Turcanu (Marcu), Andra Luciana; Gasparotti, Carmen Marilena

Article

Administrative barriers : influence on port management operations

EuroEconomica

Provided in Cooperation with:
Danubius University of Galati

Reference: Turcanu (Marcu), Andra Luciana/Gasparotti, Carmen Marilena (2020). Administrative barriers : influence on port management operations. In: EuroEconomica 39 (2), S. 227 - 233. https://dj.univ-danubius.ro/index.php/EE/article/download/515/583/.

This Version is available at:
http://hdl.handle.net/11159/6253

EE
E u r o E c o n o m i c a
Special Issue 2(39)/2020 *ISSN: 1582-8859*

Administrative Barriers - Influence on Port Management Operations

Andra Luciana Turcanu (Marcu)[1], Carmen Marilena Gasparotti[2]

Abstract: This paper refers to the impact of the port management operations on the goods transshipped on the inland waterways. I proposed to analyze the administrative barriers and their impact on the level of goods transhiped. During the time more and more port operators state that the import/export/transit process it is hampered by a number of factors. External good practices, that might be beneficial for inland waterway in the Danube Region have been identified and described. The identified good practices can serve as examples to be used for the optimization of processes at the Danube inland waterway. The factors that influence the management of import- export operations in inland waterways and will be analyzed in this paper are: border Police, tax and customs; navigation/traffic control authorities; port authorities/administrations; waterway & canal administration; other relevant authorities imposing barriers.

Keywords: port management, goods trassshipped, inland waterways, administrative barriers, Danube region

JEL Classification: H12

1. Introduction

The Danube is an important connection between Western Europe and Eastern Europe, functioning like a accelerator for economic progress in a region stretching 10 European countries and cultures. The river is - as part of the central TEN-T network "Rhine-Danube" - considered one of the most important transport routes in Europe.

The abundance of research in recent years suggests that inland waterway transport on the Danube, its prospects for development and future challenges, have played a significant role on the European academic agenda. Issues such as climate change, hydrological and shipping conditions, risk management or the sustainability of freight transport, especially in south-eastern Europe, are the most discussed topics.

For example, Juha Schweighofer (2014) provides an overview of the impact of extreme weather conditions on inland waterway transport, with a focus on the Rhine-Main-Danube corridor. The paper concludes that there is no clear evidence that extreme weather conditions could seriously reduce the overall performance of European inland waterway transport by 2050. Similarly, Beuthe et al. (2014) published an article addressing the potential effects of low water levels on navigation on the Rhine and Danube in the context of climate change and weather variability. Analyzing the potential impact of

[1] PhD Student, University "Dunarea de Jos" of Galati, Faculty of Naval Architecture, Romania, Address: Galati, Domneasca Street, No. 47, 800008, Romania, Corresponding author e-mail: andralmarcu@gmail.com.
[2] Professor, PhD, University "Dunarea de Jos" of Galati, Faculty of Naval Architecture, Romania, Address: Galati, Domneasca Street, No. 47, 800008, Romania, E-mail: Carmen.Gasparotti@ugal.ro.

changes on water depth conditions, the authors conclude that the impact of climate change should, at least by 2050, be limited. In the same context, Szépszó et al (2014) published an article, which addresses the impact of climate change on inland waterway transport networks on the Rhine and the Upper Danube. Because the effects of climate change are measured using climate model simulations, the authors argue that more uncertainty is still a challenge in quantifying the concrete effects of climate change on inland waterway transport.

Proper maintenance of the river and modernization of port infrastructure, according to Nedea (2011) and Boșneagu / Coca (2015), have a decisive role in improving the overall navigability of the Romanian Danube sector. The authors suggest that by making targeted investments, IWT on the Danube really has the potential to become an attractive alternative to road transport and, as Bocănială (2015) argues, the ability to improve the economic, social and cultural development of the entire Danube region. Similarly, Šoškić et al (2014) reflect on the development of IWT in Serbia. The lack of modern port infrastructure is, as in the case of Romania, one of the main challenges in transforming IWT into an attractive alternative for other more polluting modes of transport.

