European Construction and Political Sciences

EUSDR between Political Approach and Economic Realities

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Abstract: The paper deals to the analysis of the new development related to EUSDR in the context of the new EU27 and the geo-political balance in Europe. The analysis covers representative economic indicators of the Danubian countries and specific indicators regarding the transport development's trend on Danube. The comparative analysis is followed by regression and a cluster approach in order to obtain pertinent conclusions. The whole approach is based on the latest official statistical data, pertinent diagrams and tables. The main conclusion of the paper is that the disparities across EU27 are almost the same to those between Danubian countries and the future seems to be one of more confrontation than cooperation.

Keywords: economic disparities; Danubian clusters; inland waterways transport; inland waterways transport measurement.

JEL Classification: L91; O18; R11; R12.

1. Introduction

The inland waterway transport is less polluting than rail transport and has a higher development potential. The inland water transport consumes less energy per km/ton of transported goods than the road transport (only 17%) or the rail transport (only 50%). Finally, the inland waterway transport accounts for 6% of EU domestic shipments.

21 Member States benefit from inland waterway transport. 13 of them have built interconnected maritime transport networks. Moreover, 8 of them plus 2 non-Member States operate across the Danube.

The waterway transport on Danube operates in accordance with a Specific Directive defining the technical requirements for inland waterway vessels (European Parliament and Council, 2006).

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On February 2016, the European Commission adopted a proposal for a Directive on the Recognition of Professional Qualifications in River Transport (European Commission, 2016).

2016 brought a new impetus to the implementation of the EU Strategy for the Development of the River Transport as part of the NAIADES II package of measures. This package focuses on six priorities: improving infrastructure quality; developing innovations; better functioning of the market; environment protection; labour qualification and quality jobs; integration of the river transport into multimodal transport networks (European Commission, 2013). NAIADES II targets the river transport development during 2014-2020.

On the other hand, on March 2016, the European Council and the European Parliament signed an agreement on technical requirements for river ships (European Commission, 2016). The impact of the global crisis on the EU economy has reduced the number of employees and fleet in river transport (Eurostat, 2015; Eurostat, 2015b).

The present research puts together macroeconomic indicators of the Danubian countries and waterway transport indicators, in order to conclude if the EUSDR is still viable or not.

2. Literature Review

The importance of the inland water transport in Europe was pointed out by an official international document realised under United Nations Economic. The document proposed some policy recommendation as the following ones:

- the development of the E waterway networks;
- modernization of the inlandwater fleet at the pan-European level;
- development of the River Information Service (RIS);
- development of the inland water transport in connection to other transport modes;
- training and developing the specific labour resource;
- environment protection, managing the waste and reducing pollution of inland water vessels;
- improvingthe institutional and regulatory framework at pan European level (United Nations Economic, 2011).

A more pessimistic approach started from the idea that at least 50% of the EU populations is connected to different inland water transports. Even that Danube is

the most important inland water transport way, it covers only 9% of the overall inland waterway transports. This situation is supported by the lack in meeting the standards established for waterways by the European Conference of Ministers of Transport. Moreover, there are great disparities between the Western and the Eastern Danube basin related to the quality of the infrastructures. The main conclusion of this approach was that EU faces to "no significant improvements in modal share and navigability conditions since 2001" (European Court of Auditors, 2015).

In the same pessimistic tone, other paper pointed out the contradiction between the theoretical approach related to the inland water transport and the realities. This contradiction is increased by the lack of statistical data regarding the inland water transport. Romania faces to the same situation. After the economic crisis, the transport activities on the Danube faced to the impact of the decreasing activities, including the support activities, too. As a result, the recovery of the transport activities on the Danube will be not possible on short or medium term (Ionescu, 2016).

The integration of the inland waterway transport in the Europeantransport logistics chain was analysed in the context of low variation of this transport mode during the last period (see Figure 1).

