system that collects, processes and disseminates information for these areas. In response to these needs Polish official statistics initiated works towards such a structure. Results of this research (household surveys, border traffic surveys, entrepreneurship surveys, etc.) turned out to be unexpected. They show that changes to approach to estimate some items in Balance of Payment (BoP), thereby developing the calculation of Gross Domestic Product (GDP), are required. This article presents both methodological aspects and findings of these surveys.

Key Words: Research system for transborder areas, improvement in GDP estimates

Introduction

Analysis of the processes of socio-economic development in the modern world clearly indicates the need to study phenomena occurring in transborder areas. On the one hand, we can observe integration processes, which cause the economy to become a blurred system in many cases. The most recognizable one in Europe is the extended Schengen Area. On the other hand, disintegration processes are visible.

In the countries where the Schengen Area is being introduced, open borders facilitate communication, running business, etc., but they generate many information gaps. The removal of border controls and cessation of recording the traffic of people and vehicles cause the information deficit in this regard. This is why there is necessity of replacing the lost source of information through retrieval of data in another way.

What is more important is the fact that opening the borders in some countries usually leads to tightening the rules of crossing the borders in others, in this case at the EU's external border. It is the reason why we can frequently observe higher intensity of non-registered socio-economic phenomena in this area.

Therefore, integration and disintegration processes cause the need for more and more information concerning transborder areas, thereby growing interest in regional statistics.

Regional statistics often comes across different problems of, among other things, limited availability of data for areas located on both sides of the national border, lack of information on a certain level of aggregation in individual countries and low level of data comparability, especially those pertaining to economic issues.

Therefore it is essential, to create a coherent research system for cross-border areas which would allow for gathering and analyzing comparable data from sample surveys and administrative registers.

In response to a greater demand for information Polish official statistics resumed in 2008 the survey of goods and services turnover in border traffic. Initially, it was

carried out on the Polish-Ukrainian border, and since 2010 at the whole European Union's external border on the territory of Poland.

Results of this survey turned out to be unexpected, and influenced the creation of a research system on transborder areas.

The objective of this paper is developing a survey methodology for transborder areas in order to use the results of this survey on the micro-mezo-macroeconomic level. When it comes to macroeconomic level, incomplete information causes a disturbance of GDP structure from expenditure approach and failures in economic growth rate.

Towards coherent research system for transborder areas

Delimitation of cross-border areas

There exist, of course, numerous ideas for setting cross-border area. Thus, its delimitation is pre-arranged to a large extent and depends on the purpose it serves. The delimitation can be carried out based, for instance, on morphological criterion, with geographical features taken mainly into consideration (in particular the lie of the land), or on functional criterion, viewed as a commonly dependent production and consumption actions, and those related to exchange and administration. Delimitation in the institutional sense does not denote a compact area — it creates a kind of a network because it is determined by locations of units cooperating within the cross-border area (units of territorial division on NUTS 4—5 level, entities etc.). As part of these criteria, common problems to solve, e.g. areas of ecological threat or common chances for development, for instance, creation of cross-border touristic area, are also taken into consideration. Groups of indicators reflecting various processes of socio-economic development can be also used for delimitation. It should be stressed, that, as a result of numerous criteria the boundaries of cross-border area are fuzzy since spatial scope of individual features does not coincide with each other.

In practice, preliminary delimitation is carried out first. It is based on limited, not finally coherent list of variables that include law, administrative, political and factual aspects. Systematic analysis of socio-economic phenomena in preliminary defined cross-border area, which mainly focuses on labour market, entrepreneurship, tourism, environmental protection or institutional infrastructure, usually leads to changes of the outlined area, what can be named as dynamic delimitation.

An instance of defining cross-border area is a preliminary delimitation based on three criteria: Regulation No. 1931/2006 of the European Community, dated 20 December 2006, according to which the border zone covers an area of 30—50 km from the border; the rule stating that the smallest administrative unit is a unit of territorial division on NUTS 4 level; and the results of surveys on journeys to work. The first reason for initial corrections of the preliminary delimitation can be analysis of results of sample surveys carried out on borders concerning, for example, goods turnover, in which we ask the respondent about distances from the border to the place of residence and shopping.

