

## THE EVOLUTION OF THE ROAD TRANSPORT NETWORK IN MOLDAVIA – FROM GEOGRAPHICAL COHERENCE TO PERIPHERAL DEPENDENCE

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**Abstract:** This study is primarily aimed at diagnosing the development of road network in the north-east part of Romania, as a prerequisite for an analysis of its quality. Tracking how this network was formed during the last three centuries, was allowed to browse a large bibliography and support that was original or processed cartographic representations. Starting from the existence of natural and anthropogenic premises of the road network development in this region, the analysis was carried in accordance with to conventional means of historical geography, highlighting the political implications. The periodization made to take account of the moments of rupture in the evolution of the network studied, overlapping of major geopolitical changes. Essential conclusion is the assumption that the structure validation center of road network in north-east Romania (Moldavia) was profoundly distorted due to a continuous process of marginalization, emphasized in the contemporary period. In this way, what could be a shaft of the network coordinatory axis, the transcontinental road that was Siret Valley terminus with the port of Galați, was deeply reshuffled being diverted towards the capital (Bucharest), in a process of excessive centralization.

**Key words:** historical changes, political factors, deficiency/optimization, marginal space, convergence areas

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### NATURAL AND ANTHROPOGENIC PREMISE OF THE WAYS OF ROAD TRANSPORT DEVELOPMENT

The Genesis of the communication network is tightly related to the practical and organisational necessities of any community. As these necessities have become more and more complex, the occurred networks have got a

special strategic importance. Most often, these networks were governed by a centre with a large capacity of polarization directed to this one (or starting from this one) the large spread axes of communication. The complex relations between these points of space (nodes, poles) reunited in network is expressed through differences of accessibility (Frémont, 1999) that may generate spatial inequalities, especially in the case of an inadequate conception of the territorial management (Giraud, 1996, p.19). Transport networks have self management and as certain studies present, their evolution has known a continuous progress from the dominance of certain intuitive and heuristic rules to those based on optimisation and simulation (Xie, Levinson, 2009, p.212). In the analysis of a transport network evolution, it should be also taken into account a relation of dependence between this one and the social and economic system for which the formalization of certain patterns of economic development and spatial reorganization have become a priority (Pini, 1998, p.177). The rapports between the individual and his life environment, the population spatial behaviour that may govern decisions which are apparently inadequate to the geographic reality (Rougerie, 2000, p.150) should not be neglected either. Last but not least we should take into account the role of transport infrastructure (especially the ruttier transport) as agent of geographical changes (Johnston, Gregory, Smith, 1994).

