

# Grain Market Integration in the Lower Danube Region: From the Moldo-Wallachian Hinterland to European Entrepôts (1857-1866)

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## ABSTRACT

Between 1829 and 1853, the Lower Danube region became one of the strategic grain supply points for the Mediterranean *entrepôts* and a source for supplementing Britain's food requirements. The Crimean War ended in 1856 with Russia's removal from the Mouths of the Danube. In this context, in conjunction with the outbreak of the American Civil War, a phrase was coined which was later exploited by politicians in Bucharest: "Romania - the granary of Europe". In this study, we will retrace the route of products from the Danube hinterland and see how, by whom and for whom the grain from Moldavia and Wallachia was produced. At the same time, we will analyse how foreign entrepreneurs innovated in the Lower Danube in the mid-19<sup>th</sup> century. On the basis of contemporary sources, mostly ignored by historiography, we were able to construct econometric series of the grain trade conducted through the ports of Brăila and Galați. But, following the introduction of cargo ships, we have also considered the growing importance of the port of Sulina for the maritime trade on the western Black Sea coast. In so doing, we could understand how long-distance transport can transform an inland region, involving the local production structures in profitable long-distance trade games.

## 1. Introduction

The historian Fernand Braudel concludes his works writing that it would be more useful to look systematically at the well-known or little-known past in large units of time, not just years or decades,

but whole centuries. Braudel's perspective remains valid in most of his works on trade, even beyond his assiduously analysed Mediterranean. After all, the Black Sea and the Danube are a continuation of the Mediterranean world, an "El Dorado" beyond the Bosphorus and Dardanelles.<sup>1</sup> Undoubtedly, in order to understand the long-term economic development of different geographical areas, systematic and systemic analyses are absolutely necessary, but in small units of time. Heterotopia<sup>2</sup> and grain trade commodification<sup>3</sup> in the Danube mouths entail putting together a jigsaw puzzle with missing pieces, without which the whole picture remains incomplete.

At the end of the Crimean War (1853-1856),<sup>4</sup> the diplomats of Quay d'Orsay, Saint James and Ballplätz changed the paradigms of trade in the mouth of the Danube: the excessive quarantine regulations at Sulina were removed and the Budjak (the three counties north of the Danube Delta) were returned to Moldavia. The new geopolitical reality meant that Russia was no longer a direct obstacle to the development of navigation and international trade in the Lower Danube.<sup>5</sup>

Was Romania the 'granary of Europe' or not? This is a question that has haunted the Romanian collective mind for over a century. Specialist publications frequently reintroduce this phrase in the public arena to serve the political interests of the ruling class in Bucharest. The answer has been provided by a number of analysts.<sup>6</sup>

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<sup>1</sup> See: Braudel, 1979; Braudel, 1992.

<sup>2</sup> Foucault, 1986, pp. 22-27.

<sup>3</sup> With reference to the emergence of the capitalist system, commodification means the transformation of goods, services and ideas into commodities to be traded.

<sup>4</sup> For the origins of the Crimean War (1853-1856), see: Temperley, 1932a, pp. 387-414; Temperley, 1932b, pp. 523-543; Temperley, 1933, pp. 60-621; Temperley, 1934, pp. 265-298; Temperley, 1936; Florescu, 1964, pp. 46-67.

<sup>5</sup> See: Gordon East, 1929; Seton-Watson, 1934; Seton-Watson, 1937; Marinescu, 1983; Cernovodeanu, 1986.

<sup>6</sup> "The Danubian valley and southern Russia form the granary of Europe, but the navigation of that noble river is impeded by drought and interrupted by ice, and the heavy river dues and lighter age, and the high freights and insurance on the long and circuitous voyage to western Europe, leave the grain fields of the Danube, the Dnieper, and the Don, at serious disadvantage with American rival". (Report of the U.S. Consul

The earliest documentary records of such a *cliché* are identified in the Bucharest journal *Analele Economice* of 1861 and came as an alternative to the dire situation of modest European harvests and commercial stocks in the United States, subject to requisitions and the partially deficient shipping traffic during the Civil War (1861-1865).<sup>7</sup>

In 1861, the Confederate leaders embargoed American cotton exports, hoping that Europe would face an economic crisis that would force the British Empire to go to war on their side. The South's tactic proved unsuccessful. Europe had a surplus of cotton, and the poor European harvests in 1860-1862 increased the importance of the North's grain exports. So "King Corn was more powerful than King Cotton." American (Unionist) grain increased from a quarter to nearly half of British imports,<sup>8</sup> but the experienced European *entrepôts* merchants would not bet their business on a single poker card, in the context of the Civil War. This is why the fertile lands around the Black Sea represented a viable alternative to replace North American trade stocks.

This study aims to provide support to those who wish to follow F. Braudel's scientific advice, by focusing on the identification, interpretation and analysis of trade relations between the Danube hinterland and its main trading partners. After 1856, the integration of the Lower Danube ports into the international grain market entered a new and seemingly different stage compared to the pre-Crimean War realities. The end of the Russian-Ottoman War between 1853 and 1856 provided the premises for a better rapprochement between the grain market in the Danube ports of the Romanian Principalities and the European trading houses.

Over the years, the study of the sinusoidal curves of grain trade

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in Constantinople, C.W. Goddard, dated 28 November 1862, to Washington D.C.; Letter of the Secretary of State, 1963, p. 565). See analyses in Axenciuc, 1999, pp. 24-26; Mihai, 2012; Murgescu, 2012, pp. 244-268.

<sup>7</sup> For the impact of the American Civil War on trade, see: Mahon, 1999, pp. 133-138; Mitchell, 2013; Bever, 2019, pp. 251-284. See how the U.S. Civil War boosted the productive structures and cotton trade on other continents in Mead Earle, 1926, pp. 520-545.

<sup>8</sup> McPherson, 2003, pp. 382-396.

in the mouth of the Danube has been a favourite theme for economic historians. Researchers have been particularly concerned with two major issues in order to understand the evolution of the Danube grain market during the second social-political “revolution” in modern Romanian history, the decade 1857-1866. The first problem was the lack of (apparently) unquestionable statistical series, and the second was the impossibility of comparing the quantities traded, due to the use of different units of measurement on the international grain market, combined with the fear of a resounding scientific failure or the indulgence in convenient analyses without any substantive questions. So far, researchers have focused on interpreting fragmentary data, both from inefficient contemporary statistics of the Romanian authorities and from the plethora of foreign sources. Paul Cernovodeanu and Beatrice Marinescu<sup>9</sup> exploited fragmentary statistical information identified in British archives. The model of the two Romanian historians was followed, to a large extent, by Constantin Ardeleanu.<sup>10</sup> Constantin Bușe<sup>11</sup> focused on French consular sources, while Emil Octavian Mocanu<sup>12</sup> merely corroborated the information provided by the other authors mentioned in the summary of statistics of the European Commission of the Danube. A ray of light seemed to glimpse in a volume produced in the last decade,<sup>13</sup> which introduces the analysis of the quantities and values reported by the American diplomatic mission in the United Danubian Principalities. The content of the *Black Sea Research Project* has been disseminated through several works, but unfortunately, not even the eighth volume, devoted exclusively to the presentation of statistical series, gathers information on the export of grain through the Mouths of the Danube between 1853 and 1871.<sup>14</sup> The decade 1857-

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<sup>9</sup> Marinescu, 1969, pp. 171-181; Marinescu, 1976, pp. 71-76; Cernovodeanu and Marinescu, 1979, pp. 707-741; Cernovodeanu, 1986.

<sup>10</sup> Ardeleanu, 2008; Ardeleanu, 2020.

<sup>11</sup> Bușe, 1976.

<sup>12</sup> Mocanu, 2012.

<sup>13</sup> Constantin, 2018.

<sup>14</sup> See: Harlaftis, 2020, p. 29 (Figure 2.11); Petmezas and Papadopoulou, forthcoming.

1866 remains the most superficially analysed in the history of the Lower Danube grain trade.

Either out of complacency or, most likely, out of ignorance and lack of access to sources, the reports drawn up by the various consular agents in the ports of the Maritime Danube have not been taken into account by most of the analysts of economic life, even though they represent very significant sources. The editing of (vice)consular reports in contemporary diplomatic yearbooks, often a year or two after their submission to the Central Office, made them somewhat inaccessible to historians and historiography in Communist Romania. The identification and processing of some of the statistical series present in such diplomatic yearbooks allowed us to create an overview of the trade relations between the Danube grain market and the trading houses in the Levant and Western Europe.

Who would have thought that a pertinent picture of the Lower Danube grain trade could be provided by two seemingly modest states on the scale of the European economy in the mid-19<sup>th</sup> century? After the Crimean War (1853-1856), Belgium and the Kingdom of Sardinia (Italy) perfectly illustrate this anecdote of the European grain trade. From Bucharest, the capital of Wallachia, and later of the two united Romanian Principalities, but especially from the ports of Brăila (Ibrail/a) and Galați (Galatz/i), extensive economic history research was transmitted to Brussels and Turin, capturing the realities of economic life in the wider Black Sea area.

In the context of our proposal, we should have a better understanding of the characteristics of a region that is oriented towards distant trade in bulky products. Recent studies tend to unravel the mystery behind the trade “explosion” of the Lower Danube grain market. Almost unanimously, researchers consider that a hinterland can be described as a land area, largely agricultural, organised, developed and linked to a port by means of transport. The most important elements of a major export centre (seaport) are the road, river and rail links connecting it to the hinterland, even though the supply of goods and the level of exports do not depend only on the level of production, but can be limited or controlled by state, economic and

geo-strategic policies.<sup>15</sup> Gelina Harlaftis analysed the concept of “foreland” for the wider Black Sea area and considers that, unlike a hinterland, the “foreland” encompasses everything in front of the port, including the maritime connections of a port. Mainly, one considers the land areas on the seaward side of the port; the other ports with which a main port is connected via the sea routes, where goods are shipped or transhipped, either by coastal vessels or deep-sea vessels.<sup>16</sup> So, according to the Greek researcher, what counts the most is not space but what generates economic activities with bulky products over long distances: the maritime transport system. Connectivity between ports and regions is the main feature of the maritime transport system, where maritime routes are linked to hinterland land transport routes, forming in this way “a dense chain of interactions and communications” at a global level.<sup>17</sup> Thus, the removal of the Tsarist Empire from the mouth of the Danube contributed enormously to the development of the foreland on the western coast of the Black Sea.