Monitoring of socio-economic phenomena

In order to maintain comparability, the first step seems to be creation of a uniform set of variables concerning individual socio-economic fields (e.g. demography, entrepreneurship, environmental protection), which will be based on joint glossary of terms, often relating to various classifications.

Only a set of variables prepared in this way allows to use a great number of data analysis methods, such as neuron networks, genetic algorithms, taxonomic methods, classification and regression trees, supporting vector methods or association and

sequence methods. In regional statistics, taxonomic methods – hierarchical and non-hierarchical – appears to be particularly useful.

Aiming at comparability, one should not forget about a unique character of individual regions. What seems to be vital in this context, is distinguishing the most important exogenous factors which influence economy and region's development. Combining both approaches enables to create a „portrait of cross-border region”.

Data sources

Administrative and statistical databases can be the primary data sources used in monitoring of cross-border areas. Data of customs service and border guards, which are exceptionally important in generalizing results of sample surveys, plays a special role here.

A potential source of information is also outcomes of automatic points of road traffic measurement, which can estimate its intensity (by selected days of a week, month. etc., including seasonal fluctuation), and also cover categories of vehicles. In some countries, the automatic measurement system can precisely identify a vehicle (e.g. registration number, number of persons travelling), and its localization at any point of time.

Collecting of data used in cross-border surveys may be carried out also through bank system. Information on the usage of credit cards might be particularly useful. It should be emphasized, though, that in most countries reports on this matter made by central banks for the purpose of payment balance are of virtually no use for cross-border areas (e.g. in accordance with the EU regulations, transactions not higher than 12.5 thousand euro are not registered). Due to confidentiality of bank data, functioning of an independent information system, powered by commercial banks for regional purposes, appears, however, difficult to realize.

Another and extremely important source of information is certainly sample surveys. Analysis of processes observed in cross-border areas requires creation of such a system of sample surveys that covers the possibly broadest scope of socio-economic phenomena. Among the most important areas, the following should be mentioned: surveys of household, enterprises, tourist accommodation facilities and questionnaire surveys on borders.

In such a context, the analysis and the linkage of data from sample surveys (the Labor Force Survey, the Household Budget Survey, the Survey of Goods and services turnover in Border Traffic and Social Diagnosis) to available administrative registers (Border Guard) are immensely important. First and foremost, it reduces the survey burden put on respondents, and enables to identify scattered information sources owned by many institutions. The sources of information, after being inventoried and merged, constitute a new value. This venture is of a special significance for monitoring and the analysis of the processes taking place in the cross-border area, for which it is important to develop an interdisciplinary data banks. Linking information from different sources would also create the possibility of conducting works on the verification of the quality of results acquired from conducted surveys in addition to the factors connected with the border influence (border trade).

Border traffic and movement of goods and services at the European Union's external border

The survey of goods and services turnover in border traffic is carried out using the representative method, which allows generalization, with specified error, of the obtained results for a total number of persons who cross the surveyed border, by foreigners and the Poles. It is conducted on a sample of about 1%.

A two-stage scheme for drawing elements for a sample with determining the layers was used. First, the days (time intervals) undergoing survey are drawn, then persons are drawn out of those who cross the border. The layers were determined

according to the days of the week as well as the border crossings and kind of traffic. For each of the layer one, selected at random, 12-hour interval in a quarter coinciding with a day shift of the border guards is surveyed. Drawing of a sample is the same for the Poles and foreigners. For each of the selected shift (a unit of the first stage of drawing which participate in the survey) a sample of persons undergoing survey is selected by means of systematic sampling. In case a selected person rejects to participate in the survey, a successive person is surveyed.

The questionnaire survey is carried out in quarter periods, in selected days of a week chosen from the total number of days in a given period (7 times in the quarter). Non-representative days are not included in drawing, e.g. national and religious holidays. The questionnaire survey is conducted simultaneously at all border crossings covered by the survey.

Estimation of survey results is based on data gathered from questionnaires and information of the Main Headquarters of Border Guard on border traffic which concern respective crossings, including the way of crossing the border. These data cover the number of the Poles and foreigners who cross the border according to the crossing, direction and kind of traffic (the way of crossing the border) in a surveyed quarter and in 12-hour shifts during which the questionnaire surveys were carried out.

