

## Peculiarities of the Danube Business Environment in the Context of the Sustainable Development

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**Abstract:** The aim of our study intends to be a link between the “green economy” and the “blue economy”, and the objective of it is to analyze the Danube economy in the context of the environment preserving. As the prior works deserve generous space to research regarding the sustainable development concept and experiences and others deal with the Danube problems, our approach tries to build on a link between these two fields of research, and understanding all these problems linked to the Romanian area and trying to find out what are the problems in this sense for our country. The method of research used for our survey is a qualitative one, survey and observation being our tools for fulfillment this approach. The key results and conclusions from this empirical study is that any reader of it could find out how the Danube business environment tries to circumscribe it into the sustainable development percepts. This study could be useful to researchers, administrations, ports authorities, and people interested in this field. The key contribution of this paper might be the interdisciplinary approach of this matter and thus the hope of its originality.

**Keywords:** Danube economy; sustainable development; environmental challenges; European Strategy; business environmental

**JEL Classification:** O19; Q56; R11

*Motto: “Between the rivers that have reputation and are navigable when coming from the sea is also Hister.” Herodotus*

### 1. Introduction

When thinking of Danube river it comes into our mind the wonderful Johann Strauss’ music of “The Blue Danube” or “The Danube Waves” of Iosif Ivanovici, these masterpieces creating to the riparian citizens the feeling that they together belong to the same river world. This proves that the most important connection that performed the Danube is that between the citizens of Europe, living in this region. That is why our duty is to preserve this gift of nature with the means of technology in the 21<sup>st</sup> century.

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Danube has a special significance for Romania; Danube, Hister or Danubius - the names of the ancient river has always been considered an economic opportunity for residents and commercial Danubian-Pontic space, but also an important link between different cultures and civilizations. Today must not only maintain this reputation and we manage to use the huge potential of the Danube using the latest technologies by implementing a "green strategies, sustainable, based on the latest elements of human knowledge."

In this line, our approach tries to point out the implications for Romania, together with its priorities and also with the problems in the area of the Danube business medium. As for the research hypothesis it is about what are the peculiarities of the this mentioned area and which are the implications of this on the sustainable development on it.

So, the structure of this study is as follows: at the beginning there is a framework of the Danube economy, with the different opinion about this area expressed in some of the prior works regarding the field. As our intention was to see how could be concept a development of the Danube economy in those ten countries afferent to the river - but with different level of economy – and taking into account the sustainable development concepts, our approach goes on with these percepts. The next step refers to the ways of implementing these concepts on the Danube – Black Sea zone, followed by the analysis of this idea applied in the case of Romania.

The study continues with a glimpse to the European Union Strategy regarding Danube region, thus could be a great chance for Romania. Then follows an analysis of the Romania's problems in this matter, which would be Romania's chances. In this line this paper analyzes the Romanian priorities, taking into account the environmental policy.

This work ends with the necessary conclusions on this approach, trying to answer to the scope from the beginning of this study.

## **2. Contents**

### **2.1 Danube Economy – a Framework**

The Danube is of great economic importance to the 10 countries that border it - Ukraine, Moldova, Romania, Serbia, Croatia, Hungary, Bulgaria, Slovakia, Austria, and Germany - all of which variously use the river for freight transport, the generation of hydroelectricity, industrial and residential water supplies, irrigation, and fishing. As for the development of the Danube economy, it is a heterogenous level, depending on each country's economy. "Lower welfare of a certain region might cause higher social costs and negative external effects" precised Lukas Schrott, Martin Gächter and Engelbert Theurl in a recent study (2015, pp. 1–23). Moreover, within-country divergence might lead to the

depopulation of economically disadvantaged areas, increasing the economic vulnerability of small and medium-sized cities and economic disengagement between metropolitan and surrounding areas (Dubois et al., 2007, pp. 253-269). On the other hand, Porter & Purser (2008, pp. 253-269) argue that an understanding of human development on international, national and regional levels is essential for a proper understanding of the capabilities of the population and thus, for appropriate strategies of political intervention. Stiglitz et al. (2004, pp. 253-269) suggest that well-being should be measured in a multidimensional way. They identify material living standards, health, education, personal activities including work, political voice and governance, social connections and relationships, environment and insecurity in an economic as well as a physical nature as the key elements of such an index.