In the following part of this article, as far as the documentary sources allow us, we will try to apply to the Moldo-Wallachian grain market the four essential aspects, concretely defined by G. Harlaftis, which must be taken into account in order to perceive the role of water transport in long-distance trade in the Lower Danube region.<sup>18</sup>

The authorities of Constantinople ordered the closing of the Bosphorus and Dardanelles straits after the destruction of their fleet

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<sup>15</sup> Focas, 1987; Hoyle, 1989, pp. 188-206; Broeze, 1996, pp. 73-96; Scheltjens, 2015.

<sup>16</sup> Harlaftis, 2020, pp. 3–32.

<sup>17</sup> Harlaftis, 2020, p. 13.

<sup>18</sup> “(1) In all maritime region small, medium and large port cities/towns were the loading places that formed the port system of the coastal zone. (2) In every maritime region there is a hinterland where goods are brought by land, river and sea transport to the coastal loading export/import zone. (3) In every maritime region there were port-cities/towns that developed or attracted fleets and acted as maritime centres. Small, medium and large maritime centres formed a maritime zone that integrated local markets and connected the region with the foreland. (4) The maritime transport system linked the maritime zone of the maritime centres with the coastal import-export zone of the loading places” (Harlaftis, 2020, p. 13).

in the Battle of Navarino (8 October 1827) during the Greek War of Independence. In April 1828, a new military conflict broke out between the Russian Empire and the Ottoman Empire following the repudiation of the Akkerman Convention (7 October 1826) by Sultan Mahmoud II. For more than a year, the Romanian provinces became a battlefield for the two armies. Among other things, the Peace Treaty of Adrianople, signed on 2/14 September 1829 by Alexei Orlov, the representative of the Russian Tsar, and Abdul Kadîr-bei, the envoy of the Ottoman Sultan, provided access to the mouth of the Danube for Russians. The treaty opened the Dardanelles and Bosphorus straits to all trading vessels, providing new opportunities for producers in the western Black Sea foreland and southern Tsarist Russia to conduct profitable transactions with trading houses in the Levant and the West. The treaty also stipulated that Tsarist troops would occupy Wallachia and Moldova until the Ottoman Empire managed to pay Russia a huge war indemnity of 11.5 million ducats.<sup>19</sup> For the two extra-Carpathian Romanian principalities, the treaty provided for the recognition of the life reign of the elected princes and returned the towns of Brăila, Giurgiu and Turnu (today's Turnu Măgurele) to Wallachia but also confirmed the considerable reduction of Constantinople's power over the Romanian territories in favour of St. Petersburg. Russia was to dictate the pace of international trade in the Lower Danube for the next two decades.<sup>20</sup>

The establishment of the Russian Protectorate and the "Organic Regulations/ Statutes" (liberal-inspired constitutions) suggested that Moldavia and Wallachia were on their way to becoming modern states, but the modernization and emancipation of the Romanians turned out to be a decades-long process, due to the intense, unmediated contact with Western capitalist elements. The "Organic Regulations", with a similar structure in the two provinces, established modern political and administrative principles, such as the division

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<sup>19</sup> Bernstein and Milza, 1994.

<sup>20</sup> Ardeleanu, 2014, pp. 8-14.

of power, public budget, a state educational system, a national militia, juridical stability, etc.<sup>21</sup>

The application of the “Organic Regulations” accelerated the modernisation of feudal institutions in Moldavia and Wallachia and established new ones. The ‘Constitutions’ imposed by Russia allowed the development of capitalism in the Lower Danube area and initiated major changes, producing the impetus for a new social, political and economic stage: the path towards market economy and capitalist investment in the Romanian Principalities.<sup>22</sup> With the termination of the Ottoman right of pre-emption over Moldavian and Wallachian exports and the growing demand for Moldavian and Wallachian products from the West, an excellent opportunity arose to maximize the profitability of the estates of the landowners, who for the first time became the effective owners of the land.<sup>23</sup> The “Organic Regulations” (Chapter V, *Trade Regulations*) developed the provisions of the Treaty of Adrianople (1829) and stipulated, in Article 148, that freedom of trade was defined as the true source of prosperity for Moldavia and Wallachia.<sup>24</sup>

The integration of Danube cereals into the international market was largely due to foreign traders. The foreign element<sup>25</sup> functioned as a “transmission belt” between the Romanian ports and those of the Mediterranean, integrating the West Pontic foreland into the global economic circuit, technological innovations and maritime trade customs.<sup>26</sup> The fast technological, institutional, economic and political developments in the second half of the nineteenth century brought about structural changes in the economic development pattern of the ports in the Lower Danube and Black Sea region, but were

<sup>21</sup> The Moldavian Statute is printed, in French, in *British and Foreign State Papers*, vol. XXXII, 1859, pp. 586-789.

<sup>22</sup> Oțetea, 1977, pp. 50-74.

<sup>23</sup> Filitti, 1934; Cernovodeanu, 1986; Ardeleanu, 2008; Ardeleanu, 2014, pp. 53-56.

<sup>24</sup> Lampe and Jackson, 1982; Hitchins, 1996a, pp. 58-189; Florescu, 1964, pp. 46-67; Florescu, 1997, pp. 31-36.

<sup>25</sup> Ardeleanu, 2016, pp. 253-274; Kontogeorgis, 2016, pp. 275-302.

<sup>26</sup> Chatziioannou and Delis, 2020, pp. V-XIII.

downplayed by the nationalist-communist historiography of Eastern European countries. The progress of the Pontic regions was due to the agents of modernisation, that had deep roots in the Greek, Italian and Jewish communities of the Levant. A constant innovative role was played by the Greeks of the Ionian Islands, connected to the business environment of the *City* of London and under British protection between 1815 and 1864, who were willing to settle in the ports of Brăila and Galați because of the opportunities to exploit the grain market in the Danube hinterland.<sup>27</sup>

Tsarist Russia has always considered itself as the heir to the Byzantine Empire, frequently harbouring the intention of resurrecting it and reclaiming the territory that the flag-bearer of Orthodoxy had held in the Middle Ages. Beyond the purely economic and military needs, the Russian tsars had ingrained in their minds the idea that Russia should advance to the Mediterranean and protect/hold the Holy Places of Christianity, but Palestine had been in Ottoman possession for centuries. The Tsar set himself up as the protector of Orthodox Christians living in the Ottoman Empire, and France protected Catholics in the Near East as much as possible. The official focus of both empires were two symbols of Christianity: the Basilica of the Nativity and the Church of the Holy Sepulchre in Palestine. The Crimean War is considered as one of the last religious wars in Europe; it broke out on 28 March 1853 and lasted until 30 March 1856, when the Peace Treaty was signed in Paris. The conflict began with the occupation of Moldavia and Wallachia by Russian troops,<sup>28</sup> and pitted Tsarist Russia against a coalition that supported the Ottoman Empire, made up of Great Britain, the Second French Empire and the Kingdom of Sardinia. Austria and Prussia declared themselves neutral, but the Wilhelmstrasse and Ballplätz Cabinets were constantly involved in the secret games of power.<sup>29</sup>

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<sup>27</sup> Butărescu, 1906; Kapetanakis, 2020, pp. 55-92.

<sup>28</sup> Florescu, 1964, pp. 46-67; Baumgart, 2020.

<sup>29</sup> Temperley, 1933, pp. 601-621; Temperley, 1934, pp. 265-298; Temperley, 1936; Seton-Watson, 1937; Hitchins, 1996a; Baumgart, 2020.

The Treaty of Paris (30 March 1856) regulated the terms of the Russian defeat in the war. The question of Moldavia and Wallachia was introduced on the agenda of the Paris Congress (25 February-30 March 1856) by Count Walewski, the French Foreign Minister. The main measures adopted led to the abolition of the Russian protectorate over Moldavia and Wallachia and its replacement by a collective guarantee of the Great Powers. The era of the “Organic Regulations” was ending and at the same time, other decisions were taken such as: Russia would cede south-eastern Bessarabia to the Principality of Moldavia, a measure that removed Russia from the mouth of the Danube; the free movement of all ships on the Danube would take place under the close supervision of the European Commission of the Danube, especially set up on this occasion; and the abolition of the abusive provisions of the Danube quarantine for people and goods. The Ottoman suzerainty was maintained and the two principalities could not decide their own foreign policy while being granted the right to establish their own armies (one for each principality). The union of Moldavia with Wallachia aroused the fiercest disputes. The Ottoman Empire, the Austrian Empire and – after the Sultan guaranteed the neutrality of the Straits – also Great Britain, were against the union of the two principalities so much so that in the end, the Great Powers decided that the fate of the Principalities should be left to *ad-hoc* assemblies (a plebiscite organised for this purpose).<sup>30</sup>

Through the provisions of the 1856 Treaty of Paris, the Great Powers succeeded in halting Russian expansion,<sup>31</sup> delaying the destabilisation of the European balance and maintaining the status quo at continental level.<sup>32</sup> Moldavia and Wallachia took advantage of the favourable international context, and finally achieved their ideal of unification in January 1859, with the double election of Prince Alexandru Ioan Cuza to the thrones of Iași and Bucharest.

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<sup>30</sup> Seton-Watson, 1937; Hitchins, 1996a; Ardeleanu, 2020.

<sup>31</sup> Baumgart, 2020.

<sup>32</sup> Temperley, 1932a, pp. 387-414; Temperley, 1932b, pp. 523-543.

The united Romanian Principalities sought the international recognition of the union, that was made official by the decree granted by the Ottoman Sultan Abdul-Aziz on 4/16 December 1861. The union of the Romanians in 1859 posed a major problem: it was only accepted during the reign of Prince Alexandru Ioan Cuza. In January 1862, the separate governments of Moldavia and Wallachia resigned in order to make it possible for Romania's first single cabinet, led by Barbu Catargiu, to be formed in Bucharest and to launch a wide-ranging programme of reforms to modernise the Romanian state.<sup>33</sup>

## 2. Structures of production in the Romanian Principalities

The geographical location of Wallachia and Moldavia influenced the dominant character of cereal cultivation in the agriculture of the two principalities.<sup>34</sup> The various conditions, which will be analysed below, allowed production for domestic consumption, but also for a significant international trade, as Carlo Cattaneo, the Sardinian consul in Brăila, pointed out to his superiors as early as January 1862.<sup>35</sup> The rapid expansion of the Romanian agricultural areas cul-

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<sup>33</sup> Corivan, 1973, pp. 139-161; Zane, 1980; Bernstein and Milza, 1994; Hitchins, 1996a.

<sup>34</sup> Emerit, 1937; Corfus, 1982; Stan, 1994.