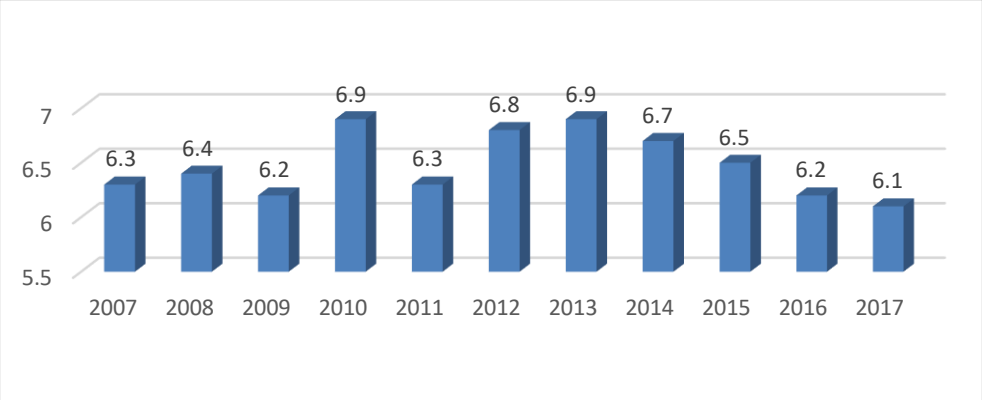

Figure 1. Modal split of freight inland water transport 2007-2017 (%)

On the other hand, the structure of the goods transported on the Danube was changed during the same period for the main inland water transporters (see Table 1), (CCNR, 2019).

Table 1. Tendencies for inland navigation per country and per goods

	Agri.	Food	Chem.	Ores& Sands	Petro.	Metals	Containers	Total
D	↓	↓	↑	↓	→	→	↑	→
HU	→	→	↑	→	↓	↓	→	→

HR	→	↑	↑	↓	↑	→	→	→
RO	↓	↑	↑	↑	↑	→	→	↓
BG	↑	→	↑	↓	↑	→	→	↓

Diversity is an important asset in cooperation in the Danube region.Recognizing the importance of EUSDR is highlighted by the participation of the most developed European economy in this project (at macro level and two Länder).The common interest in socio-economic and cultural development is the key to SUERD's successfully implementing.

EQUAL TREATMENT + PARTICIPANTS' DIVERSITY + IMPORTANCE'S RECOGNITION + COMMON INTEREST = SUERD'S SUCCESS.

3. Economic Analysis of the Danubian Countries

According to the official international statistic data, there are great disparities between the Danubian countries regarding the economic development (International Monetary Fund, 2019).

Across the EU, the inland water transport of goods had a fluctuant evolution (see Table 2).

Table 2. Inland water transportby type of good

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Thousand tonnes	450.9	532.4	539.8	542.6	543.3	557.9	549.0	552.5	558.3	542.7
Annual growth rate	-	1.2	1.4	0.5	0.1	2.7	-1.6	0.6	1.0	-2.8

There is a direct correlation between the economic development (GDP growth rate) and the inland water transport volume (IWTV) for each analysed country. This correlation for Germany is presented in Figure 2.

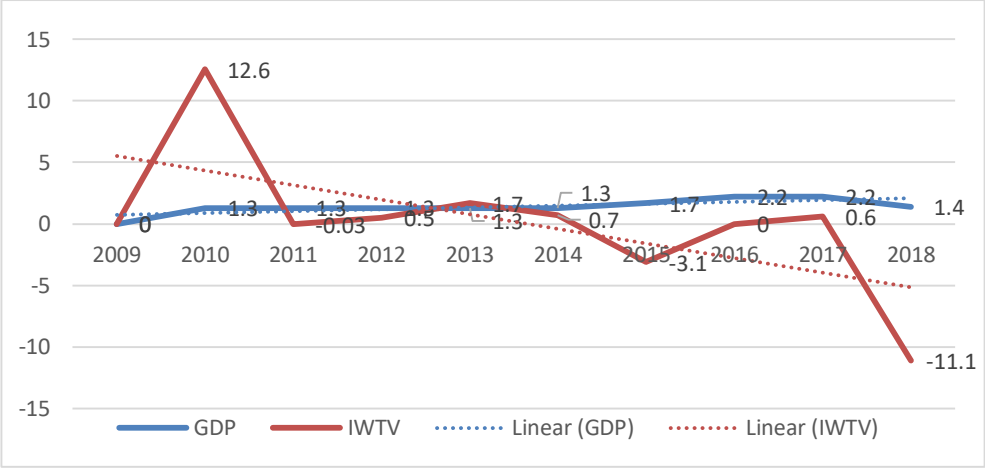

Figure 2. Economic and IWTV trends in Germany (%)