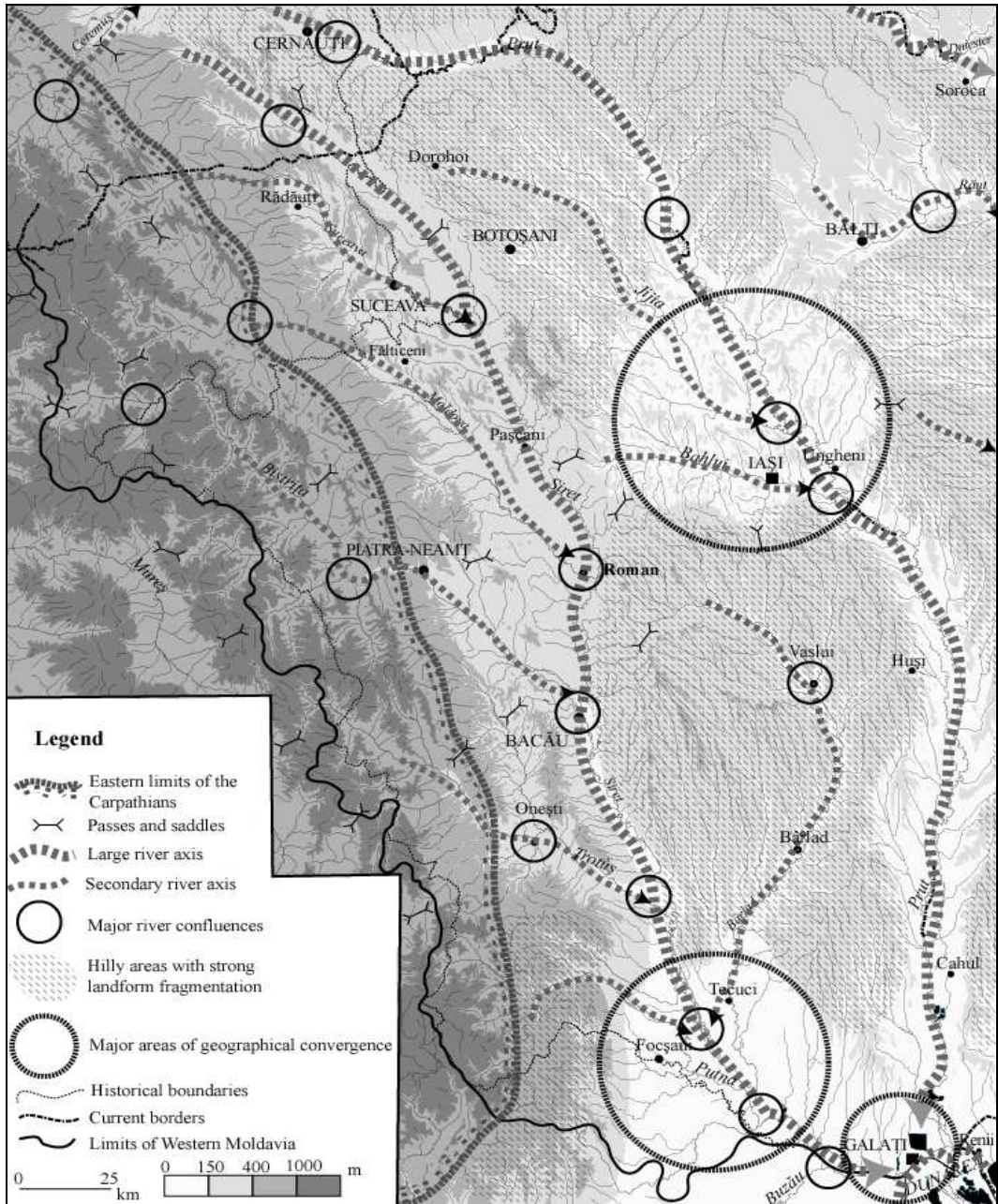
The western part of the historical Moldavia displays some physical and geographical features that have guided in time the appearance and the evolution of the communication network (Figure 1):

- The presence of handsome fluvial axes which are parallel and convergent toward the Low Danube river (Siret and Prut or if we extend the analysis at the scale of the historical Moldavia, including Dniester which is directly tributary to the Black Sea) are essential issues in the orientation of main roads;

- The presence in the western part of the Oriental Carpathians crossed by longitudinal and transversal valleys collected by Siret river, issue that interposes a relative natural barrier toward Transylvania and which guides the main flux(tide) toward the flow of Siret river. From this point of view, a major role in directing the main Trans Carpathian routes was played by the commercial – manufacturing towns from Transylvania, Braşov and Bistriţa especially (Cebuc, Mocanu, 1967);

- The dominance of a hilly relief within Siret – Prut interfluve which is quite varied from morphological and slope perspective, reducing from here and there the possibilities of communication on east –west direction with the notable exception of some saddles which become therefore obligatory passing points, placed with predilection in the northern half of this interfluve. The main effect consists in the division of the eastern part of the region in two divergent areas from natural favourability perspective for the development of the communication network: one directed to the hilly Plain of Jijia river and the other one directed to Bârlad Plateau;

- The existence of some areas of natural convergence, especially around some major confluences (of the two fluvial axes with the Danube river especially and to the Carpathian rivers with Siret). These ones naturally structure the evolution of transport networks. As unfavourable issue especially in the lower regions, the presence of large areas of wetland may be mentioned.