<sup>35</sup> "I principali prodotti naturali di questo suolo sono i cereali, da cui la Valachia trae tutte le sue risorse. Senza di essi questo paese non avrebbe alcun altro genere da offrire al commercio europeo, eccetto che alcune poche lane, pelli e sevo. Fin dall'anno 1830, epoca in cui col trattato di Adrianopoli questo Principato venne liberato dalla diretta ingerenza della Turchia nella sua amministrazione, l'agricoltura prese un grande sviluppo, che andò gradatamente crescendo a tal punto, che oggi per la quantità dei prodotti, che versa sui principali mercati d'Europa, si può considerare come uno dei primari empori granari del Levante [...] La Valacchia, per la fertilità ed estensione del suo territorio, sarebbe suscettibile di una produzione tre o quattro volte maggiore dell'attuale, specialmente per i cereali, se la mancanza di braccia non vi facesse ostacolo e se l'arte della coltivazione fosse meno trascurata. Tutti i generi sovra enunciati affluiscono per un buon terzo del loro quantitativo sulla piazza d'Ibraila, donde vengono esportati per l'estero. I rimanenti due terzi servono alla consumazione interna, meno piccole quantità che sono introdotte nella Transilvania". See: *Bollettino consolare*, 1861, pp. 178-186. (Report of the Sardinian consul in Brăila, Carlo Cattaneo, dated 21 January 1862, on the situation in Wallachia).

tivated with cereals must be correlated with the increasing interest of Western economies in the deeply agrarian periphery of Eastern Europe. Based on the statistics for the period 1862-1866, it can be seen that in the United Danubian Principalities there was a total area cultivated with cereals of 2,221,000 ha, of which 705,000 ha (31.8%) were sown with wheat, 1,033,000 ha (46.5%) with maize, 260,000 ha (11.7%) with barley, 62,000 ha (2.8%) with oats, 72,000 ha (3.2%) with rye and 89,000 ha (4%) with other cereals.<sup>36</sup> On the basis of the same annual averages, we can state that the production of the main cereal crops in the period 1862–1866 was 16,679,000 q,<sup>37</sup> of which 8,303,000 q (49.8%) were maize, 5,321,000 q (31.9%) wheat, 1,743,000 q (10.4%) barley, 266,000 q (1.6%) oats, 497,000 q (3.0%) rye and 549,000 q (3.3%) other cereals.<sup>38</sup> The analysis of the above data gives an average yield per hectare of 7.5 q for wheat, 8 q for maize, 6.7 q for barley, 4.3 q for oats, 6.9 q for rye, 6.2 q for millet and 4.8 q for buckwheat.<sup>39</sup>

A comparison of the Romanian wheat and maize average production per hectare with other European countries in the period 1862-1876 reveals major differences to the disadvantage of the state at the Mouths of the Danube. Romania's average wheat production per hectare was 7.5 q/ha in 1862–1866, compared to 11 q/ha in France and 13.1 q/ha in Germany. For maize, the average production per hectare over the same five-year period was 8 q/ha for Romania and 10.4 q/ha for France.<sup>40</sup> Taking into account the existing statistical data for the same period, we can state that the value of cereal production was £9,645,640 (53.4%) of the total crop production of £18,051,840.<sup>41</sup>

Let's take a look at the background of this development. The first

<sup>36</sup> Axenciuc, 1996, p. 512.

<sup>37</sup> The metric quintal (q) is a unit of measurement for weights, mostly used for grain, equal to 100 kilograms.

<sup>38</sup> Axenciuc, 1996, p. 519. For objective descriptions of agriculture and cereal crops in Romania, see Hitchins, 1996b, pp. 186-202.

<sup>39</sup> Axenciuc, 1996, p. 525.

<sup>40</sup> Axenciuc, 1996, p. 536.

<sup>41</sup> Axenciuc, 1996, 707.

stage of the Industrial Revolution coincided with the division of labour and the entry of European trade into the phase of liberalism promoted by the *City* of London.<sup>42</sup> The specialisation of the international market penetrated the Lower Danube after 1829 and erupted after the removal of the Tsarist danger from the mouth of the river following the Crimean War. Between 1829 and 1853, with a seemingly solid foundation and with the control of the maritime sector of the Danube, thanks to the leverage of the European Commission of the Danube (since 1856),<sup>43</sup> the elements of the allogeneic entrepreneurship penetrated even deeper into the economy of the two Romanian Principalities. At the dawn of the union of Moldavia and Wallachia, the Levantine merchants became, for more than half a century, the main force dictating the pace of the transformation of Romanian agriculture thanks to the habit of local potentates to expand the areas cultivated with cereals and on the basis of substantial capitals accumulated in commercial operations. With the entry of local production structures into the international commercial ‘carousel’, the whole of Romanian agriculture became subject to the requirements dictated by international standards.<sup>44</sup>

The Romanian economist Ștefan Zeletin believes that the reforms of Alexandru Ioan Cuza’s time should not be minimized, but should be corroborated with the actions of “the [foreign] powers that brought about our agrarian revolution” through “the participation of the foreign bourgeoisie, which nevertheless gave the decisive impetus.” The agrarian reform of 1864<sup>45</sup> “should not be seen in this light, it should not appear as the personal achievement of a single individual or political group, which was able to impose itself on all,” but in a broader context, in which the impetus was given by the Western bourgeoisie. Foreign capital was the “key” that opened Romanian society to the reforms typical of a nineteenth century nation-

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<sup>42</sup> See contemporary interpretations in Ricardo, 1939; Smith, 1962, pp. 7-18.

<sup>43</sup> Gătejel, 2017, pp. 781-800.

<sup>44</sup> Oțetea, 1977, pp. 50, 72-73.

<sup>45</sup> See an analysis of the 1864 land reform in Adăniloiaie and Berindei, 1967.

state, which would later replace the influence of Western entrepreneurs with the protectionism of the local bourgeoisie.<sup>46</sup>

In 1859, the population of the two United Principalities amounted to about 3,865,000, with 3.2 million living in rural areas, spread over a territory of 123,335 km<sup>2</sup>. This results in a density of 31 inhabitants/km<sup>2</sup>, well below the Western European average. Over the course of just seven years, the number of inhabitants increased to 4,116,000, of whom 3,408,000 lived their daily lives in a still archaic rural environment, on a territory similar to that of 1859, but with a density of 33 inhabitants/km<sup>2</sup>. In the period 1862-1876, the total area of Romania was 12,334,000 ha with an average – for the years 1862-1866 – of 3,335,000 arable ha (27.1%). The rural reform of 1864 abolished the system of feudal relations in agriculture. The main measure to ease the peasant question was the cancellation of the exploitation of the peasants, who until that moment were dependent on the landlords through legal and material obligations. Gone from the “patriarchal” economy were the peasants who, in order to survive, had to work for days, pay wages, etc. on the estates of the landowners. The allotment of plots of land, between 2 and 8 ha per family, apparently facilitated the transition of the Romanian economy to a Western European one. Romania is the beneficiary of fertile soil, but no matter how well the land might have been cultivated in the nineteenth century, although this was not the case, crops could not be profitable because of the use of poor-quality seeds, full of impurities and/or lacking germination power. Against this backdrop, the crops didn’t meet the required standards for export, an aspect not fully taken into account by domestic growers.<sup>47</sup>

The grain production of the large estates was closely linked to the supply on foreign markets. Landowners and lessees conformed to the demands of the business environment. In the years following the end of the Crimean War, investors such as Hristo and Evloghi Gheorghiev took full advantage of the new situation when large

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<sup>46</sup> Zeletin, 1991, pp. 210-214.

<sup>47</sup> Roman, 1902, p. 14.

tracts of land were leased by the landowners and the state. The two Bulgarian brothers benefited from the contribution of masses of the rural population anchored to the customs of the feudal era. The peasants were still in possession of most of the agricultural inventory needed for seasonal work on the estates. The large estates in Wallachia and in other counties where cereals were grown were taken over by the Gheorghiev family. The accumulation of considerable capital from trade and the exploitation of the soil did not prompt Hristo and Evloghi Gheorghiev to purchase these farms, but they continued to lease only what could be productively exploited for three to five years.<sup>48</sup>

External observers highlighted the new capitalist relations, which imposed the use of mechanized labour in Romanian agriculture and the valorisation of commercial stocks according to grain prices on international markets.<sup>49</sup> Brothers Hristo and Evloghi Gheorghiev were among the pioneers of the introduction of modern agricultural machinery into Romanian agriculture, offering commercial rivals in the Principalities a model on their own estates in the Danube meadows. The old rules of production structures were still strongly rooted in the Romanian collective mind, but from the beginning of the 1860s, the need for increased quantity and quality of production in the large *entrepôts* prompted the purchase of machines for threshing and husking maize, for winnowing and threshing

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<sup>48</sup> Adăniloiaie and Berindei, 1967.

<sup>49</sup> "As the peasants of Romania and Bulgaria have had a good harvest [...] As the merchants are of opinion that the war in the United States is drawing to a close, they are very careful not to have too many goods on hand, as they expect prices to fall suddenly [...] The business in agricultural implements and machines has been very good, and the demand has been always greater than the supply. About seven hundred threshing machines, mostly moved by steam power, have already been sold in the principalities, and now that the peasants will become proprietors and labour still scarce, as the peasants will probably not continue to work even for wages for the large proprietors, but on their own soil, the demand for threshing machines driven by horses or oxen will be greatly increased". (Report of Frederic Wippermann, U.S. Consul in Galați, to the U.S. Department of State on trade in the ports of the Lower Danube for the year 1863, dated November 1864, *Letter of the Secretary of State*, 1865b, p. 66).

wheat. Many of these machines were bought from the English factory at Glarfon. In return for considerable sums of money, the Gheorghiev brothers brought mechanics from the West to maintain the agricultural machinery. The steam engines operated on the estates of Obilești and Ulmeni, but were also transferred to other farms, depending on the interests of the moment. In 1861, in a letter to a business partner in Livorno, Hristo Gheorghiev left a testimony to the mechanization of production structures in the Romanian Principalities: “We use a few (steam) threshing machines and they are very good”.<sup>50</sup>

The purchase of these machines involved high costs, paid for directly in pounds, and the custom of the time could not be applied. Agricultural machinery manufacturers did not accept transactions against agricultural products placed by the two Bulgarian brothers on the British market on behalf of the company. The major impact of grain cultivation on the Romanian economy had direct repercussions beyond the southern border of the Romanian Principalities. Seasonal workers from Bulgaria and Macedonia were also accepted to fill the need for workers on the farms. Away from the shortages in the Ottoman Empire, Balkan peasants often crossed the Danube and were employed as agricultural labourers on the estates of the Gheorghiev brothers.<sup>51</sup>

The Bulgarian entrepreneurs were not the only modern farmers of their time, but their names remain in the written records of the era, as they set a successful model, followed by other “pioneers”. For example, in 1864, agricultural machinery was imported through the port of Galați from the United States of America, Germany and Great Britain, in return for which £12,000, £8,000 and £26,000 respectively were paid, in the same order.<sup>52</sup> In order to inform as accurately

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<sup>50</sup> Kosev et al., 1971, pp. 354-355.