The movement of freight is the most important economic use of the Danube. Among the major ports are such cities as Izmail - Ukraine, Galați and Brăila – Romania, Ruse – Bulgaria, Belgrade – Serbia, Budapest – Hungary, Bratislava – Slovakia, Vienna- Austria and Regensburg - Germany. Since World War II, navigation has been improved by dredging and by the construction of a series of canals, and river traffic has increased considerably. The most important canals - all elements in a continent wide scheme of connecting waterways - include the Danube–Black Sea Canal, which runs from Cernovadă, Romania to the Black Sea and provides a more direct and easily navigable link and the Main–Danube Canal completed in 1992 to link the Danube to the Rhine and thus to the North Sea.

The Danube has been tapped for power, mainly in its upper course. The process, however, has spread downstream. One of the largest hydroelectric projects - the Derdap (Djerdap) High Dam and the Iron Gate power station - was built jointly by Yugoslavia and Romania. Not only does the project produce hydroelectricity, but it also makes navigable what was once one of the most difficult stretches on the river.

Industrial use of Danube waters is made at Vienna, Budapest, Belgrade, and Ruse. The main irrigated areas are along the river in Slovakia, Hungary, Serbia, and Bulgaria. The river has nearly become unfit for irrigation as well as for drinking water, however, because of the tremendous increase in pollutants; pollution has also diminished the once-rich fishing grounds, although some of the fish have moved to side lakes and swamps.

## **2.2. Sustainable Development in the Danube-Black Sea Region**

Development is a multidimensional process involving major changes in social structures, popular attitudes and in national institutions, aiming at accelerating economic growth, reducing inequality and poverty eradication (Jula et al, 1999)

Experts place the concept of sustainable development among the five great principles of scientific ethics, along with the principle of equity, the precautionary principle, ethics of scientific and organizing debates and decision-making. Adoption of the principles of sustainable development requires a shift in perspective by one Eco-Centre await Techno-centre in all aspects of landscaping (Pops & Vrabete, 1999, pp. 258-265). Sustainable development restructures hierarchy of functional parameters in terms of the approach to development issues. "Changing the accent" that proposes the concept of sustainable development environment reveals that value respectively as a result of three values: aesthetics, ecology and economy (qualitative assessment). Items such as restoring the natural environment and use natural resources judiciously receive some priority in the overall political conception to this area.

Global issues relating to balance environmental factors have a major importance in the study of the concept of sustainable socio-economic development: today, for tomorrow, all resource issues (air, soil, water, pollution and environmental degradation) are interdependent analyzed as economic and social development and technological development. Riding, Herbert, Ricketts, Dodd, Ostle, Semple (2015, pp. 52-67), Balisacan, Chakravorty & Ravago (2014) present a collection of 25 articles that lay the foundations of sustainable development in a way that facilitates effective policy design. The editors mix broad thematic papers with focused micro-papers, balancing theories with policy designs.

And where the Danube-Black Sea stands out a "genuine global problem" that exist in these interconnections of environmental problems, balance environmental and economic factors. However, it is necessary and involves a multinational political control for timely and effective resolution of these complex issues on the Danube.

Thus, "sustainable development is an alternative in terms of cooperation at the global, regional and local level, and ensuring sustainable development is the responsibility of each individual" (Sobaru; Nastase & Avadanei, 1998, p. 261). Even the current economic reform is related by interrelated actions to promote sustainable social and economic development: business, interest groups, scientific community, education/education, media and non-government organizations. David Turnock (2003) examines the geography of the transition economies that were not formerly part of the Soviet Union, making references also to Romania. There is a thematic treatment beginning with the landscape and historical background, which moves on to the social and economic geography (industry, agriculture and infrastructure) and to issues concerning regional development and environmental protection.