**Figure 1.** The natural premises for the road network development in Western Moldavia

Having these natural premises, the communication networks from this region respected quite accurately at least in the past the physical- geographical offer. The development of the networks and means of transport is however indissolubly related both to the production and circulation of goods and to the population mobility. In this way, to the natural premises, a series of human – geographical particularities was added. Their importance in the dynamics of the road transport had the same meaning:

- The concentration of the population especially in the neighbored area of the Carpathians (in the Subcarpathians depressions, in Suceava Plateau and in Siret Passage). This one was a constant in the demographical evolution of Moldavia, at least starting with the 14<sup>th</sup> century and may be explained by the more generous offer of those areas and by the larger distance toward the troubled areas of the North Pontic steppes;

- the existence of some natural resources which are more varied in the Carpathian and Sub Carpathian region, that stay at the basis of the earlier development of industrial activities even if nowadays the inherited infrastructure was submitted to a large process of degradation in the last twenty years;

- The presence of some political barriers resulting from successive dismantling of the Principality of Moldavia at the end of the 18<sup>th</sup> century and the beginning of the 19<sup>th</sup> century which imposed therefore a divergent evolution of the communication networks from the perspective of their efficiency and quality inclusively. There is a difference between the former Moldavian Austrian frontier (till 1918) which is more permanent and favourable to innovations diffusion, including the infrastructure of transportation and frontier on Prut river which is as opaque now when it divides the historical Moldavia in two as well as when it separates the western part of the Tsarist Empire, even if this one was made from different historical reasons;

- The positioning at the Southern end of the communication area which is first of all dysfunctional nowadays from geo-political reasons. The Ponto-Baltic Isthmus, which the historical Moldavia in overall belongs to, has lost in the latest centuries the importance as commercial route between the North –West and the South –East of the Europe, even if it remains however at European scale, a relatively dense populated area at least in the Southern sector. The way the commercial fluxes were redirected in the states that are extending in this Isthmus (Poland, Ukraine and Romania firstly) was a divergent, centred on capitals (Kiev, Bucharest) or on the main industrial – urban axes (Silesia in the case of Poland), resulting therefore a marginalization of the natural corridor which unifies the middle and low flow of Vistula, the upper valleys of Dniester and Prut, and finely the Siret Passage, the latter being made by accessible saddling, parallel to the Carpathian chain. This marginalization was accentuated in the latest decades and will continue probably to be accentuated more in the conditions in which the states from the present Eastern frontier of the European Union will be maintained in the area of influence of the main political actor from Eastern Europe, the Russian Federation.

All these particularities were differentially manifested in time, mixing up in different degrees, and depending on the specificity of each category of communication network. This is the reason why a detailed analysis of their evolution is required as well.

### **THE CHARACTERISTICS OF THE ROAD TRANSPORT NETWORK IN MOLDAVIA IN THE PRE MODERN PERIOD**

The organisation of a network of coherent roads in the Moldavian space is relatively recent, just from Middle Age, being mentioned clues of the existence of some well précised routes which are tightly related to the insertion of this territory in the European economic circuits. Moldavia was previously only tangentially exposed to the diffusion of the antic communication network ( from the Roman period) but there were transit couloirs directed by the main valleys, passes, saddles toward the Central Europe or to the south - east in the period of the great

migrations. The existence of those roads was however pretty uncertain till the 18<sup>th</sup> century, even if the medieval documents mention many local or continental roads of large scale, being unable however to set up a précised route. The appearance of some more précised cartographic documents after the year 1700 allow a more faithful reconstitution of the routes, even if many of them were not inserted (among them being mentioned the famous map of Dimitrie Cantemir). As most of these cartographic materials were drawn up by the Austrians, these ones were several times displaying only the connection routes between Moldavia and Transylvania which was integrated after 1699 in the Hapsburg Empire. The cartographic materials from the last decades of the 18<sup>th</sup> century are much more generous with such information (Băican, 1996, p. 135-142, see Figure 2). The symbols used in these maps, the Austrian maps (Büschel, Otzellowitz, von Mieg etc.) or in the Russian maps correspond to those used nowadays, having also the advantage of the scale in several cases, presenting detailed issues and bridges (inclusively the floating ones that are variable as position), the post stations, the inns, the distances (measured in fasting) etc.