<sup>51</sup> Kosev et al., 1971, pp. 283-368.

<sup>52</sup> According to the report of Oscar Malmoros (U.S. Consul in Galați) to William Henry Seward (U.S. Secretary of State) on the trade of the Lower Danube, sent on 15 October 1865 from Galați; see Hitchins and Milin, 2001, p. 65.

as possible about the evolution of the grain market in the mouth of the Danube, the introduction of technological innovations in Romanian agriculture was widely reported by foreign consuls in Moldavia and Wallachia.<sup>53</sup>

Based on the rather sketchy statistics from the rule of Al. I. Cuza, we found that in 1865 there were 8 steam tractors, 156 locomotives, 15 sowing machines, 102 harvesting machines, 8 mowing machines, 156 threshing machines, 127 corn threshing machines and 102 sorters, selectors and hunters. In the same year, the hypothetical working area of the main agricultural machines ranged from 0.1% of the total in the case of ploughs to 6.8% in the use of straw threshers. Ploughing machines covered 2,400 ha (0.1%) of the area ploughed in that year, sowing machines 1,600 ha (0.1%), reaping machines 9,200 ha (1.1%), threshing machines 59,200 ha (6.8%). Analysing the engine power of the same agricultural machines in 1865, the 8 steam tractors generated 320 HP and the 156 locomotives had an engine power of 3,900 HP. At a total of 4,220 HP for the year 1865, the motive power per 100 ha of arable land was 0.24 HP.<sup>54</sup> Alongside labour, agricultural tools have been an essential element of labour productivity in agriculture. The small number of agricultural machines had to be replaced by agricultural tools. It should also be noted that in 1865 there were 150,500 ploughs and 338,900 carts and wagons in the Danubian Principalities. Broadly speaking, this is the state of the productive structures in the Romanian Principalities in the third quarter of the nineteenth century.

### 3. Legislation and taxes

In the mid-19<sup>th</sup> century, the economy of the Romanian Principalities was predominantly agrarian, supported by feudal-type agriculture

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<sup>53</sup> See: *Bollettino consolare*, 1861, pp. 178-181; *Bollettino consolare*, 1868, pp. 107-127; Hitchins and Milin, 2001.

<sup>54</sup> Axenciuc, 1996, pp. 361, 369, 377.

based on grain production and animal husbandry.<sup>55</sup> For the most part, the local industry was limited to mediaeval manufacturing, and mills and the not-too-numerous agricultural machines, powered by steam engines, were the first elements of the industrial revolution to enter the area between the Danube and the Carpathian Mountains.<sup>56</sup> From 1<sup>st</sup> January 1860, the system of leasing customs houses was abandoned and they started being operated by the state. Also on that date, common customs rules, the status of the customs official, and the exchange rate of foreign currencies were regulated, the status of the ports of Brăila and Galați as free ports was recognized, and a 5.0% *ad valorem* tax was adopted for the export of most of the products of the economy of the Romanian Principalities. Export duties were reduced to 3.0% *ad valorem* in 1866, and in the following two years, they fell to 2.0% and 1.0% respectively.<sup>57</sup>

The fiscal policy of other European states was a decisive factor in the trade relations of the Romanian Principalities with their European partners.<sup>58</sup> Great Britain, one of the main markets for Romanian grain, reduced import duties on cereals to 0.0% since the eighth decade, after charging 2.6% *ad valorem* on wheat, 4.7% on barley, 5.5% on oats and rye in the mid-19<sup>th</sup> century. The otherwise insignificant duties on imported maize were abolished in 1868. Around 1850, Germany (Prussia) levied 7.1% on wheat imports, 13.0% on barley, 19.2% on oats and 10.6% on rye, whereas in 1875 massive imports were encouraged and duties abolished. The Wilhelmstrasse cabinet imposed a policy of industrialisation of the Second Reich and wanted to compensate for food needs by increasing imports of agri-food products from the East European farming community.<sup>59</sup>

Customs duties were levied *ad valorem* in the two extra-Carpathian Romanian principalities. Therefore, in the business en-

<sup>55</sup> Hitchins, 1996a.

<sup>56</sup> See: Aurelian, 1880; Zane, 1973; Berindei, 1983, pp. 115-145; Vlad, 1989, pp. 59-78; Axenciuc, 1997; Berindei, 2003, pp. 69-110.

<sup>57</sup> Băicoianu, 1904; Constantinescu, 1991; Sută et al., 1996, pp. 78-79.

<sup>58</sup> Milward and Saul, 1977.

<sup>59</sup> Klovland, 2005, pp. 166-167.

vironment of the Danube ports, it became common practice to misdeclare the values of exported and imported goods. In the case of imports, according to some contemporary interpretations, “the figures published by the Bureau of Statistics represent approximately half of the real value of products.”<sup>60</sup> The regime of Prince Al. I. Cuza showed an increased interest in the economic relations that the two United Principalities had with foreign exchange partners, but at the same time, it adopted a series of legislative measures through which a national body for collecting and processing statistical data was created. The statistical office was in charge of keeping track of foreign trade traffic, with a precise indication of the amounts obtained from these transactions. As the main purpose of this office was to calculate the amounts of customs duties, statistics were compiled only with the values of exports and imports. In May 1859, the first statistics office in Wallachia was set up in Bucharest under the direction of Dionisie Pop Marțian, followed two months later by the Statistical Directorate for the Principality of Moldavia, headed by Ion Ionescu de la Brad. In the case of exports, the main tasks of the office were to identify “species, industrial agricultural products, quantity, value, price, export modes, destinations.”<sup>61</sup> After the administrative unification of 1862, Dionisie Pop Marțian headed the Statistical Office of the United Romanian Principalities.<sup>62</sup>

The statistical records were drawn up by customs officials under the Ministry of the Interior and the Ministry of Finance. For this reason, in the early 1860s, only the values of transactions were recorded, and a precise picture of the quantities exported from an indigenous perspective is not possible. After the adoption of the customs tariff in 1864, the Statistical Office of the United Romanian Principalities also recorded data on the quantities of products involved in Romania’s foreign trade.<sup>63</sup> The statistical series drawn up by Victor Axen-

<sup>60</sup> Obedenaru, 1876, p. 245.

<sup>61</sup> *Documente privitoare la istoria economică a României*, 1960, pp. 5-6, no. 3; pp. 22-23, no. 16; p. 208, no. 148; p. 215, no. 154.

<sup>62</sup> *Documente privitoare la istoria economică a României*, 1960.

<sup>63</sup> Cernovodeanu, 1986, p. 230.

ciuc for the period after 1862 constitutes a valuable working tool for the analysis of Romanian foreign trade, but its corroboration with the various inventories of Romanian grain exports carried out through the ports of the Maritime Danube highlights the shortcomings of 19<sup>th</sup>-century statistics in Romania.

For a long time, the ventures of foreign entrepreneurs could prove to be a fiasco in the Romanian Principalities because of the variations of the different currencies that circulated in the ports of the Maritime Danube. The consular officials regularly drew up reports in which the evolution of the exchange rate in the region was monitored.<sup>64</sup> Before 1867, when the new leu was introduced in Romania, the quotation of coins was at different and variable levels. A gold coin was worth 32 lei, the napoleon 20 French francs or 54 lei, the pound sterling was worth 25.20 French francs or 68 lei. The adoption of the new national monetary system, with the leu-bimetal (gold and silver) standard, was fixed at 0.3226 g gold or 5 g silver, identical to the French and Swiss francs. The equivalence with the previous coin, based on the metallic standard, was: 100 new lei = 270 old lei; 1 gold coin = 11.75 new lei; 1 French franc = 1 new Romanian leu. After 1867, the Romanian coinage was related to the other imported coins of that time as follows: £1 = 25.25 lei; \$1 = 5.18 lei; 1 German mark = 1.24 lei; 1 French/Swiss franc = 1 leu.<sup>65</sup>

The port authorities in Genoa assessed the cost of navigation through the Danube mouths before and after 1858. For example, the level of navigation charges reached £49 for a vessel with a cargo of two thousand quintals, but in 1860, a reduction to just £20 was noted.<sup>66</sup> Between 1856 and 1860, the cost of freight over the distance between the Danube ports (Brăila and Galați) and those of England or northern Europe averaged 5 shillings per quintal of grain and fell

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<sup>64</sup> Note from Henry T. Romertze (U.S. Consul in Galați) to Lewis Cass (US Secretary of State) on the market rate of currencies in circulation in the United Romanian Principalities, dated 21 July 1859; see Hitchens and Milin, 2001, pp. 4-5.

<sup>65</sup> Sută et al., 1996, p. 92; Axenciuc, 2000b, p. 19. See interpretations in Kirițescu, 1964.

<sup>66</sup> Bușe, 1976, p. 89.

to 4 shillings per quintal between 1861 and 1870.<sup>67</sup> In the second half of the nineteenth century, as an economic reaction to the introduction of steam-powered ocean liners, shipping between the Danube and West European ports was in direct competition with that between ports on both shores of the Atlantic Ocean.<sup>68</sup>

#### 4. Grain exports and technological transfer

Wheat, corn, barley, oats and rye were the most exported agricultural products grown in the Romanian Principalities. In the mid-19<sup>th</sup> century, Moldo-Wallachian exports were overwhelmingly influenced by two issues:

- 1) The type of cereal crops grown in the Romanian extra-Carpathian area;
- 2) The specificity of land and sea transport of (relatively) cheap and high-volume goods.

For grain merchants, distances in Romania were compressed after the advent of the railways and the introduction of cargoes on the maritime sector of the Danube. In the 1850s and 1860s, Moldavia and Wallachia were still far from these technological innovations. Almost all Moldavian and Wallachian grain left the Romanian Principalities via the mouth of the Sulina branch of the Danube, a navigation route administered by the European Commission of the Danube since 1856.<sup>69</sup>

The grain trade in the Lower Danube region did not differ from the other activities resumed after the Crimean War. The transition from a state of armed conflict to peace was gradual, as was the shift in trade from supplying the anti-Russian coalition armies to traditional partners in Mediterranean *entrepôts*.<sup>70</sup> The food and financial

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<sup>67</sup> Official EDC statistics, in francs/tonne (data recalculated by us), in A-GL-CED, file 13/1869, f. 8v; see Mocanu, 2012, pp. 164-165.