Data are generalized separately for the Poles and foreigners in each layer. Results for the border sections and regions (NUTS 2 level) are calculated on the basis of the results from all layers.

The results of the this survey analysis allow us to say that the phenomena associated with the border traffic are of great importance for social-economic development of cross-border areas. The greatest intensity of these phenomena occurs in areas in the strip of up to 50 kilometres along the border. It is reflected by high percentage of people crossing the border who incurred expenses in this strip, as well as the fact that the inhabitants of villages located in this area were among the vast majority of people crossing the border, and the majority of expenses was incurred in this strip. Analysis of the results of the survey carried out at the European Union's external border on the territory of Poland also shows some variation occurring on its particular sections, especially in the case of the Polish-Russian border.

The value of foreigners' expenses in Poland and Poles abroad is significant in comparison with the Polish foreign trade turnover. Expenses incurred for the purchase of goods in Poland by foreigners declaring Ukraine as a country of residence amounted to 3.4 billion zł in 2012, whereas expenses of Poles returning from Ukraine – 269.5 million zł. Data on exchange of goods presented by statistics of foreign trade for Poland show that exports to Ukraine amounted to 17.2 billion zł in 2012, whereas imports from Ukraine – as a country of dispatch – amounted to 8.4 billion zł.

The value of expenses incurred by the Belarusians in Poland is also significant. In 2012, the expenses on the purchase of goods incurred in Poland by foreigners declaring Belarus as the country of residence amounted to 2.2 billion zł and expenses of Poles in Belarus – 70.1 million zł. Exports of goods from Polish to Belarus amounted to 6.6 billion zł, whereas imports from Belarus (as a country of dispatch) – 3.3 billion zł.

Expenses on the purchase of goods incurred in Poland by foreigners declaring Russia as a country of permanent residence amounted to 470.5 mln zł, whereas expenses of Poles declaring Russia as a country of stay – 272.3 mln zł. Exports of goods from Poland to Russia amounted to 32.3 billion zł, whereas imports from Russia – as a country of dispatch – totalled to 89.9 billion zł. Expenses on goods incurred by the Poles in Russia and Russians in Poland are much lower compared to expenses on purchase of goods incurred by Belarusians and Ukrainians in Poland and Poles in Ukraine. The Polish exports to Russia and imports from Russia is, however, much higher than in the case of Ukraine and Belarus. Therefore, the expenses on the purchase of goods incurred in Poland by foreigners declaring Russia as a country of permanent residence are small compared with exports from Poland to Russia.

Expenses incurred in Poland by foreigners crossing the border in territorial units on NUTS 2 level accounted for around 15% compared with the value of export sales of entities of these units in 2012. As to expenses incurred abroad by Poles crossing the border in corresponding units, they accounted for 3.7% compared with the value of import purchases of entities from these units in 2012.

It is also worth noting that the value of purchases of goods made in Poland by foreigners crossing the European Union's external border in 2012 at current prices was 8.6% compared with the value of retail sales of the regions located by the European Union's external border.

The results of the survey of goods and services turnover in border traffic at the European Union's external border on the territory of Poland show that the vast majority of people go abroad and return in one day, mainly to make purchases. The expenses structure is dominated by the resources allocated to the purchase of goods, and only a small part is spent on services.

There is diversity between studied phenomena on individual sections of the border. In particular, the Polish-Russian border can be seen as different one, both with regard to the purposes for which foreigners visited Poland, as well as to distance to travel, structure of expenses and the frequency of crossing the border.

Changes in legislation relating to crossing the border, introduced by Poland or neighbouring country, are almost immediately reflected in changes in the level of border traffic intensity and border trade. The functioning of local border traffic, which has been present at the Polish-Ukrainian border since July 2009, has had a positive impact on increasing traffic and the amount of expenses made by foreigners in the Polish border area. Thus, it has positively influenced the revival of the area, as evidenced by the higher rate of increase in the number of economic entities in this area than in areas by other sections of the border. This can, in turn, be beneficial for the development of units on the LAU level 2 that are in the border area.