According to this figure, the trend lines for both indicators are opposite. The harmonization of these trends was achieved in 2013, when both trend lines intersected. During 2014-2018, the lag between the economic growth and the IWTV increased. This means that the positive economic evolution in Germany was not followed by an increase in IWTV. The German economy prefers other transport modes than the inland water transport.

Bulgaria has a better situation regarding the trend of the analysed two indicators. The trend lines are almost parallel during the whole analysed period (see Figure 3).

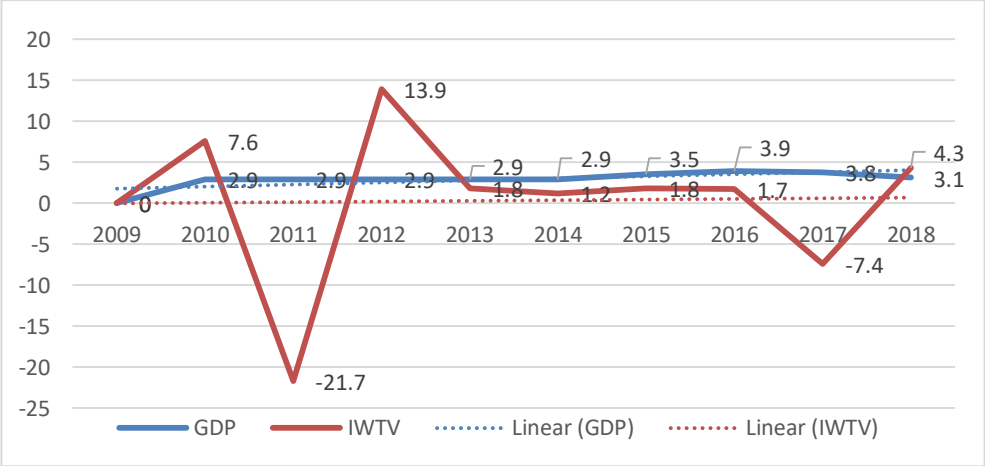

Figure 3. Economic and IWTV trends in Bulgaria (%)

Croatia faces to an almost unrealistic trend of IWTV. This is the result of the economic effort of this countries to eliminate the war's impact, including the difficulty to navigate on Danube (see Figure 4).

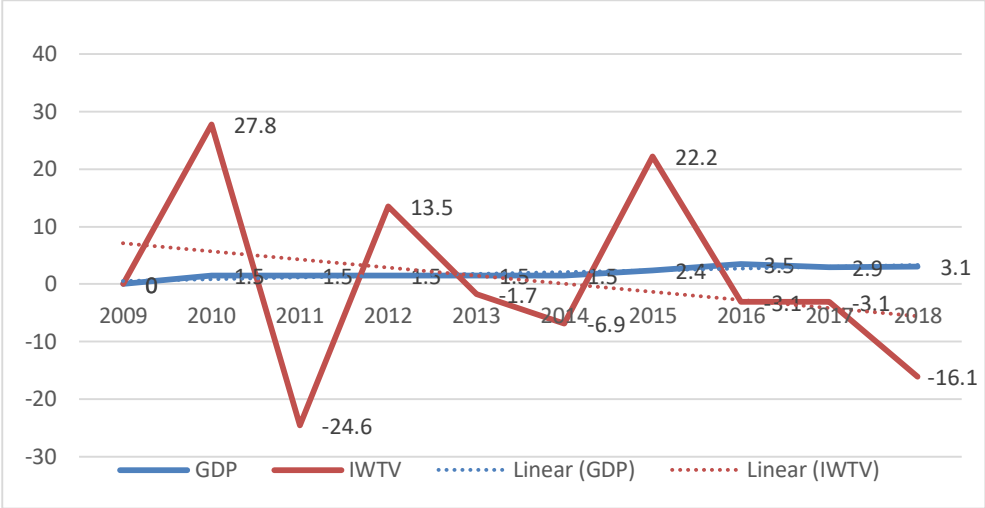

Figure 4. Economic and IWTV trends in Croatia (%)

As a result, the relative constant growth rate is intersected by the IWTV axe five times during the analysed period.