### **2.3 “The Blue Highway” of Romania**

For Romania, the Danube strengthen cooperation remains a priority while the region's sustainable development potential is considerable and we want to contribute to the transformation of the Danube into a backbone of the European space as part of the Rhine - Danube. The problems we face are numerous and multiple dimensions of regional cooperation are transport, energy, tourism, agriculture and the environment - to name a few. Economic and social development of the Danube region must be sustainable, taking into account the main Community legislation relating to environmental protection. Romania supports this approach given that handles the bulk of the reserve Danube Delta, the youngest land in the Danube basin and a unique ecosystem in Europe, which in 1991 the UNESCO list of sites defined as cultural heritage of humanity. Climate change, the need to protect towns and national parks in the Danube region are extremely important issues to be considered in the future.

An important economic dimension remains the Danube shipping. Defined as the Pan-European Corridor Transportation VII, the Danube River is part of the priority axis transport links the North Sea, via the port of Rotterdam and the Black Sea port of Constanta. We must use this bus navigable for better economic development of areas adjacent and reducing disparities between different regions. The enlargement of the European Union has almost turned into a river Danube Union interior and allows us to redefine regional cooperation action in a new framework and a consistent, coordinates policies and instruments. Efforts to meet the needs of the riparian states of the region are now joined by the Institutions of the European Union, the European Commission first, by touch, by cohesion and regional development, the Community objectives in these areas. It is a new chance for the region, which must now be harnessed chance.

### **2.4. European Union’s Danube Strategy - a Great Chance for Romania**

Danube Strategy is a very ambitious project young and has proposed development and economic integration and exchange of experience in the cultural, educational and administrative of the countries that are in Central and Southeastern Europe, along the Danube. From the Danube macro-region there are taking part 14 states, six of which are not in the EU (but someday will become member countries), and the countries through which the Danube flows but do not tributaries of them. From west to east are federal states Baden -Württemberg (which is the source of the Danube, not far from the castles of Hohenzollern and Sigmaringen), Bavaria, Austria, Slovenia, Czech Republic, Slovakia and Hungary, Croatia, Bosnia, Serbia and Montenegro, Romania, Bulgaria, Moldova and western regions of Ukraine. Mostly macro-region Danube is identical to map countries and regions which composed the Austro-Hungarian Empire. In the Danube region live 115 million

people, a fifth of the EU population. In this macro there are enormous gaps in terms of economic development and infrastructure, living conditions, structure and economic productivity, environmental protection and quality of education. In order to overcome these gaps, Danube Strategy will pursue several objectives, such as developing road infrastructure, rail and energy, cooperation in education, research, innovation (Eastern countries lacking more and more highly skilled graduates), development of socio-economic (aging population in rural areas), environmental protection (constructor water treatment plants, 70% of sewage waters are discharged without treatment into the Danube).

Coordination is done on the existing structures of the European Commission, European Parliament, and funding from existing budgets cohesion and structural funds, which were in very little access.

The new strategy will exploit the new technologies so that the Danube should become a modern river will have intelligent systems based on the latest scientific knowledge and to be able to effectively protect the environment and existing ecosystems.

The added value of the Strategy will consist in strengthening interregional and trans-border and in capitalizing the numerous disparate initiatives and projects that have been initiated or are under implementation in the Danube region. The external dimension of the Strategy will provide the opportunity for dialogue with third countries, candidate or potential candidate for membership of the EU.

The potential of the Danube region in the context of the Lisbon Strategy highlighted that in recent years cooperation has been strengthened in areas adjacent to the Danube and education, but less in the labor market and social issues in general, which remain the responsibility of Member or the local/ regional authorities in these areas.