The origin of the transcontinental road which diagonally crosses the historical Moldavia, connecting the Galician town Lvov (and indirectly the Baltic harbour Gdansk) to the North – East seashore of the Black Sea (Caffa, Cetatea Albă, Chilia), having a variant toward the Low Danube (Galați-Brăila), should be looked for in the 13<sup>th</sup> century after the great Mongolian invasion (cf. of the historians N. Iorga and C. C. Giurescu, 1920 and 1967 respectively). The North – Western part of the Black Sea being one of the outlets of the Euro – Asian transcontinental routes connected to the Byzantine Empire, had become a very attractive area for the Genovese merchants, who were transiting oriental goods which were looked for by the Hanseatic merchants from the region of the Baltic Sea for which Lvov, town situated at the half distance of the two continental maritime basins, had become a sort of poured plate of a very prosperous trade. This one has also been manifested by an afflux of Oriental merchants in the towns situated on this route (Armenians first of all). This transcontinental road was controlled at the end of the 18<sup>th</sup> century by several states (Prussia, the Tsarist Russia, the Hapsburg Empire, the Ottoman Empire) after it had been for a long time under Poland control mostly with the exception of its Ponto-Danubian outlet which was under Ottoman control. In fact, we can draw the conclusion that it is this extreme fragmentation of the Ponto - Baltic Isthmus that has generated the decrease of the importance of this route, decline which continues nowadays as well.

It should be mentioned here the fact that this route has two variants:

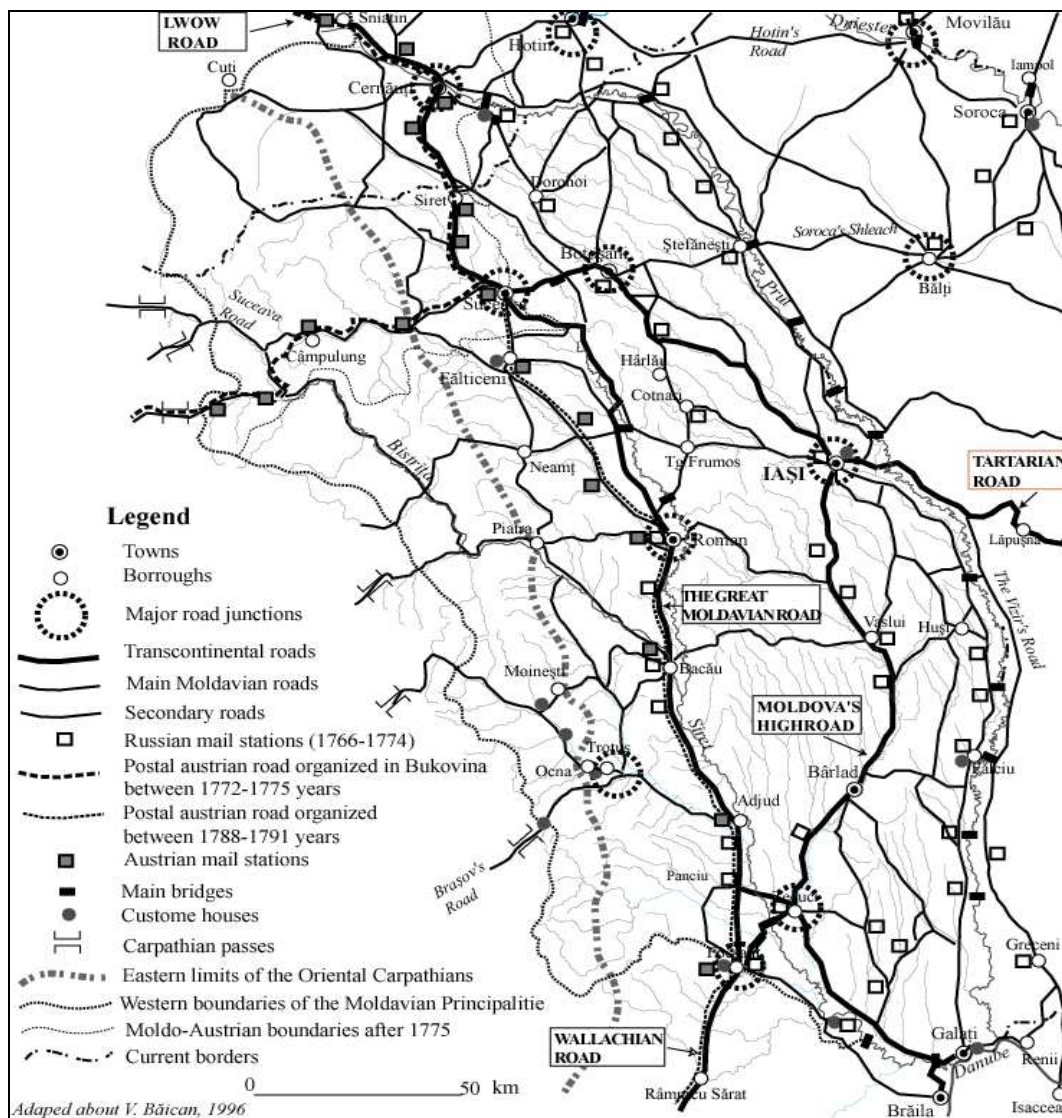
- the so called “the Tatar Road” which started from Caffa and was using approximately the inter river between the basins of Dniester and Bug rivers having as more important halts Kamenet and Tarnopol towns<sup>1</sup>;