2. Research

2.1. Method Applied (Ishikawa and Pareto Diagram)

A diagram of fish bones is also known as the "cause and effect diagram" or Ishikawa diagram (named after its inventor, the Japanese quality control expert Kaoru Ishikawa). Teams use a diagram of the Fishbone structure to visualize all possible causes of a problem, up to zero efficiency with respect to the root cause.

A diagram of causes and effects examines why it has happened or could happen by organizing potential causes into smaller categories. It can also be useful to show the relationships between contributing factors. One of the seven basic tools of quality is often referred to as a fish bone diagram or the Ishikawa diagram.

This graphical representation allows us to focus our search on identifying the root cause (root) and helps to understand the problem.

This tool has three important characteristics: it is a graphical representation of the factors that may contribute to the occurrence of the phenomenon or effect being examined, the relationships between possible causal factors are clearly indicated. A causal factor can appear in several parts of the diagram, and the relationships are generally qualitative and hypothetical.

A cause-and-effect diagram is usually a preparatory step in developing the data needed to establish causality empirically.

The stages of development are the following: the effect (problem) is defined, and later the groups of possible causes are defined.

Literature says that the most cause and effect diagrams examine a similar set of possible causes for any issue analyzed.

For example, in the manufacturing industry, these are referred to as the 6Ms: Methods, Machines, Materials, Measurements, Mother Nature/Environment, Manpower/People.

Occasionally, a manufacturing analysis will also include two other categories: Management and Maintenance.

In the service industry, these are described as the 4S: Surroundings, Suppliers, Systems, Skill.

Occasionally, a fifth category will be included called "Safety".

This diagram can be also used in the marketing industry and will often consist of 7Ps: Product, People, Process/Procedure, Promotion, Price, Physical evidence/Packaging, Place/Plant.

In our case the main effect is the quantity of time wasted in ports. This effect is caused by the administrative issues that will be categorized like this: people, environment, methods, equipment.