Territorial cohesion can be defined as an expression of the balanced, coherent and harmonious territory in terms of economic, social, endowments, accessibility and environmental quality of the existence of living and working conditions fair for all citizens, regardless of where it is, by highlighting the specificity of each type of territory, contributing to the creation of Europe prosperous, sustainable economically, socially and environmentally.

The means by which to achieve territorial cohesion are both those who directly addresses to the territory (territorial and regional valuing diversity, boosting performance regions, optimal use of the potential they have, to enhancing competitiveness) and those aimed at policy coherence sector territorial impact. Achieving real territorial cohesion requires establishing a horizontal coordination between the various sector policies at EU and national level, as well as vertical coordination between different institutions at the European level to the local level.

EU Strategy for the Danube Region is an opportunity to experience these valences of territorial cohesion in the phase of development and in the implementation of the Strategy.

The Danube Region has an unexploited growth potential. Declared part of the pan-European transport Corridor VII of EU Danube is a significant waterway that connects through the network Rhine-Main-Danube between Constanța port, the industrial centers of Western Europe and the port of Rotterdam. Danube Basin expanded to include countries and regions could benefit in the future from direct access to the Black Sea and the importance of connecting the EU with broader region of Caucasus and Central Asia has already been significantly consent of the Black Sea Synergy.

To achieve these objectives connectivity and economic development, but needed a new vision, an approach based on new technologies that ensure a "green" strategy, efficient and sustainable. We need investment and rehabilitation of transport infrastructure and efficient solutions to environmental challenges. Meanwhile, agricultural land in the Danube basin is an asset that could be better exploited and harnessed through research, crop diversification and implementation of innovative technologies.

The new strategy will be to exploit the new technologies so that the Danube should become a modern river will have intelligent systems based on the latest scientific knowledge and to be able to effectively protect the environment and existing ecosystems.

Increasing the attractiveness of the region by improving accessibility by continuing expansion and modernization of port infrastructure, airport, railway and road system by creating a multimodal transport system; will be the creation of an innovative system capable of providing accessibility fast and efficient links with international markets.

Creating new opportunities for sustainable growth and improved quality of life by developing natural/ environmental and promoting environmental policy; it will consider the creation of the management and control of environmental factors (including the removal of environmental damage in cases of natural disasters, the overall improvement of the environment by protecting bio - diversity, preserving and extending forested areas, parks and zones Green urban areas). All these objectives are consistent with national and European programmatic documents, aimed at ensuring balanced development of the region by harnessing local resources and support local economies, preserving environmental values and ensuring conditions for equal opportunities for the entire population.

## **2.5. Romania's Problems - Romania's Chances**

Generally speaking, some of the problems and shortcomings facing Romania are as follows:

- A qualified very strongly as a scandal that the absorption rate of European funds in Romania is very bad;
- Lack of interest of local communities and central to carry out projects with European financing;
- Lack of suitable and dedicated people in the central county and local governments with very good economic results and it has to point to one reason: bad salary of public employees and their changing political reasons. Yes a lot of thought if not a leftist politician, but a liberal politician, right, reaffirm this fact. Because of these shortcomings until today still could not make a second bridge over the Danube at Vidin - Calafat from, without which the transport of goods and economic development are unlikely;
- Centralization and politicization (and) decision-making processes on projects with European financing. Once again it demonstrates that centralization of Romania is one of the most important causes of underdevelopment Romania.

Of all the countries of the Danube macro Romania has by far the worst infrastructure, qualitative and quantitative level, Danube Strategy provides a great chance for our country to reduce from these enormous handicap. For this to happen, of course, it requires many changes, prioritizing, finally, the construction in the infrastructure, decentralization and administration of a professionalization her. People with great ideas for projects there are, as well as money for their realization.