- the so called “the Moldavian Road” which had as outlets, the commercial towns from the North West of the Black Sea (Chilia, Cetatea Albă, Vicina (?)), using the shortest and the most accessible routes from Prut – Dniester and Siret – Prut interfluves and then, the natural couloirs made up by the Carpathian valleys from the superior basins of those rivers passing through the successive capitals of the Moldavian Principality (Siret, Suceava and Iași).

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<sup>1</sup> The section which was unifying the capital of the Principality, Iași, to the harbours of the Black Sea had the same name





**Figure 2.** The road network of Western Moldavia in the late of the XVIIIth century

The first variant is more vulnerable crossing a forest steppe region, so that the second route (the Moldavian one) has become in time more important, gradually moving the route to the west as Chilia and Cetatea Albă enter in decline becoming military garrisons only in the favour of some newer commercial centres such as first of all Galați town, the two variants of the “large Moldavian route” detached from Suceava area were converging to: the first one through Botoșani – Iași – Tecuci and the second one faithfully following the Siret Valley. Noted that the first variant crossing a predominantly agricultural region and the second one was crossing a mixed agricultural and forester region, wood being for a long time an important resource for Moldavia<sup>2</sup>.

<sup>2</sup> The same importance for the second variant had the salt obtained mostly from Târgu Ocna, the road from this town to Bacău being named Ocna Road, this resource being massively exported to Russia

From early times, these main routes had ramifications toward East and West, gradually forming a wrought network using the fords of the main water flows (where a tax was usually paid), the Carpathian halts or the saddles from the Moldavian Plateau. The followings were more important: Soroca's Șleah<sup>3</sup> Sorocii which was detached from Botoșani, following the route to Prut river, to Ștefănești and farther to the east using the transversal valley of Răut river between Bălți and Gura Camencei, from Soroca on Dniester river going to Vinița and Kiev; Suceava Road which was from early times connecting the first more durable capital of the principality from the northern Transylvania (Rodna, Bistrița also called the Upper Road) using Rotunda and Tihuța halts forming with the previous one a real transversal axes which was connecting the Central Europe to the basin of the middle Dnieper river; Brașov Road detached from Bacău toward Târgu Trotuș and Oituz passing, connecting the road from Siret Valley to the important commercial axes which was connecting the Central Europe to Constantinople, through Bucharest (also called the Lower Road); the Wallachian Road detached from Tecuci toward Focșani and farther toward Bucharest; The Road of the Vizir, used especially by merchants and emissaries from the Ottoman Empire, which was accompanying the inferior flow of Prut river, detached from the Tatar Road, crossing the Danube to Oblucița – Isaceea, etc; Hotin Road detached in the extreme northern part of the principality, at Cernăuți and using the high plateau over the valley of Dniester river, toward Hotin and farther toward Soroca, Orhei and Chișinău where it was meeting the Tatar Road, etc. This major network was accompanied by various secondary roads which were connecting the main fairs and towns of the principality, mostly using the most facile routes along the valleys and on inters rivers.