<sup>68</sup> See: Knick Harley, 1980, pp. 218-250; Gunnar Persson, 2004, pp. 125-147.

<sup>69</sup> Berend and György, 1974; Lampe and Marvin, 1982; Gâtejel, 2017, pp. 781-800.

<sup>70</sup> Economic developments after the Crimean War can be perceived by reading classic works of historiography, such as: Cioroceanu, 1928a; Cioroceanu, 1928b.

crisis (1857–1859) that followed the horrors of war also affected trade in the Danube hinterland. In 1858 and 1859 there was a decline in grain exports through the mouth of Sulina, due to a massive inflow of local products in the ports of Brăila and Galați, combined with a lack of consistent demand from European *entrepôts*. After 1856, the grain market in the mouth of the Danube did not adapt quickly to the European model of storage and to the requirements of international trade. This led to a fall in the value of Moldavian and Wallachian grains, disinterest on the part of large trading houses and major losses for local producers. The local landowners were forced to send their grain to the Danube ports at considerable expense and often at a loss. The main cause was the disastrous land infrastructure, deprived of the benefits of railways linking the farthest points of the Principalities to the ports of the Maritime Danube. For example, the poor land infrastructure meant that the crops from the grain basin in the north of Moldavia could not be harvested to their full potential. Despite the high agricultural production in 1860, the floods of February 1861, caused by the Danube, Prut and Brateș Lake on the lower part of Galați located near the port and the rudimentary grain stores, were another cause of the decline in commercial transport. Flooding of the warehouses in the port of Galați caused £116,426 of damage to grain traders.<sup>71</sup>

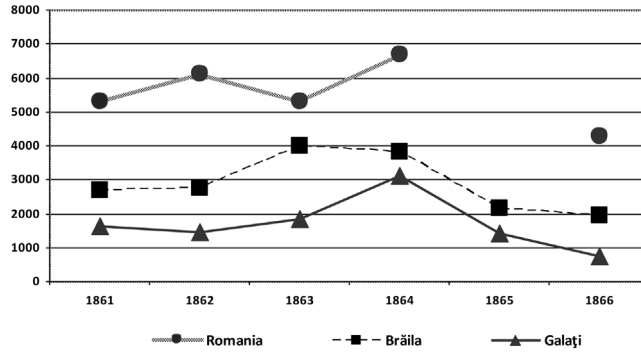
In terms of value, the Romanian Principalities' grain exports in the years of Alexandru Ioan Cuza's rule represented on average about 75.0% of the total, amounting to 3 million pounds sterling in 1861 alone. As the population of the two United Principalities in the early 1860s was about 4 million people, this gives an annual trade income of about £1 /inhabitant, which rises in the following period. The annual income from trade in grain, seeds and derivatives was about 15 shillings /inhabitant (75.0% of the total)<sup>72</sup>.

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<sup>71</sup> In the original, 7,916,946 lei; one pound sterling was calculated at 68 lei; see Bușe, 1976, pp. 90-91 (see also footnote 124).

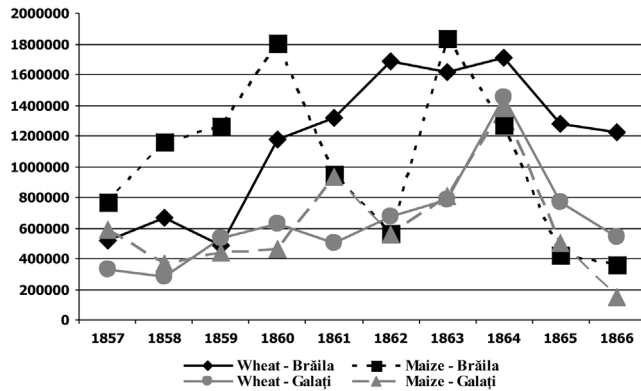
<sup>72</sup> Constantin, 2018, pp. 237–266.

**FIGURE 1**  
Romania's export of cereals compared with that of the ports of Brăila and Galați (1861-1866), in thousands of quintals



Sources: *Recueil consulaire Belge*, 1857, pp. 359; *Recueil consulaire Belge*, 1859, pp. 136-139; *Bollettino consolare*, 1861, pp. 305-314; *Bollettino consolare*, 1862, pp. 1118-1127; *Recueil consulaire Belge*, 1862, pp. 293-297; *Recueil consulaire Belge*, 1863, pp. 673-676; *Recueil consulaire Belge*, 1864, pp. 633-641; *Letter of the Secretary of State*, 1865b, pp. 526, 661; *Letter of the Secretary of State*, 1866, pp. 476-477; *Recueil consulaire Belge*, 1867, pp. 78-83, 774-780; Axenciuc, 2000a, pp. 369-374; Mocanu, 2012, pp. 168-169.

**FIGURE 2**  
Export of wheat and maize through the ports of Brăila and Galați (1857-1866), in quintals



Sources: *Recueil consulaire Belge*, 1857, pp. 359; *Recueil consulaire Belge*, 1859, pp. 136-139; *Bollettino consolare*, 1861, pp. 305-314; *Bollettino consolare*, 1862, pp. 1118-1127; *Recueil consulaire Belge*, 1862, pp. 293-297; *Recueil consulaire Belge*, 1863, pp. 673-676; *Recueil consulaire Belge*, 1864, pp. 633-641; *Letter of the Secretary of State*, 1865b, pp. 526, 661; *Letter of the Secretary of State*, 1866, pp. 476-477; *Recueil consulaire Belge*, 1867, pp. 78-83, 774-780; Mocanu, 2012, pp. 168-169.

In the nineteenth century, Brăila and Galați were the largest Romanian ports on the Danube and had a significant share in the Moldo-Wallachian grain exports through the Danube mouth. During the period 1861-1866, covered by several national statistical series, the fluctuating trend of Romanian grain exports can be observed. The econometric series reconstructed by the team coordinated by Victor Axenciuc do not include information for 1865 but, beyond these statistical shortcomings, thanks to Western consular sources, we can consider that the year was on average for Romanian grain exports. The 4,276,000 q of cereals exported by Romania in 1866 represented only 63.92% of the 6,689,000 q of cereals that left the borders of the Romanian state during 1864, and almost as much as the export through Brăila in 1860 (4,392,886 q).<sup>73</sup> In relative values, the 1,934,000 q leaving the port of Brăila, on various ships, accounted for 45.22%, and those from Galați for 17% of Romania's total grain exports during 1866. In 1864, the most prolific year of Romanian exports in the period under analysis, Brăila had a share of 57.30%, while the rival upstream port accounted for 46.50% of Romania's total grain sales. But, looking carefully at the various sources used, we find discrepancies between the econometric series reconstructed by the team coordinated by V. Axenciuc and various information from foreign consuls in the Romanian Principalities. As a rule, according to the foreign consular reports, the cumulative total of the ports of Brăila and Galați exceeds the quantity mentioned in V. Axenciuc's recent statistics.

In terms of quantity and value, wheat and maize were the most traded grains through the two Danube ports. Let's look at the situation in 1866. Wheat (2,339,000 q) and maize (1,346,000 q) accounted for 54.70% and 31.47% respectively of Romania's total grain exports. The merchants obtained £2,891,840 in exchange for these transactions.<sup>74</sup> Brăila made the largest contribution to Romania's grain ex-

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<sup>73</sup> See an earlier study, in the style of national-communist historiography, at Mocioiu, 1981-1983, pp. 349-368.

<sup>74</sup> Axenciuc, 2000a, p. 375.

ports during 1866, with 1,227,081 q of wheat and 362,096 q of maize leaving the country through this port, representing, in relative values, 52.46% and 26.90% respectively of the Romanian transactions of the two agricultural products analysed.

In 1864, wheat sales from Brăila accounted for 48.0% of Romania's exports, and maize for only 43.17%. Through the main gate of Moldavia's exports, wheat (1,450,535 q) accounted for 40.68% of the total Romanian exports through Sulina (3,565,000 q). At the same time, maize exports through Galați (1,381,674 q) accounted for 46.88% of Romania's total (2,947,000 q).<sup>75</sup>

If we add the quantities of grains exported from the ports of Brăila (3.8 million q) and Galați (3.1 million q) during 1864, the result is higher than the one recorded by Romanian statisticians for the total of Romanian exports (6.68 million q) for that year. Unfortunately, statistics have been a relative matter in the Romanian area for a long time and must be approached cautiously. At the time, the main shortcomings were due to the recording of different statistical data, but later on the main difficulties were encountered following the conversion of the many units of measurement used on the international grain market into the metric system.<sup>76</sup>

The rivalry between the ports of Brăila and Galați was gradually established since the Middle Ages and erupted after 1829, when, by the Treaty of Adrianople (2/14 September 1829), Brăila returned to Wallachia and became the main outlet for Romanian exports. Gradually, due to geographical and economic conditions, the two ports specialised in their own markets. The port of Brăila focused on grain exports, brought in by wagons from the hinterland of the Bărăgan and, in most cases, with the help of small river ships in the fertile regions located in the Danube meadows (even from Oltenia).<sup>77</sup> In the mid-19th century, trade in Moldavia and Wallachia suffered from

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<sup>75</sup> See tables 1, 2 and 8 in appendixes.

<sup>76</sup> See Constantin, 2018, pp. 712-713.

<sup>77</sup> The role of Greek navigation on the Lower Danube was analysed in the paper Focas, 1988, pp. 115-130; Harlaftis, 1996.

the lack of high-capacity land transport. Railways in Romania were only to be introduced at the beginning of the 1870s, and their commercial impact was soon visible with the introduction of grain from the large estates in the north of Moldavia into international trade.<sup>78</sup>

Based on the existing statistical data and related to the analysed time interval, we can consider that the most prolific moment of cereal exports through the Brăila port was in 1860, when 4,392,886 q left the Wallachian port. During that year, wheat exports through Brăila ranked only third and accounted for only 26.75% of the total grain trading through Wallachia's great Danube port, in contrast to the percentages recorded for maize (41.02%) and barley (31.82%) exports. During 1860, total grain exports through Galați (1,327,526 q) accounted for only 30.21% of the total quantity leaving through Brăila port.<sup>79</sup>

Wheat and maize were the most sought-after Romanian products on European markets. An overview of the statistical data gives an insight into the oscillating level of wheat exports through the port of Brăila during the decade under analysis: trades ranging from 514,973 q in 1857 to 1,711,050 q in 1864, with a tripling of the quantities traded. The most significant quantities of maize sold in the port of Brăila were recorded in 1863 when the transactions exceeded 1.8 million q and represented 34.67% of the total Romanian grain exports as indicated by V. Axenciuc. According to the existing sources, the only spectacular growth was recorded in barley exports in 1860. A practice of the time was to add up the quantities of barley and oats. The 1,398,182 q of barley exported through the port of Brăila during 1860, when the quantities of oats were probably added, represent values 3-4 times higher than those recorded in the other years of the decade analysed.