Hungary has not a better situation. It presents the highest disparities regarding the IWTV annual growth rates (see Figure 5).

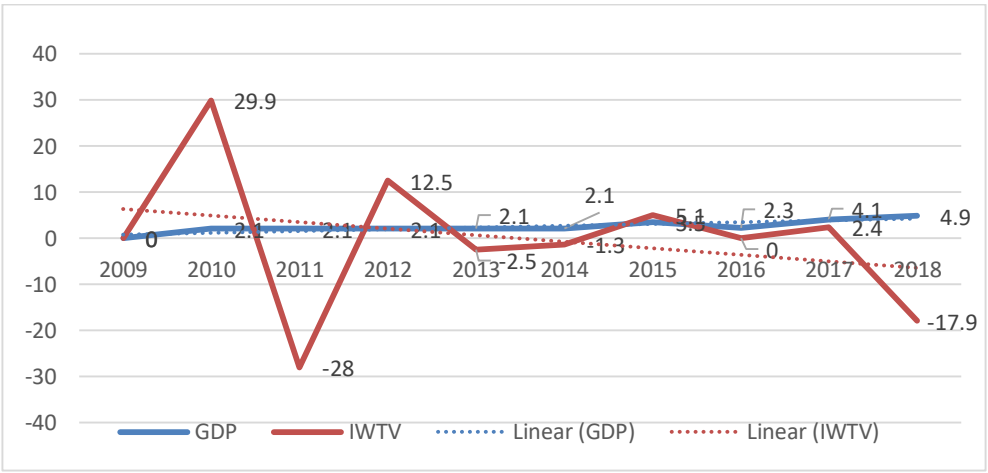

Figure 5. Economic and IWTV trends in Hungary (%)

Austria has the same situation as in Bulgaria. The IWTV trend is continuous negative during the whole analysed period, while the economic growth is modelled by a low positive line (see Figure 6).

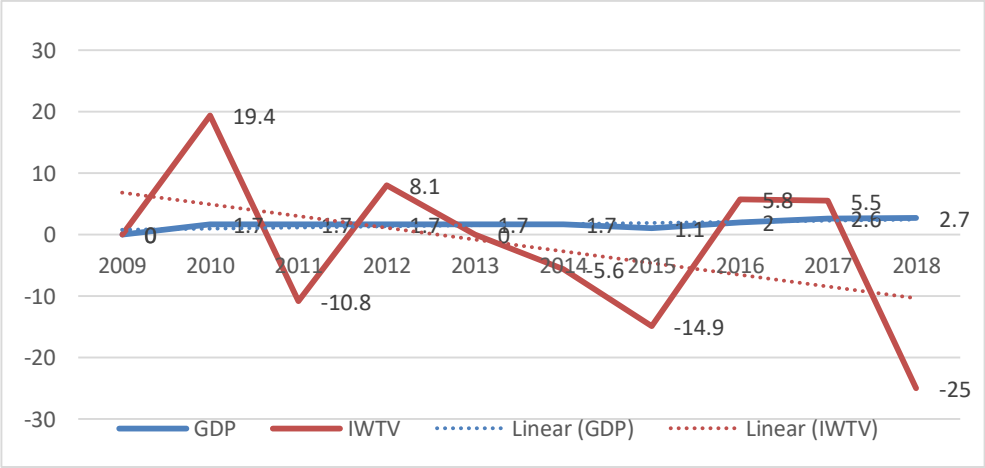

Figure 6. Economic and IWTV trends in Austria (%)

Romania presents the best correlation between the analysed two indicators. The trend lines are almost the same, and the final lag is 1.7% in 2018 (see Figure 7).