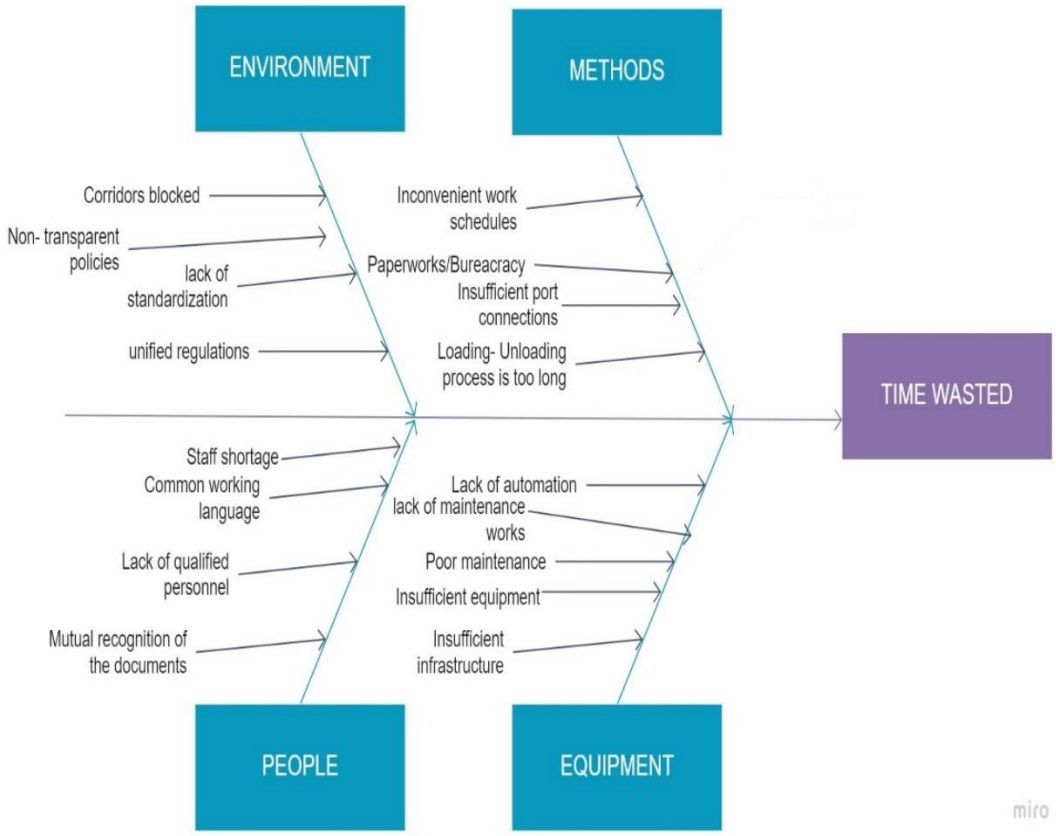

Figure 1. Fishbone diagram

The Pareto principle, or 80/20 rule, states that for many dysfunctions 80% of the result comes from 20% of the effort. The principle was named after the famous economist Vilfredo Pareto, who in 1895.

The Pareto principle can be applied in a wide range of areas such as production, management and human resources. For example, the efforts of 20% of a corporation's staff could lead to 80% of the

company's profits. The Pareto principle can be applied especially to those companies that rely on customer service. It has been adopted by a variety of customer relationship management (CRM) software programs. The first step in Pareto analysis is to order the data in the order of the frequencies with which the causes occur. Analyzing the data and the list of causes created in the cause-effect diagram, the team establishes that more data on the frequency of possible causes are needed. In order to identify these causes, we have drawn up a ranking of the causes according to the identified percentages.

Table 1. Causes ranked

Cause	Cause name	%	cumulative %
C1	Corridors blocked	13,25	13,25
C2	Non- transparent policies	11,11	24,36
C3	Paperworks/Bureaucracy	10,4	34,76
C4	Insuficient port connections	10	44,76
C5	Lack of standardization	9	53,76
C6	Mutual recognition of the documents	7,9	61,66
C7	Inconvenient work scheduels	7,3	68,96
C8	Loading- unloading process is too long	7	75,96
C9	Staff shortage	5,6	81,56
C10	Unified regulations	4,2	85,76
C11	Lack of automation	3,4	89,16
C12	Insufficient infrastructure	3	92,16
C13	Uncommun working language	2,8	94,96
C14	Insufficient equipment	2,6	97,56
C15	Lack of maintenance work	2	99,56
C16	Lack of qualified personnel	0,44	100

After ranking the causes, the Pareto diagram can be drawn up.