Toward the end of the 18<sup>th</sup> century, major modifications within this network are produced once with the occupation of the north- west part of Moldavia by the Austrians (in 1775). Vienna's interest for the western part of Moldavia was a special one, for this purpose being also arranged post roads along some old routes, firstly between Sniatin-Cernăuți-Suceava-Câmpulung-Vatra Dornei, secondly belong the Siret Valley road, from Suceava to Wallachia<sup>4</sup>. The same interest was stirred by the Tsarist Empire which used in that period the routes from the central – eastern part of Moldavia principality which had become the theatre of military operations, place of convergence of the interests of the great powers of that epoch. The Russian interests were related however especially to the Danube outlets of those roads, the target of the Tsarist expansion being Constantinople. The network of ruttier transportation in that period was generally tributary to the closed feature of feudal economy prolonged in the region under study which was in full development and modernisation (Chiriac, 1976, p.36-43).

This troubled period has profoundly marked the further evolution of the roads in Moldavia, destroying the medieval network, reducing the importance of some roads or limiting the relations from both parts of the frontiers imposed in 1775 and 1812. If we are able to talk previously of the existence of certain true ruttier nodes as the capital of the principality, Iași towns like Cernăuți, Botoșani, Suceava, Roman, Bacău, Tecuci, essential for the network

<sup>3</sup> Șleah is a word of Polish origin, meaning road.

<sup>4</sup> This was the pretext of annexing the north-west part of Moldavia and the creation of a ruttier connection between Transylvania and Galicia

management being the quadrilateral made up of Roman-Suceava-Botoșani-Iași, later these nodes are rather to become stages along some inferior roads that depend on the large routes which have maintained their transcontinental status. In this way, the large Moldavian Road was gradually attracted toward Siret Valley and from the Carpathian Curvature area it was deviated toward the capital of Wallachia, decreasing the importance of the Moldavian Road variant which was crossing Prut – Siret interfluve by unifying Galați with Tecuci and Iași with Botoșani.

### **THE STAGE OF THE BEGINNING OF THE MODERNISATION PROCESS OF THE ROAD NETWORK**

Along the 20<sup>th</sup> century, the ways of transport from Moldavia in overall supported profound positive and negative changes, in tight connection to the evolution of the European economy in general. Crucial was also the decrease of the dependence toward the Ottomans through the trade liberalization (with cereals especially) after the peace from Adrianople (1829) and through the diversification of goods production. Some studies made in the past showed that the discordance between the necessity of a more fluent circulation of goods and the way the ruttier network really looked like was stronger than in Wallachia which had the advantage of the presence of a vast Danubian space which was compensating, through its harbours, the necessity of the terrestrial transport. The same differences are noticed in Transylvania where the Austrians, in their wish to explore as intensively as possible the natural resources, in full phase of capitalist industrialization, earlier modernized the ways of communication (Boicu, 1963). Moldavia reduced to something more than a third of territory after its division from 1775 and 1812, having access only to the single Danubian harbour, Galați, peripherally situated, was practically obliged to down in a single direction its goods/cargo, hence resulting the higher cost price of transportation, having effects therefore on the isolation of some areas. In some situations, the high transportation cost obliged the population from certain areas to change the goods (cereals especially) in alcohol as in the north of Moldavia ( as N. Suțu was mentioning, quoted by Boicu, 1963). The cost price of some import goods brought through Galați harbour was also higher especially at great distance from the harbour<sup>5</sup>.