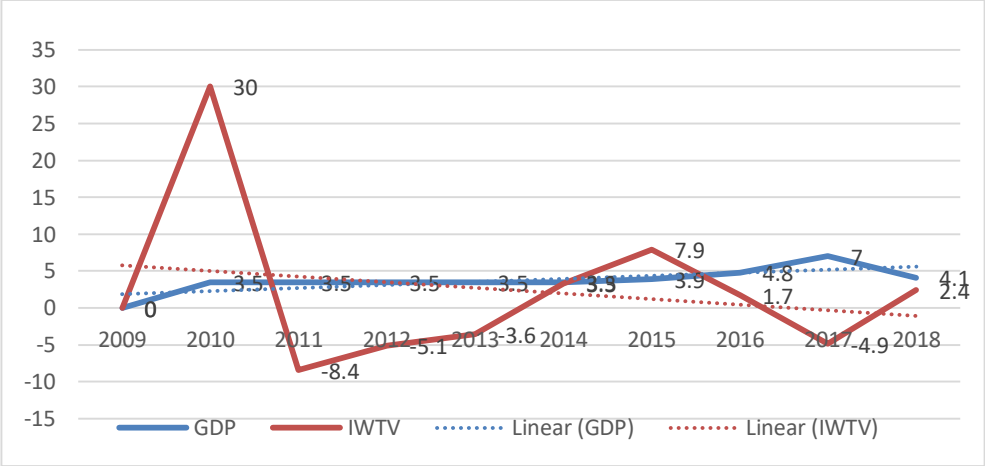

Figure 7. Economic and IWTV trends in Romania (%)

The economic almost equal growth rates in Slovakia are not followed by the same trend of the IWTV (see Figure 8).

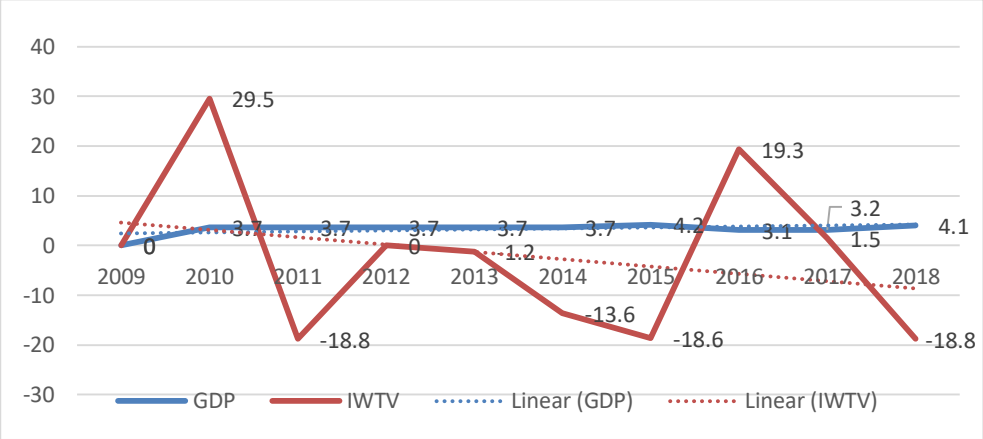

Figure 8. Economic and IWTV trends in Slovakia (%)

At least the macroeconomic development is the essential element in developing inland water transport. As a result, the number of vessels, the load capacity and the investment in this industry vary between Member States.

The number of vessels of the EU Danubian countries is presented in Table 3 (European Commission, 2019).

Table 3. The number of vessels

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BG	21	24	28	29	27	24	31	27	29	34
D	1300	1330	1336	1331	1292	1253	1204	1168	1176	1157
HR	9	10	13	13	12	13	17	19	23	22
HU	85	83	80	77	72	72	71	70	68	70
AT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RO	105	101	97	107	103	120	128	154	157	164
SK	29	28	30	31	20	31	23	23	10	10

According to data from Table 3, Romania is the single Member State which succeeded in increasing significantly the number of vessels for inland water transport.

Great disparities are those connected to inland water transport load capacity (see Table 4).