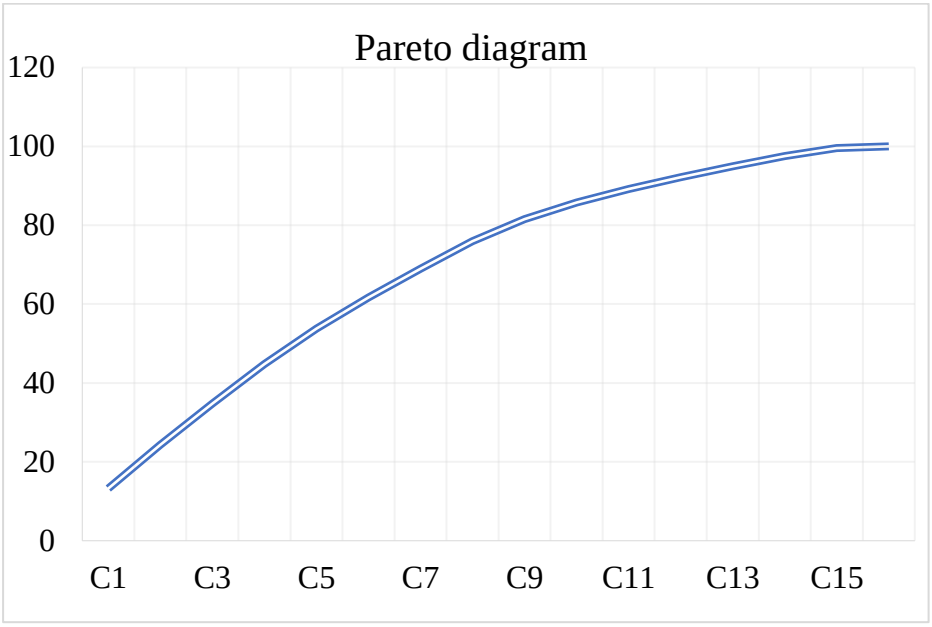

Figure 2. Pareto Diagram

After analyzing the diagram, it can be seen that the first 8 causes are 80% responsible for the waiting time very much. The rest of the cases are only 20% responsible.

Conclusions

Simplifying and harmonizing administrative processes and procedures along the Danube is an important step forward in making IWT a competitive and reliable mode of transport. It would better integrate IWT into intermodal transport and logistics chains, increase its ability to adapt to the current needs of the emerging industries market and increase overall economic profitability. Last but not least, the effective harmonization of bureaucratic processes and requirements is a necessary condition for a successful process of European integration - for both the Member States and the candidate countries.

Administrative reforms that stimulate the internal efficiency of the bureaucracy are by definition quite a long process. Adapting administrations to the concrete needs and requirements of the IWT sector must go beyond periodic administrative changes. An in-depth reform process is mainly based on the political will of the responsible national authorities and legislators. It is definitely a challenge. Achieving a process of harmonization of administrative procedures at transnational level is even more difficult, as the specific national preconditions of each country involved must be considered. In addition, it should be noted that not all countries in the Danube region are Member States of the European Union - another issue that may present some specific challenges to the process of global harmonization at transnational level.