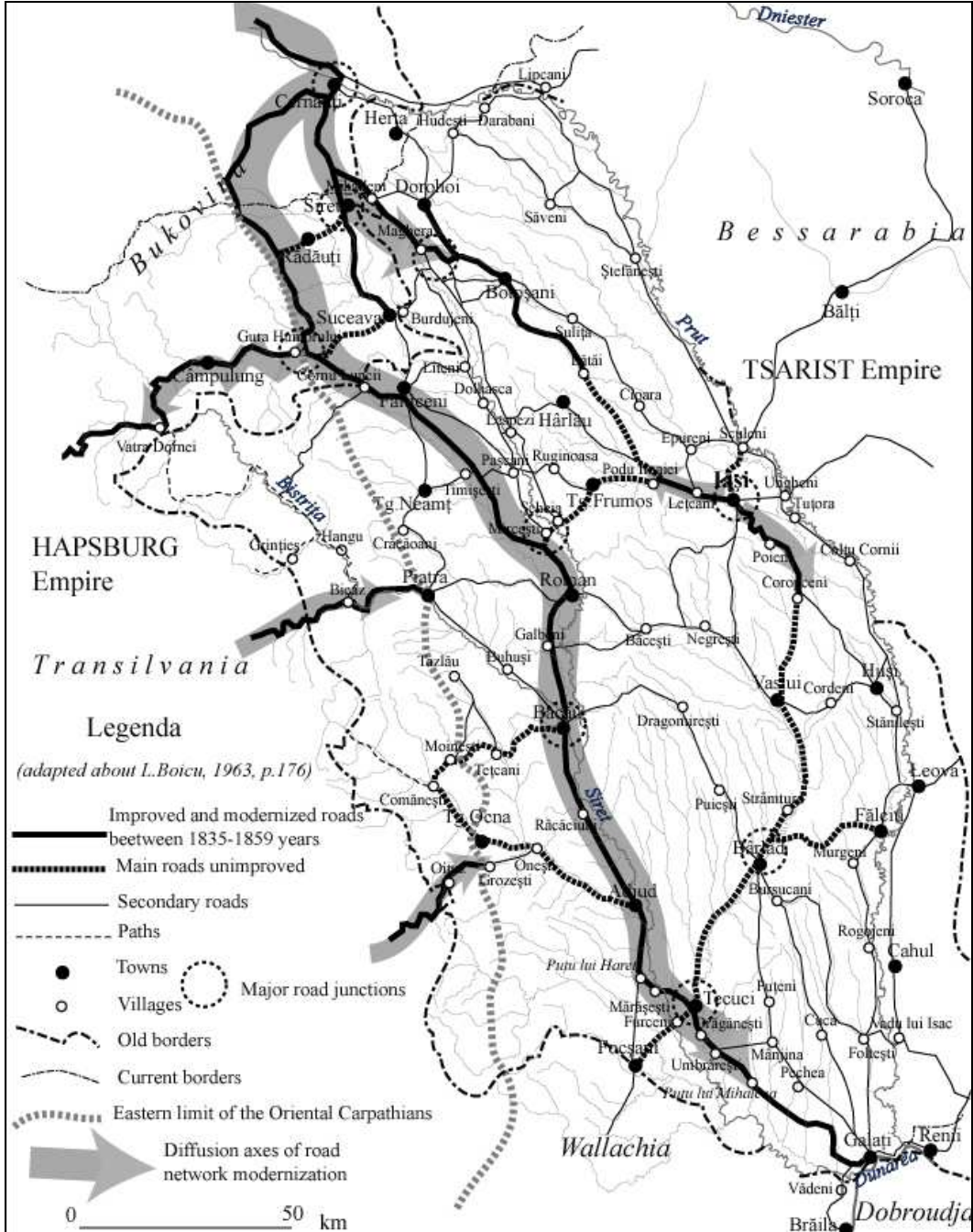
The problem of improving the ways of transport was required with acuity, especially after 1829, along with the reforms from the regulatory period. This imperative has determined the initiation of performing some actions of modernizing the main roads, so that till 1849, it had been managed to be arranged the routes Mihăileni-Iași-Galați and Cornu Luncii-Roman-Bacău-Mărășești (on a distance of approximately 360 km), being built as well an important number of stone bridges ( approximately 400 in number). This effort was enabled by the initiation of the first forms of engineering academic education (in 1850) and by the formation of a free handing work made up by the Bemis who had among their duties such activities, within some quasi – feudal relationships which were maintained till 1859. Not incidentally, some historians consider that the origin of the remaining behind of the East Europe and of Romania especially must be looked for in the context of modernity from that period which instead of leading to a relaxation of the relationship of feudal type

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<sup>5</sup> The transportation cost from Galați to Dorohoi overpasses that from the English harbors up to Galați.



it rather accentuated them (Chirot, 2004, p. 17). The most part of the executed works had the task to facilitate the transport of the Russian military forces, reason for which the attention was drawn between 1829-1859 more on the routes used by the Tsarist army (Figure 3).