Table 4. The inland water transport load capacity (thousand tonnes)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BG	30.9	33.7	37.9	38.5	35.8	32.6	44.6	41.0	43.7	51.5
D	NA	1886.0	1926.0	1907.0	1858.0	1814.0	1802.0	1764.0	1784.0	1774.0
HR	9.0	10.0	10.0	10.0	9.0	11.0	18.0	21.0	28.0	26.0
HU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RO	NA	NA	99.0	107.0	110.0	117.0	125.0	140.0	142.0	154.0
SK	21.6	20.3	22.9	24.1	23.4	20.0	11.5	12.8	10.4	9.4

Romania succeeded to obtain the permanent increase in load capacity during the analyzed period (European Commission, 2019b).

The disparities regarding the inland water transport activities are dimensioned by the investment and maintenance expenditure in vessels and infrastructure (see Table 5).

Table 5. Investment and maintenance expenditure in vessels and infrastructure (mill. Euros)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BG	0.1	NA	0.1	NA	NA	NA	0.0	NA	NA	NA
D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HR	33.0	35.0	24.0	32.0	34.0	22.0	NA	NA	NA	NA
HU	NA	NA	682.7	NA	358.0	285.3	394.6	439.2	1379.2	626.8
AT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SK	142.7	NA	5.1	3.6	4.0	4.4	9.6	3.7	0.4	8.2

As candidate country, Serbia faced to great difficulties in developing transport activities on the Danube. As a result, the investment were focused on economic reforms and in achieving the EU economic development standards, in order to adhere to the EU in 2025.

In Ukraine, the inland water transport covers less than 1% of the total freight traffic, compared to 7% in EU. "As a result, the river infrastructure is collapsing, the investment attractiveness of the industry is falling, the country's economy losses huge potential" (Slobodyanyuk, 2017).

Finally, Moldova is not able to have own inland water fleet, even that the minimal access to Danube is very important.

The great economic disparities between Danubian economies represent the main element of influence on the inland water transport's dynamics. The GDP/capita and the government gross debt (GGD) are presented in Figure 9.

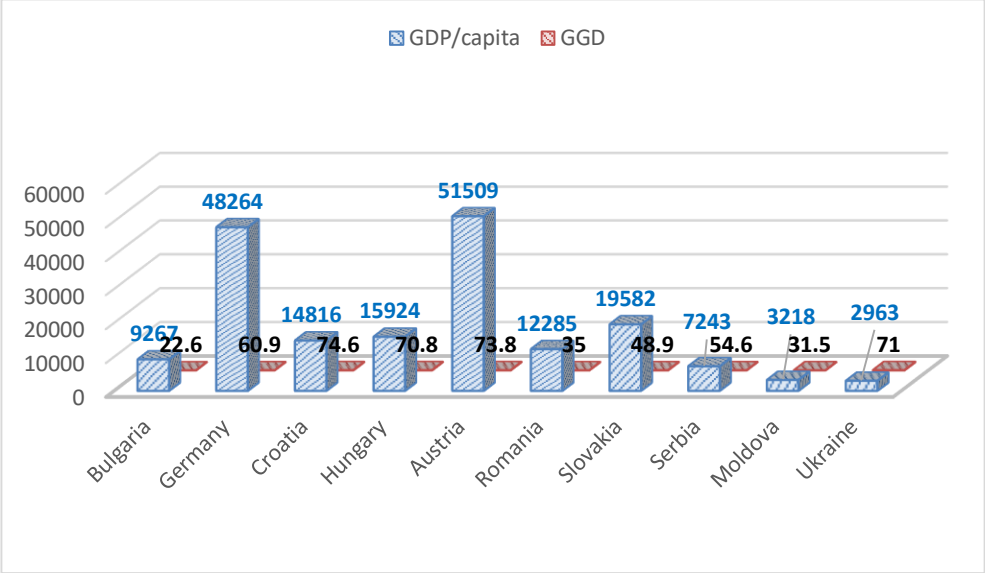

Figure 9. GDP/capita (USD) and GGD (% of GDP) in 2018

A low GDP/capita and high GGD represent the main ingredients in minimal implication in inland water transport activities. According to data presented in the above figure, three clusters can be built. The first covers Austria and Germany, the second Croatia, Hungary, Romania and Slovakia, and the third Bulgaria, Serbia, Moldova and Ukraine.