A much clearer picture can be obtained by consulting the statis-

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<sup>78</sup> See some of the studies on the impact of railways on trade in the Lower Danube region: Botez and Russu, 1960, pp. 626-634; Cebuc and Mocanu, 1967, pp. 113-120; Botez, Urma and Saizu, 1977, pp. 80-94; Jensen and Rosegger, 1978, pp. 675-702.

<sup>79</sup> The analysis was based on the statistical data in Tables 1 and 2.

tical data related to the port of Galați. With the exception of 1857, when we only have the total quantities of wheat and maize exported (944,558 q), the foreign diplomats accredited in the great Moldavian port on the Danube proved to be more skilful in collecting and transmitting statistical information to the Central Offices in the capitals of their states. The average annual grain export from the port of Galați did not exceed 1.5-1.6 million quintals. The only notable exceptions were recorded in 1863 and 1864, when the cumulative exports of wheat and maize accounted for 86.22% and 91.04% respectively of the total grain exports recorded by the authorities through the port of Galați in those years. Based on the existing sources, we can see only one major fluctuation in grain exports through Galați, which occurred in just two years. If the grain export through Galați reached 3,110,795 q in 1864, two years later it was only 727,850 q and this can be attributed to the harvests of 1865 and 1866.<sup>80</sup>

In the second half of the nineteenth century, technological development and the increasingly frequent use of large vessels produced a widespread phenomenon in the Lower Danube trade: the increasing importance of grain transshipment in Sulina. Shortly after the Crimean War, the strategic point at the mouth of the river acquired an economic significance far beyond the expectations of contemporaries. The statistics for 1861 show that more than three times as many ships were loaded in the basin of the river (153) than in the port of Sulina (45). The technological advancement is even more visible in the total quantities transhipped at Sulina that year: 230,915 q loaded in the port and 915,636 q in the basin.<sup>81</sup>

If we analyse only the information for 1862 from the report of the Italian vice-consul Pietro Castelli in Sulina, dated May 1864, we

<sup>80</sup> The analysis was based on the statistical data in Table 1.

<sup>81</sup> *Bollettino consolare*, 1861, pp. 305-314 (Report of the Italian Consul Brunenghi in Sulina, dated 24 December 1861, on trade and navigation through Sulina). For the technical and legislative conditions under which the navigation of the Lower Danube was carried out under the jurisdiction of the ECD, see Ardeleanu, 2020, pp. 29-49.

see how important was the role played by the ports of Brăila and Galați in the maritime trade of the Romanian Principalities. According to the Italian diplomatic source, the export of cereals through the mouth of the Danube amounted to 5,686,366 q in 1861 and to 5,694,563 q during the following year. Most of these quantities came from transactions carried out at Brăila, and they accounted for 58.39% and 69.55% respectively of the total output through the mouth of Sulina. Of the total 3,320,687 q exported in 1861, 2,569,096 q were loaded on vessels in the port of Brăila and only 22.63% were transhipped at Sulina (751,591 q). Transhipments from Sulina, traded at Brăila, constituted only 13.21% of the total grain exports through the Sulina inlet that year. The situation was partially balanced during the following year, when 2,659,270 q were loaded in Brăila for foreign *entrepôts* and only 1,301,794 q were transhipped in Sulina. In relative values, the movement of grain traded in Brăila on the maritime vessels stationed at Sulina accounted for 32.86% of the operations carried out through the largest port of Wallachia and 22.86% of the entire grain trade carried out through the Mouths of the Danube in 1862. Compared to Brăila, the share of transhipments carried out in Galați and Ismail was 0.24% in 1861, respectively 4.51% and 0.50% the following year. Despite the low importance of transhipments, only in the case of the port of Ismail there was a doubling of these commercial-shipping operations.<sup>82</sup>

During 1862, as contemporary observers in Sulina noted, the grain trade through the mouth of the Danube was dominated by Romanian exports (80.0%), while transactions concluded in ports south of the Danube did not exceed 20.0%.<sup>83</sup> Basically, the Western *entrepôts*

<sup>82</sup> *Bollettino consolare*, 1862, pp. 1118-1127 (The trade and navigation movement on the Lower Danube in 1862, report of the Italian vice-consul Pietro Castelli in Sulina, May 1864).

<sup>83</sup> "Nel 1862 la somma totale dell'esportazione dei cereali dal Danubio per la via di mare si elevò a 8,252,990 ettolitri, quattro quinti dei quali dalla Rumania, e circa un quinto dalla Bulgaria". See: *Bollettino consolare*, 1862, p. 1119 (The trade and navigation movement on the Lower Danube in 1862, report of the Italian vice-consul Pietro Castelli in Sulina, dated May 1864).

were dependent on the Moldo-Wallachian granary. In this context, grain merchants and transporters needed to transfer their technologies to the peripheral, underdeveloped area around the Black Sea, before the emergence of a complex railway network in the Romanian and Russian spaces.<sup>84</sup> *The Greek and Oriental Steam Navigation Company* embodies the Greek entrepreneurial spirit in the Lower Danube.<sup>85</sup> The Greek shipping company was founded by Stephanos Theodōros Xenos in 1857 and managed to integrate into the business environment in the Danube hinterland by entering into a partnership with *Lascardi and Co.*, one of the well-established companies in the Levant market. The Greek entrepreneur was thus able to run and increase the capital needed to invest in ships, crew, taxes and goods.<sup>86</sup> Stephanos Xenos was among the first shipowners to exploit the Danube grain cabotage market.

The Greek shipowner introduced river boats on the Danube, capable of providing optimal conditions for transporting grain from the ports in southern Wallachia (Calafat and Oltenița) to Sulina. The transshipment of goods at Sulina brought the Greek entrepreneur considerable profit thanks to his perception and exploitation of the mechanisms of the grain market in the mid-19<sup>th</sup> century: the early (spring) purchase of grain from the small Danube ports; the sale of grain to the grain companies in the English ports until harvest; the use of barges on the Danube and the transshipment of grain in the port/basin of Sulina; the transport of goods to the *entrepôts* by means of cargo ships, capable of moving considerable quantities in a relatively short time.

By buying grain in the river Danube ports, the price paid for

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<sup>84</sup> See the impact of the introduction of railways in Russia in Kelly, 1976, pp. 908-916.

<sup>85</sup> Xenos, 1869, pp. 1-3.

<sup>86</sup> "If I could send three such steam barges up the Danube into the shallow waters, let us say as far as Calafat and Oltenitza, where the markets are in which the grain is purchased that is brought down to Galatz and Ibraïla in carts, I should be able to buy wheat and Indian corn at least 5s. or 6s. less per quarter than they can be bought at Galatz or Ibraïla. I could tranship this grain on board the large steamers at Sulina for England" (Xenos, 1869, p. 11).

these products in Brăila and Galați was cut by a half, and the profit obtained, apparently small, became profitable in the context of more frequent trade. The investments redeemed themselves relatively quickly and allowed the trade games to continue. Transport costs on the Danube and direct transshipment in Sulina proved more viable than purchasing, which was subject to the whims and percentages demanded by intermediaries, in the ports of the Maritime Danube. Between 1857 and 1865, Stephanos Xenos used the following river ships on the Danube: Tzamados (500 NRT),<sup>87</sup> Botassis (452 NRT), Bobolina (300 NRT), Zaimis (500 NRT), Colocotronis (500 NRT), George Olympius (500 NRT), Londos (500 NRT) and Rigas-Ferreos (500 NRT).<sup>88</sup>

In the 1860s, for contemporaries it had become a fact: if there had been enough barges equipped with steam engines, trade on the Lower Danube would have moved from Galați and Brăila to Sulina, and only ships carrying imported goods would have come up the Danube.<sup>89</sup> The grain cabotage from the Danube ports to Sulina was a profitable and habitual business for the shipping companies in the Lower Danube. As early as the 1860s, a substantial increase in the number of cargoes loaded at Sulina was expected. The shipping companies that carried out transshipment activities in the Sulina basin did not pay taxes to the European Commission of the Danube, and those that loaded in the port of Sulina paid only half the amount of the taxes charged in Brăila and Galați. The constant water depth at Sulina, 17 feet, provided the necessary framework for loading operations for vessels with a high carrying capacity, unlike the situation in the maritime sector of the Danube, where the navigable channel was only 10-11 feet deep.<sup>90</sup>

<sup>87</sup> Net register tonnage (NRT) is a unit of measurement for the internal volume of a merchant vessel, equal to 2,8316 m<sup>3</sup>.

<sup>88</sup> Xenos, 1869, p. 305.

<sup>89</sup> Report of William W. Thomas Jr. (U.S. Consul in Galați) to the U.S. Department of State on the condition and trade of Romania, dated February 13, 1863; See *Letter of the Secretary of State*, 1865a, p. 526.

<sup>90</sup> Letter of the Secretary of State, 1865a, pp. 524-527.

**FIGURE 3**  
The main trading centres on the western Black Sea coast (19<sup>th</sup> century)



Source: Harlaftis, 2020, p. 21.

## 5. Destinations and foreign views on the grain trade in the Lower Danube

In the 1850s and 1860s ships under Austrian, English, Greek, Ionian, Italian (Sardinian and Sicilian) and Ottoman flags were the main means of transportation of the Danube grain to European *entrepôts*. The superiority of these vessels (sail or steam engines) can be seen both from the study of the total number of ships and in terms of transport capacity/tonnage, where they outperformed by far the other states.<sup>91</sup> But for the study of maritime trade, it is worth noting that the flag of the carrier ship doesn't always match the final destination of the goods, all the more so in the case of a product in great demand on the international market, such as grain.

<sup>91</sup> Ardeleanu, 2008, pp. 315-316 (Table 6); Ardeleanu, 2020, pp. 34-43.