The volume of the border traffic and the presence of border trade are affected by different endo- and exogenous factors, especially relationships between prices of goods on both sides of the border, supply-side deficiencies in the internal market of a given country and the possibility of crossing the border. The way they evolve will determinate the development of border trade, which is one of the forms of border cooperation, conducive to its development as well as strengthening and improving the living conditions of the inhabitants of border regions.

Comprehensive survey

In order to obtain information from both the survey of foreigners' trips to Poland and Pole's participation in trips, a pilot survey "The integration of statistical surveys of travel tourism for the needs of tourism statistics, national accounts and balance of payments" has been launched.

The survey of the trips of Poles is conducted in households, and the survey of foreigners' arrivals (survey on the internal and external border of the EU) – in the vicinity of selected border crossings.

Border survey (of border traffic at the internal land border and questionnaire survey among foreigners) is conducted in two rounds 7 days per one round (the survey is conducted 14 days in the quarter in total – two full weeks from Monday to Sunday), whereas the household survey is carried out on a previously drawn sample.

The purpose of the survey is to obtain from foreigners (non-residents) leaving Poland information on the amount of expenses incurred by them in relation to the residence, including the purchase of goods and payment of services, in particular specifying the structure of spending. The survey also includes, among others: the country of residence, destination and length of stay, distance from residence and place of purchases to the border crossing, the frequency of crossing the border.

The study of participation of Poles in travel is conducted in households on a random sample of homes across the country. Dwellings for the survey were selected at

random by two-step layering at the first level. Statistical regions are the units of the first level, and dwellings are the units of the second level. In addition, half of the sample will be allocated to the border layers, and the other half to the central layers.

Data obtained in the study allows for protection of both the information needs of major customers, namely, the Central Statistical Office, the Polish National Bank and the Ministry of Sport and Tourism, as well as the balance of payments needs.

Conclusions

In terms of the economic slowdown that we see in many parts of the world, precise estimates of individual components of GDP are becoming particularly important. The experience of several European countries shows that the phenomena occurring in the border areas have a significant impact on the balance of payments.

Integration and disintegration processes result in more interaction within socio-economic phenomena (through the difference of potential) including an increase in the scale of unregistered and illegal transactions. It is worth stressing that unregistered trade means all goods which are not registered on customs documents but can be legally transferred across the border. It does not cover grey or black zones.

According to border traffic and movement of goods and services survey in 2012 the expenses incurred on the purchase of goods in Poland by Ukrainians, Belarusians and Russians was surprisingly high, and accounted for approximately 20%, 30% and 2% of Polish export to these countries respectively.

Nowadays, economic growth is determined by details, and export is one of the most sensitive component of GDP. Therefore, precise information concerning BoP obtained from a coherent research system for transborder areas is crucial.

The unique character of cross-border areas requires a great number of various surveys of socio-economic matters to be carried out. Establishing a consistent research system should include a wide spectrum of methodological structure, which will be useful both in the countries covered and not covered by liberalization of the rules on requirements as to crossing the border (it will be particularly helpful in the countries with both kinds of border crossings — e.g. internal and, at the same time, external borders of the European Union). Effective functioning of such a system requires support from standardized sources of information (official registers, other administrative sources of data, bank registers, automatic measurement of traffic, etc.), as well as creation of projects which will not only include surveys on borders, but will primarily concentrate on processes ongoing around the border.

The functioning of a coherent research system for cross-border areas will provide opportunity to use econometric models, as well as employ the results of analyses on micro-mezo-macroeconomic level.

References

- Cierpień-Wolan, M. (2008) "Cross-Border Surveys – Some Methodological Aspects" *Statistic In Transition New Series, Vol.9, No. 2*, 361-366.
- Cierpień-Wolan, M. "Economics aspects of migration in Poland", *Forum Statisticum Slovacum 3/2007*, Bratislava 2007, 50-57.
- Cierpień-Wolan, M. "The measures of adaptability in Poland's system of official statistics under crisis" *Statistic In Transition New Series, Vol.10, No. 1*, 163-170.
- Liberda, Z. B., Cierpień-Wolan, M. and Łagodziński, W. W. „Combining of Survey and Administrative Data for Cross-Border Areas”, *IARIW 31st General Conference*, Switzerland 2010.