Using regression under ANOVA conditions, the above three clusters are well defined as in Figure 10.

The quality of the cluster approach is made by a two-step cluster analysis. It uses the Euclidian distances and the variables from Figure 10 as continuous variables (see Figure 11).

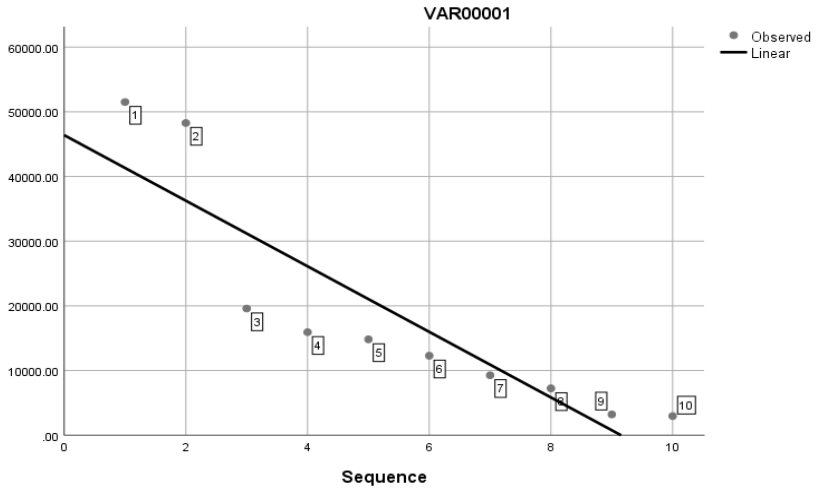

Figure 10. Cluster approach under GDP/capita (USD) and GGD (% of GDP) in 2018

The cluster sizes are good (40%, 40%, 20%) and the cluster quality is good (0.8), as well.

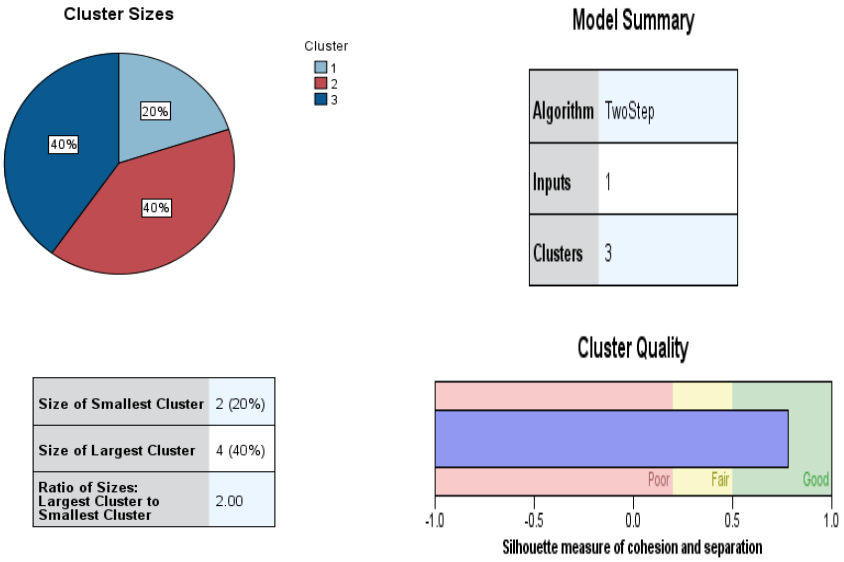

Figure 11. Cluster quality under GDP/capita (USD) and GGD (% of GDP) in 2018

4. Conclusion

In order to solve the challenges related to the development across of Danube region, EUSDR was launched. The main goal of this strategy is "Development of the life quality, by increasing the competitiveness and attractiveness of the Danube localities".