For example, in 1856, English tradesmen contracted 249,342 q of grain from the Romanian Principalities market, only to see a slight increase to 267,112 q two years later. Based on an analysis of the reports of the vice-consulates of Brăila and Galați, Paul Cernovodeanu believes that British imports of grain from the two Romanian provinces remained “at the usual average level of purchases [...] over the last decade.”<sup>92</sup> British grain trade in the port of Brăila amounted to 2,557,964 q in the year 1858.<sup>93</sup> During 1861, 50.10% of the total quantities of grain (1,146,551 q) loaded in Sulina port and basin belonged to British-flagged vessels (574,486 q) and 29.81% to Austrian freighters (341,793 q). British and Austrian merchants alone purchased 240,251 q and 268,168 q of maize from the port of Brăila and engaged in considerable transshipments in the port of Sulina. Also, in the port of Sulina, 115,870 q of maize bought from traders in Galați were transhipped on British-flagged vessels.<sup>94</sup> Romania was the third largest exporter of maize to Great Britain between 1860 and 1870.<sup>95</sup>

The business milieu in the port of Marseille was another key trading partner for agricultural producers in Moldavia and Wallachia. Romanian grain exports to France reached 413,800 q in 1864, representing only 1/20 of the total imports of the Second French Empire in years with insignificant harvests.<sup>96</sup> Before Moldavia and Wallachia could connect to the international market, Romanian grain had been transported to Istanbul, which is a tradition that still lasts in this period. The grain from the “great warehouse of the Ottoman sultan” was resold to *entrepôts* in Livorno, Marseille, London, Liverpool, Antwerp and Rotterdam. The superior infrastructure in the

<sup>92</sup> Cernovodeanu, 1986, p. 174. His analysis is based on research of English archival documents (TNA, PRO, FO, Turkey, files: 78/1347, 1379, 1399, 1455 and 1456) and their corroboration with the data present in Marinescu, 1976.

<sup>93</sup> Marinescu, 1976, Table 3.

<sup>94</sup> *Bollettino consolare*, 1861, pp. 305-314 (Report of the Italian Consul Brunenghi in Sulina, dated 24 December 1861, on trade and navigation through Sulina).

<sup>95</sup> Mocanu, 2012, pp. 174-175.

<sup>96</sup> Taftă, 1999, pp. 163-173.

capital of the Ottoman Empire (modern warehouses and a high draught in the harbour) was the main factor in maintaining this medieval trade pattern.<sup>97</sup>

The diplomatic sources of the United States of America in the Danube Principalities estimated the export of grain through the Mouths of the Danube in 1863 at about 6 million quintals, in return for which \$12,172,886 [about £2.4 million] was paid. In terms of quantities, the outflows from Brăila totalled 3.9 million quintals of grain, those from Galați 1.6 million quintals, and the total transactions through the Danube River ports amounted to about 320,000 quintals. In exchange for this grain, in the same order, \$7,561,927 [about £1.5 million], \$3,917,098 [about £783,420] and \$693,861 [£138,772] were paid in the ports upstream of Brăila. In that year, the average price paid for a quintal of grain in the Lower Danube was 8 shillings.<sup>98</sup>

In contrast to the previous year, “the splendid harvest of the year 1863” in the United Principalities led to a 20.0% increase in grain exports. Due to a lack of capital on the part of Western merchants and to the extremely high prices compared to those charged in other European and American grain basins, exports were insignificant considering the impressive quantities remaining in storehouses. Economic forecasts stating that “the quality was excellent, it was expected that a great amount of money would flow into the Principalities,”<sup>99</sup> did not materialise and maritime trade encountered considerable setbacks in the 1850s and 1860s. The Lower Danube market was affected by falling demand and prices in Western *entrepôts*, but also by the short autumn export seasons. Moldo-Wallachian products had only a two-month window in which they could be transported before the navigation on the Sulina branch was

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<sup>97</sup> Constantin, 2018, pp. 251-266.

<sup>98</sup> Report of Frederic Wippermann (U.S. Consul in Galați) to the U.S. Department of State on the trade in the ports of Galați and Brăila for 1863, dated 27 June 1864; in Letter of the Secretary of State, 1865b, p. 661.

<sup>99</sup> Hitchins and Milin, 2001, pp. 49-50.

interrupted in winter time. Ice floes were a notorious impediment to cargo traffic in the maritime sector of the Danube. Exports through Romanian ports on the Danube River sector accounted for a quarter of the total quantities traded at Brăila and Galați.<sup>100</sup>

European merchants were aware of the rudimentary way of storing grain in the improper warehouses on large farms and in the Danube ports. Despite these shortcomings, merchant houses flocked to export grain from the 1863 harvest in large quantities after the opening of navigation on the Danube the following spring. In his report, the American consul Oscar Malmoros pointed out that “on the quantity and quality of the crops, as well as on the demand for them abroad, depend the magnitude of the business of the country, and consequently its prosperity. At the opening of navigation in 1864, a large portion of the crop of 1863, not needed for home consumption, was still on hand. This was further increased by the plentiful harvests of the year. The quality of the last year’s crop was not equal to the general average; hence the magnitude of the business of that period was not unprecedented.”<sup>101</sup> The additional grain export expenses paid by the exporting companies amounted to about \$3.6 million [£720,000] in 1864 alone and accounted for 15.0% of the number of grain transactions in the Danube ports.<sup>102</sup> Grain prices fell considerably in the autumn of 1864, and that year’s harvest was brought to the Danube ports for storage, where storage rents rose substantially. Grain was arriving “with a normal moisture content” and processing was necessary before loading it onto ships. In October, wheat was destined for consumers in Italy and trading houses loaded barley for markets in England and the port of Marseille. Western merchants’ interest in the Danube grain market was in relative decline although maize production proved to be of superior quality in those years.<sup>103</sup>

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<sup>100</sup> Hitchins and Milin, 2001, pp. 50-51.

<sup>101</sup> Report of the U.S. Consul in Galați, Oscar Malmoros, written on 30 September 1865 and sent on 15 October of the same year; in *Letter of the Secretary of State*, 1866, pp. 476-477.

<sup>102</sup> *Letter of the Secretary of State*, 1866, pp. 476-477.

<sup>103</sup> Report of the American consul in Galați, F. Wippermann, dated 4 November 1864; see Hitchins and Milin, 2001, pp. 57-58.

An analysis of the Belgian statistics shows that 568,423 q, representing 40.46% of the grain exports to the port of Galați during 1865, were loaded on 272 barges under the Greek flag, while 410,772 q (29.24%) were transported to Sulina by 157 barges. Wheat accounted for 91.46% of the transactions carried out by the Greeks in the port of Galați during the same year, while maize accounted for 86.48% of the quantity of grain made available by the same port for transshipment at Sulina. Italian warehouses were supplied with 178,552 q of grain purchased from the Galați port market, with wheat accounting for 56.43%. In relative terms, exports through Galați represented only 12.71% of the quantity of grain transported by the 55 ships under the Italian flag in 1865.<sup>104</sup>

The main destinations of grain exports through Galați did not change during the following year. The first place was held by the 216 ships under Greek flag, which transported 55.92% of the grain sold in Galați, followed at a great distance by the 30 British ships, with a share of 21.06% of the total grain exports through the same port during 1866. An important signal of the specialization of maritime transport is provided by the relatively small number of vessels under British flag (30), which managed to transport 153,286 q of grain, unlike the 153 vessels under Ottoman flag, which carried a total of only 27,579 q of grain, representing in relative values only 3.78% of the grain exports of the port of Galați. The British companies used large cargoes, which, due to their high draught, could not proceed upstream from Brăila and, as a rule, operated in the ports of the Maritime Danube and in the basin of the port of Sulina.<sup>105</sup>

The development of maritime shipping influenced trade trends and food consumption in the second half of the nineteenth century.<sup>106</sup> The sixth position, constantly occupied by the Ionian Greeks in the Danube shipping in the mid-19<sup>th</sup> century, demonstrates the

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<sup>104</sup> Report of the Belgian Consul in Brăila and Galați, M. Klein, dated 21 October 1866 (*Recueil consulaire Belge*, 1867, pp. 78-83).

<sup>105</sup> Ardeleanu, 2008, pp. 114-132; Ardeleanu, 2011, pp. 73-94.

<sup>106</sup> Jacks and Pendakur, 2010, pp. 745-755.

importance of the Greeks under British protection in the competitive trading environment of the Danube ports. The agricultural production of the Romanian Principalities, the Danube and its ports were the determining factors in the specialisation of the Ionian Greeks in the purchase and transport of grain to the *entrepôts* of the Mediterranean world and their partners in London and Liverpool. The case of the Ionian Greeks demonstrates how regional river and sea transport of bulky agricultural products (grain) can be transformed into a major player in international trade, integrating the peripheries into the political and economic games of a global empire such as the British Empire.<sup>107</sup> Warehouse trade, in which the final destination of the grain was uncertain, was a constant in the modern era and, at times, imposed the fluctuating rhythms of the production structures of the Danube granary

Based on the data included in the statistics of the time, it can be considered that two of the most important European grain *entrepôts* of the nineteenth century, Antwerp and Rotterdam, were not yet a preferred destination for the products traded in the ports of the Maritime Danube. In the decade under review, Belgian and Dutch flagged vessels never exceeded 2.0% of the total grain exports of the ports of Brăila and Galați.<sup>108</sup> This was to change during the last two decades of the nineteenth century.

## 6. Conclusions

Overall, under the influence of Western stimuli, the development of the grain trade in the Lower Danube ports boosted production and revolutionised agriculture in the Danube hinterland after Russia's

<sup>107</sup> Ardeleanu, 2008; Kapetanakis, 2012, pp. 269-284; Kapetanakis, 2020, pp. 65-83; Ardeleanu, 2020, pp. 96-103.

<sup>108</sup> See: Report of the Belgian Consul in Brăila and Galați, M. Klein, dated 21 October 1866; and Report of the Belgian Consul in Brăila and acting consul in Galați, M. Klein, dated 15 June 1867 (*Recueil consulaire Belge*, 1867, pp. 78-83, 774-780); Ardeleanu, 2008, pp. 315-316 (Table 6).

removal from the mouth of the Danube in 1856. In the present study, we have been able to retrace the route of products from Moldavia and Wallachia and have seen how, under what auspices and for whom grain was grown. Foreign entrepreneurs, such as the Bulgarian Gheorghiev brothers and the Greek shipowner Stephanos Theodōros Xenos, were the greatest innovators in the Lower Danube after the Crimean War.

Contemporary consular sources, most of which are ignored by Romanian and foreign researchers, have been of real help in reconstructing the statistical series of the grain trade through the ports of the Maritime Danube. The introduction of cargo ships in the Lower Danube grain transport increased the importance of the port of Sulina for maritime trade on the western coast of the Black Sea. In particular, the production structures of Wallachia were involved in profitable games of exchange, which came about as a result of innovations in the long-distance maritime transport sector.