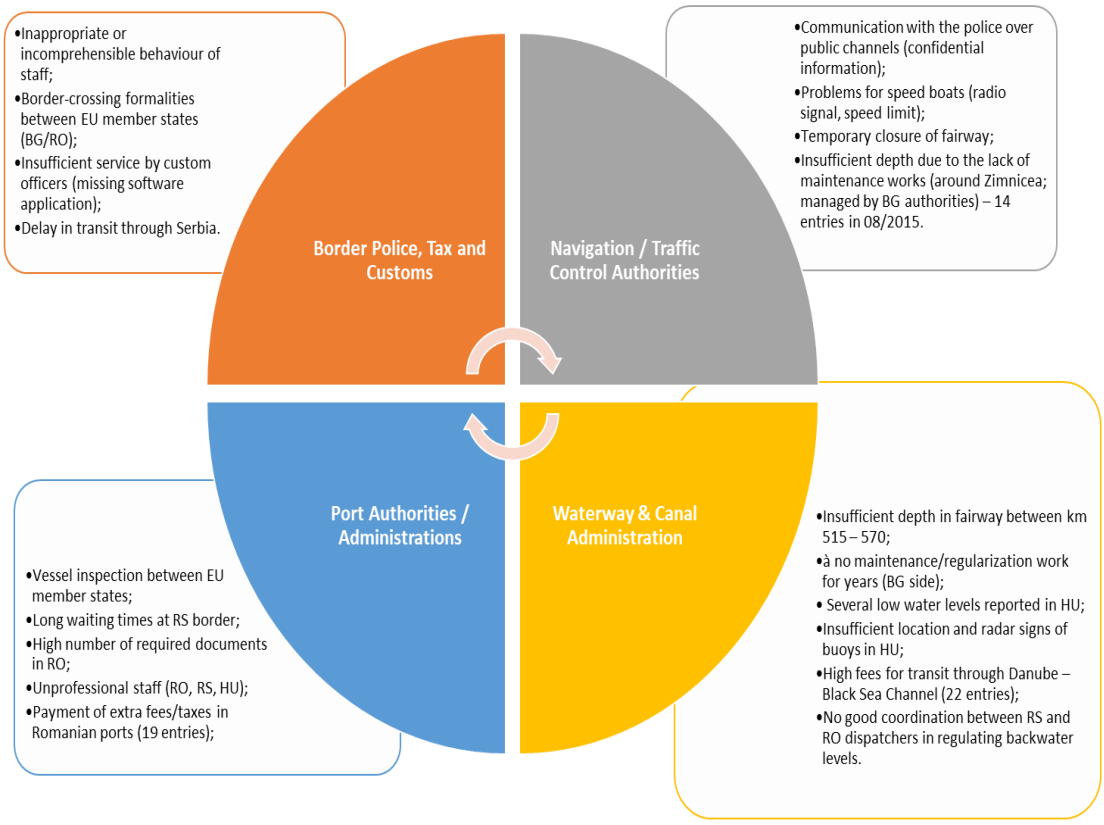

Figure 3. Overview of main barriers per thematic area

As can be concluded so far, inland waterway transport is undoubtedly facing many challenges. In this sense, Simon (2015) tries to offer some concrete solutions to overcome these difficulties. According to the author, transport policy should focus on regional rather than national particularities, while ensuring a fair balance between different interest groups and stakeholders.

The main objectives of the Europe 2020 Strategy are to build missing links and remove bottlenecks in European transport infrastructure, as well as to ensure the future sustainability of transport networks. Inland waterway transport plays a prominent role in achieving the goal of shifting transport to less energy-intensive, cleaner and safer modes of transport in the EU. In order to exploit the potential of inland navigation, make it more attractive, given that navigation on the Danube and its tributaries is international, existing administrative barriers need to be identified, assessed and removed. Despite its potential, inland waterways suffer from various traffic jams and restrictions.

References

Beuthe, B; Jourquin, B; Urbain, N; Lingeman, I; Ubbels, B (2014). Climate Change Impacts on Transports on the Rhine and Danube: a Multimodal Approach. *Transportation Research Part D 27*, 6-11.

Bocănială, Tache (2014). The Impact of Increasing the European Union's Role in the Development of the Transport on the Danube in Romania. *Journal of Danubian Studies and Research,* Vol 4, No 1 (2014)13-20

Boșneagu, Romeo; Coca, Carmen-Elena (2015). Importance of the Danube in the Development of the European Inland Transport. Inland and Port Infrastructure Development in Romania. *Journal of Danubian Studies and Research*, Vol. 5, pp. 207-216.

Nedea, Petronela-Sonia (2011). The Transboundary Impact Generated by Works of Improving the Navigation Conditions on the Romanian-Bulgarian Common Sector of the Danube. *Anale. Seria Științe Economice/Annals. Economic Sciences Series,* 17: 343-348.

Schweighofer, Juha (2014). The Impact of Extreme Weather and Climate Change on Inland Waterway Transport. *Nat Hazards,* 72, pp. 23-40.

Simon, Szabolcs (2015). Towards an Integrated Waterway Transport System in the Danube Region. *Journal of Economics and Management*, 19, pp. 210-220.

Šoškić, S; Đekić, Z; Kresojević, M (2014). Analysis of River – Sea Transport in the Direction of the Danube – Black Sea and the Danube Rhine River Main. *The International Journal on Marine Navigation and Safety of Sea Transportation*, 8 (4), pp. 523-531.

Szépszó, Gabriella; Lingemann, Imke; Klein, Bastian; Kovács, Mária (2014). Impact of Climate Change on Hydrological Conditions of Rhine and Upper Danube Rivers based on the Results of Regional Climate and Hydrological Models. *Nat Hazards* 72, pp. 241-262.