The different economic development levels in the Danubian economies support different approaches on the water inland transport activities and socio-economic development in the region.

The greatest part of the navigable Danube belongs to Romania. As a result, Romania is interested in implementing EUSDR. Unfortunately, the political approach is not followed by a logical implementation of the strategy in Romania.

In order to eliminate the bad-management in EUSDR implementation, the present research proposes three action levels:

- regional level: implies the following measures:

- returning the Danubian urban and rural settlements facing the Danube;

- correlating the SUERD cooperation projects with the objectives of the Territorial Development Strategy in Romania: Polycentric Romania;

- transformingthe NUTS2 regions from Romania into functional regions, with precise attributions and responsibilities;

- transforming the great Danubiancities (Braila, Galati) into regional growth and welfare poles;

- delimitating policy by the regional technical expertise departments at the level of the future NUTS2 Councils;

- increasing the role of Danubian Universities specialists in supporting public-private cooperation and providing technical assistance in the field of regional development under the EUSDR;

- creatinga database of partnership proposals within the EUSDR and with potential collaborators (companies, institutions, NGOs, universities, etc.);

- realizingDanubian Universities clusters on the principles of regional proximity and common interests, facilitating communication between business, social and cultural environments, and regional decision-makers.

- national level:

- EUSDR "returning" to the Danube and focusing projects on areas of socio-economic underdevelopment as described in the Territorial Development Strategy 2035.

- supranational level:

- returning to "Unity in diversity" dictum versus the current reality "Unity vs. disparity".

Nowadays, EUSDR is more a nice idea than a real project. The Danubian countries access this strategy in order to satisfy their regional and national interests, which are often different from a state to another.

5. References

CCNR - Central Commission for the Navigation of the Rhine (2019). *Study on the integration of inland waterway transport in the European transport logistics chain from a regulatory, funding and transport economics perspective*. Strasbourg Cedex, pp. 4, 25.

European Commission (2013). *Towards quality inland waterway transport NAIADES II*, COM/2013/0623 final. Brussels.

European Commission (2016). *Proposal for a Directive of the European Parliament and of the Council on the recognition of professional qualifications in inland navigation and repealing Council Directive 96/50/EC and Council Directive 91/672/EEC*, COM(2016) 82 final. Brussels, 18.02.

European Commission (2016). *Inland waterways: trilogue agreement on uniform safety standards for inland navigation.* In News. Brussels, 18.03.

European Commission (2019). *Self-propelled vessels, dumb and pushed vessels, by load capacity.*Brussels, Retrieved fromhttp://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=iww_eq_loadcap&lang=en.

European Commission (2019b). *Load capacity of self-propelled vessels*.Brussels, Retrieved from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=iww_eq_age_loa&lang=en.

European Court of Auditors (2015). *Inland Waterway Transport in Europe: no significant improvements in modal share and navigability conditions since 2001*. Luxembourg: Publications Office of the European Union, pp. 9-10.

European Parliament and Council (2006). *Technical requirements for inland waterway vessels*, Directive 2006/87/EC, Brussels, 12th of December.

Eurostat (2015). *Employment in inland waterways transport enterprises by number of vessels in enterprises*. Brussels, Retrieved from http://ec.europa.eu/eurostat/iww_ec_employment.

Eurostat (2015b). *Number of inland waterway transport enterprises by number of vessels*, Brussels, Retrieved from http://ec.europa.eu/eurostat/iww_ec_ent_number.

Ionescu, R.V. (2016). Inland Waterways' Importance for the European Economy. Case Study: Romanian Inland Waterways Transport. *Journal of Danubian Studies and Research*, vol. 6, issue 2, pp. 180-192.

International Monetary Fund (2019). *Report for Selected Countries and Subjects*. April, Retrieved from https://www.imf.org/external/pubs/ft/weo/2019/01/weodata/weoselagr.aspx.

Slobodyanyuk, T. (2017). Ukraine: river transport could triple by 2020 if proper regulation in place. *EU4Business*, 15th of September.

United Nations Economic, Commission for Europe (2011). *White Paper on Efficient and Sustainable Inland Water Transport in Europe.* New York.