The efficiency of the agriculture of the Romanian Principalities and the grain trade carried out by this hinterland area can be inferred from the average quantities produced per cultivated hectare and the selling price of the goods. For example, an analysis of the most sought-after cereal product on the international market, wheat, in the period 1862-1866 where the average production in Romania was 7.5 quintals and the average price of a quintal was 14 shillings, shows a maximum value of £5 and 9 shillings/ha, recorded in 1864.<sup>109</sup> Broadly speaking, it can be considered that the Lower Danube grain market was a reference point for European *entrepôts* in the mid-19<sup>th</sup> century and, beyond any further interpretation, the ports of Brăila and Galați lived their “golden age”, constituting a profitable venture for modern argonauts (merchants and shipowners) from the Levant.

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<sup>109</sup> Data calculated from statistics in Axenciuc, 1996, p. 519; Axenciuc, 2000a, pp. 375-376.

## Appendixes

**TABLE 1**  
Grain export through the port of Galați (1856-1866), in quintals

Year/Product	Wheat	Maize	Rye	Barley	Total cereals
1856	244,402	986,877	–	–	1,341,745
1857	330,553	589,073	–	–	944,558
1858	279,227	367,975	127,336	13,317	787,855
1859	536,461	437,513	107,989	43,739	1,125,702
1860	626,542	460,278	153,121	87,585	1,327,526
1861	499,933	931,261	156,451	52,539	1,640,184
1862	671,494	553,977	148,352	63,479	1,437,302
1863	788,052	805,543	168,545	86,135	1,848,275
1864	1,450,535	1,381,674	176,243	102,343	3,110,795
1865	765,510	505,663	102,720	28,496	1,402,389
1866	538,196	150,273	16,977	22,404	727,850

Source: *Recueil consulaire Belge*, 1859, pp. 136-139; *Recueil consulaire Belge*, 1864, pp. 633-641; *Recueil consulaire Belge*, 1867, pp. 78-83, 774-780 [Data recalculated by us from Galați kilos in q (metric quintals); 1 q = 100 kilograms. The total sums up only the 4 kinds of cereal].

**TABLE 2**  
Grain export through the port of Brăila (1856-1866), in quintals

Year/Product	Wheat	Maize	Rye	Barley	Total cereals
1856	674,076	1,114,164	–	293,707	2,081,947
1857	514,973	765,086	–	377,841	1,657,900
1858	669,456	1,163,560	–	737,770	2,570,786
1859	485,109	1,265,473	–	696,731	2,447,313
1860	1,175,310	1,802,243	17,151	1,398,182	4,392,886
1861	1,315,764	948,926	40,794	379,225	2,684,709
1862	1,686,310	568,104	41,192	457,648	2,753,254
1863	1,616,700	1,836,000	54,404	483,212	3,990,316
1864	1,711,050	1,272,450	51,590	798,220	3,833,310
1865	1,279,002	424,206	97,272	348,342	2,166,310
1866	1,227,081	362,096	30,430	308,500	1,934,690

Source: *Recueil consulaire Belge*, 1857, pp. 359 and nexts; *Bollettino consolare*, 1861, pp. 305-314; *Bollettino consolare*, 1862, pp. 1118-1127; *Recueil consulaire Belge*, 1862, pp. 293-297; *Letter of the Secretary of State*, 1865, p. 526; *Recueil consulaire Belge*, 1863, pp. 673-676; *Letter of the Secretary of State*, 1865b, p. 661; *Letter of the Secretary of State*, 1866, pp. 476-477; Mocanu, 2012, pp. 168-169 [Total and data recalculated by us from Brăila kilos and imperial quarters in quintals].

**TABLE 3**  
Destinations of grain exports from Galați in 1865 (in quintals)

Flag	Ships	Wheat	Maize	Rye	Barley	Total cereals
Greek	272	519,920	33,298	3,335	11,870	568,423
Ottoman	183	18,740	16,198	193	–	35,131
Italian	55	100,760	37,565	32,474	7,753	178,552
English	32	26,144	38,618	16,077	5,003	85,842
Austrian	30	33,731	10,094	1,734	1,965	47,524
Romanian	22	2,368	–	–	–	2,368
Russian	16	14,325	–	–	–	14,325
Norwegian	7	–	3,075	15,735	–	18,810
Samos	4	581	7,568	–	–	8,149
Prussian	3	–	3,979	1,337	–	5,316
Hanover	3	–	–	5,153	–	5,153
Dutch	2	–	–	3,635	–	3,635
Swedish	2	4,209	–	4,604	–	8,813
Oldenburg	1	–	–	–	–	–
French	1	2,390	–	–	–	2,390
Portuguese	1	2,988	–	–	–	2,988
American	1	2,484	–	–	–	2,484
Serbian	1	–	–	–	–	–
Mecklenburg	1	4,102	–	–	–	4,102
Barges	157	35,155	355,268	18,444	1,905	410,772
<b>Total</b>	<b>794</b>	<b>767,897</b>	<b>505,663</b>	<b>102,721</b>	<b>28,496</b>	<b>1,404,777</b>

Source: *Recueil consulaire Belge*, 1867, pp. 78-83 [The total has been calculated only for the 4 kinds of cereal we included in the table].

**TABLE 4**  
Destinations of grain exports from Galați in 1866 (in quintals)

Flag	Ships	Wheat	Maize	Rye	Barley	Total cereals
Greek	216	332,535	60,989	7,075	6,412	407,011
Ottoman	153	11,589	14,974	–	1,016	27,579
English	30	102,420	38,928	1,212	10,726	153,286
Italian	20	28,088	16,218	–	4,249	48,555
Romanian	19	36,260	12,471	–	–	48,731
Swedish and Norwegian	7	14,525	–	6,032	–	20,557
Austrian	5	9,235	1,615	434	–	11,284
Russian	4	1,912	388	–	–	2,300
Dutch	2	459	–	2,225	–	2,684
Serbian	2	–	–	–	–	–
Samos	1	–	–	–	–	–
Barges	–	1,169	4,658	–	–	5,827
<b>Total</b>	<b>459</b>	<b>538,192</b>	<b>150,241</b>	<b>16,978</b>	<b>22,403</b>	<b>727,814</b>

Source: *Recueil consulaire Belge*, 1867, pp. 774-780 [The total has been calculated only for the 4 cereal varieties included by us in the table. Data converted by us from Galați kilos to quintals; totals recalculated by us].

**TABLE 5**  
Ships loaded in the basin of Sulina port, in 1861

Country	Ships	Tonnage	Port of origin	Type of cargo	Quantity of grains (quintals)	Total importer state (quintals)
Austria	47	20,393	Brăila	Maize	268,168	335,163
	1	417		Barley	5,008	
	10	4,458	Galați	Maize	57,788	
	1	417	Ismail	Maize	4,199	
Great Britain	40	14,267	Brăila	Maize	240,251	412,225
	5	1,808		Barley	26,108	
	20	10,212	Galați	Maize	115,870	
	3	1,097		Barley	15,718	
	1	282	Reni	Maize	4,522	
	2	677	Ismail	Barley	9,756	
Prussia	2	600	Brăila	Maize	10,710	17,170
	1	527	Galați	Maize	6,460	
Russia	1	360	Brăila	Maize	5,610	10,746
	1	440		Barley	5,136	
Greece	1	305	Brăila	Maize	4,539	4,539
Norway	1	318	Brăila	Maize	5,100	15,208
	2	830	Galați	Barley	10,108	
Mecklenburg	4	1,078	Brăila	Maize	23,205	36,634
	1	248		Barley	4,708	
	3	730	Galați	Maize	8,721	
France	1	299	Galați	Maize	57,788	57,788
Italy	2	818	Galați	Maize	10,013	10,013
Portugal	1	325	Galați	Maize	5,168	5,168
USA	2	995	Galați	Maize	10,982	10,982
<b>Total</b>	<b>153</b>	<b>41,091</b>				<b>915,636</b>

Source: *Bollettino consolare*, 1861, pp. 305-314.

**TABLE 6**  
Ships loaded in Sulina port in 1861

Country	Ships	Tonnage	Port of origin	Type of cargo	Quantity of grains (quintals)	Total importer state (quintals)
Austria	1	514	Brăila	Maize	6,630	6,630
Great Britain	4	3,270	Brăila	Wheat	30,345	162,261
	6	2,411		Maize	39,449	
	13	4,319		Barley	62,158	
	2	2,025	Galați	Wheat	16,150	
	1	286		Maize	4,674	
	2	669		Barley	9,485	
Italy	2	305	Brăila	Wheat	4,998	10,423
	1	333		Maize	1,000	
	1	323	Galați	Maize	4,425	
USA	1	397	Brăila	Maize	6,630	27,174
	3	1,790		Barley	20,544	
Greece	1	329	Brăila	Wheat	3,570	5,415
	1	167		Barley	1,845	
Ionian Islands	1	224	Brăila	Wheat	4,794	4,794
Norway	1	296	Brăila	Barley	3,809	3,809
Sweden	1	460	Brăila	Barley	5,564	5,564
Russia	1	287	Galați	Maize	4,845	4,845
<b>Total</b>	<b>45</b>	<b>18,405</b>				<b>230,915</b>

Source: *Bollettino consolare*, 1861, pp. 305-314.

**TABLE 7**  
Grain exports through the ports of Brăila, Galați and Ismail  
in the years 1861 and 1862 (quintals)

Port	Place of loading for export	1861	1862
Brăila	Port of Brăila	2,569,096	2,659,270
	Transhipped in Sulina	751,591	1,301,794
	Total	3,320,687	3,961,064
Galați	Port of Galați	1,175,220	985,908
	Transhipped in Sulina	261,142	257,243
	Total	1,436,362	1,243,151
Ismail	Port of Ismail	417,351	188,700
	Transhipped in Sulina	14,200	29,030
	Total	431,551	217,730
<b>Total through the Danube mouths</b>		<b>5,686,366</b>	<b>5,694,563</b>

Source: *Bollettino consolare*, 1862, pp. 1118-1127.

**TABLE 8**  
Romanian grain export, by quantity in thousands of quintals

Year	Wheat	Maize	Rye	Barley and oats	Total (all 4)
1861	2,553	2,513	–	243	5,309
1862	3,099	2,088	205	723	6,115
1863	2,584	2,203	30	478	5,295
1864	3,565	2,947	21	156	6,689
1865	–	–	–	–	–
1866	2,339	1,346	41	550	4,276

Source: Axenciuc, 2000a, pp. 369-374.

**TABLE 9**  
Romanian grain export compared to the export from Brăila and Galați ports  
(1861-1866), in thousands of quintals

Year	Romania	Brăila	Galați
1861	5,309	2,684	1,640
1862	6,115	2,753	1,437
1863	5,295	3,990	1,848
1864	6,689	3,833	3,110
1865	–	2,166	1,402
1866	4,276	1,934	727

Source: Axenciuc, 2000a, pp. 369–374; see Table 1 and Table 2.

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