Romania supports the European Union Strategy for the Danube Region is able to ensure greater efficiency in the allocation and management of EU funds and integrate current developments in regional development policy. The strategy will have the ability to help improve the overall efficiency of the current regional initiatives and facilitate the dialogue at Community level, regional and local level. Through an external dimension, the future strategy will strengthen the European Union's dialogue with third countries in the Danube Basin and will facilitate the expansion of European values and standards in the neighborhood. We must not neglect the potential of this strategy to facilitate connecting the Union wider Black Sea region and beyond to Central Asia. At the same time, we can better meet the expectations of all the Union's external border to improve the ability to stop external threats and to strengthen European Union cooperation with neighboring states, the mutual benefit.



## **2.6. Romania's Priorities**

### *2.6.1 Transport*

Providing a modern transportation system on the Danube is one of Romania's main priorities and a basis for economic development of coastal areas. It is necessary to increase the attractiveness of the region by improving accessibility by continuing expansion and modernization of port infrastructure, airports, roads and rail system by creating a multi - modal transport.

The Danube must become a true modern river, with an infrastructure based on new technologies and integrated transport systems, management, monitoring and information. Gradual achievement of projects on Corridor 7 European navigations which helps ensure optimal safety conditions throughout the Danube is a prerequisite for project success. Added to this is modernization of river ports. Ports have altered functional structure for conversion into logistics centers and their integration into the transport system inter - modal. In addition all related infrastructure needs to be modernized the ports.

Upgrading and providing access in rural areas to improve living conditions in rural areas and to support economic activities and tourism, modernization of county and local roads is adjacent to other aspects important.

We also need increased mobility in urban areas, the modernization of the urban public transport and multi- modal transport development in order to increase the comfort and safety of passengers and reduce pollution.

### *2.6.2. Environmental Protection*

All investments to be made in the Danube basin type systems must be intelligent based on the latest scientific and technological developments and the environmental protection is included in the phase of system design ("green knowledge intelligent systems").

Creating new opportunities for sustainable growth and improved quality of life can be achieved by developing natural/environmental and promotion of EU environmental policy by creating a system of management and control of environmental factors (including the removal of environmental damage in cases of natural disasters, the overall improvement of the environment by protecting bio - diversity, preserving and extending forested areas, parks and green spaces in urban areas).

Other priorities are related to: development and expansion of utility infrastructure (water supply, sewage system, gas supply); providing municipal wastewater treatment for all agglomerations over 2000 people; reducing pollution by nitrates from agricultural sources for all vulnerable zones designated in Romania; eliminate

discharges of priority hazardous substances into waters closure of non-compliant waste landfills and landfills for conducting all settlements; reducing coastal erosion and to the south of the Romanian seaside.

Close to the Danube are several protected parks included in the Nature 2000 program, including the Danube Delta - a unique ecosystem and of inestimable value. They must further protected by continuous monitoring.

### **3. Conclusions**

As the intention of this study was to understand how to pass from the “blue economy” of the Danube river, to the “green economy” of it, hope that this endeavour was at least partly fulfilled.

Even if the discussions are about a region passing through ten countries, that means the Danube economy is a heterogenous one, nevertheless it is necessary a stable and competitive macro-economic system, institutional strengthening and human resource development, efficient use of natural resources and new technologies are needed to support sustainable growth conditions in the Danube region.

So, regarding Romania – as it is already known – having the worst infrastructure of all these riparian countries it will be necessary to make many changes in the priorities, for the construction in infrastructure, trying to decentralize an professionalize the administrative system and changing even the legislation in this field, in order to easier adapt it to that more performed from other European countries. This great chance for Romania – that is the European Strategy for the Danube should be better fructify this big opportunity for our country to develop the “blue highway”, sooner that the traditional one on road and thus making the link of the western countries with the Black Sea.

Finally, it is clear need to develop a plan for economic and financial measures to support the sector, which aim to facilitate fundamental modernization of the river fleet under Romanian flag.

An important result of applying this development strategy will be to ensure a balanced polycentric development of the region and the elimination of intra - regional disparities. But the most important connection that performed the Danube is Europe of the citizens living in this region.

This approach is only an invitation to further studies on this topic, and the authors would be grateful to those making suggestions and constructive criticizes.

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