**Figure 3.** The evolution of the road network of Western Moldavia in the first part of the XIXth century

In many cases, the excessive use of roads was leading to their massive degradation in spite of the efforts of modernization, mentioned by some sources. For instance, the International Commission of studying the Danubian Principalities state of facts, founded through the Peace Treaty from Paris, in a rapport made in 1858 and quoted by Boicu, (1963) it was mentioned that in 1858, Moldavia had approximately 600km of roads in comparison with the 262 km of roads found in Wallachia, registering therefore higher progresses than the latter one (situation which was mentioned in the Romanian Encyclopaedia in 1939 as well).

In Moldavia, a Public Works Department which was managing the roads had been founded even from 1849. Moldavia's relative openness to modernity in the first part of the 19<sup>th</sup> century may be attributed to some faster insertions in the commercial circuit, in the cereal export field especially, whose evolution were not depending so much on the international treaties as it had been often stipulated but on the economic factors (Murgescu, 2010, p. 114-123).

In this way, Moldavia seemed to be the favourite in that epoch, this one having tighter relations with the Habsburg Empire after the occupation of Bukovina, benefiting of a less stressing taxation than that in Wallachia, in the context of very controversy relations between the two powers which were controlling the Principalities territory at that time, the Ottoman Empire *de jure* and the Tsarist Empire *de facto*. Not incidentally, the regions which had registered the fastest extension of the areas cultivated with cereals were those from the north of Moldavia in close neighbourhood with Bukovina (Dorohoi, Botoșani, Suceava, Roman areas, etc.). This tendency was coordinated with great interest for the modernization of the transport ways in those regions.

This modernization, which was supposing first of all the roads levelling and paving, was accompanied by the modification of some routes, not always the economical and functional ones or in agreement with the physical geographical realities. The most typical case was that of the road which was connecting Iași to Galați deviated through Bucium-Poieni-Solești to Vaslui, route which is used nowadays as well by the National Road 24 (DN24) in the disfavour of the old shorter road which was using Bordea pass through Nicolina and Rebricea streams, route which was later used for the railway building. In spite of this effort, vast spaces have remained almost completely with no important roads, especially in the mountainous and hilly areas (the west part of Bârlad Plateau, Vrancea Subcarpathians, etc) areas where the freeholder property and an agriculture based on a subsistence traditional poli-culture were still dominating. It should be noticed however that the authorities of that time complained and performed some actions of repairing and rehabilitation of some roads which were connecting the towns from Siret Valley and those from Bârlad Valley, first of all Bacău, Bârlad and Vaslui. The same thing happened with the connection road between Mălini and Dorna, necessary for the recordation of those isolated mountainous areas, imperiously required by the inhabitants (Boicu, 1963, p. 440).

A special attention was given to the building of bridges along the main arteries, especially on Siret River and its Carpathian affluent.

We may notice the existence of some main waves of diffusion of progress performed in the ruttier transport networks, having the origin during the Habsburg Empire, approximately along the classic route between the Baltic Sea and the Low Danube, axe which was accompanying more or less faithfully Siret Valley, and maintaining its role of coordinator of the network.

This wave of diffusion had also a deviation in the direction Mihăileni-Botoșani, with a ramification toward Dorohoi, these towns being earlier inserted in modernisation circuits than other towns from Prut – Siret inter river. For this key period in the evolution of modern ruttier transport network from Western Moldavia, the importance of the political factor is noted as well. Iasi town, which had become peripheral after the occupation of Bukovina managed to adept pretty quickly to this wave of progress, before achieving it, becoming a secondary centre of diffusion having two preferential directions: the road which, according to the market economy logic, was going along Bahlui and Bahlueț valleys toward Siret axe and the new road which was built on Vaslueț valley toward Galați harbour along Bârlad valley. After 1850, the decrease of its political importance, its changing in a simple county capital diminished up to disappearance this tendency of centralization of the ruttier network from the central eastern part of the principality, the capital of the United Principalities, that is Bucharest, determining the deviation toward west of the connection routes of the main Moldavian towns, including Iași as well.

Thus, the road which was connecting the localities Podu Iloaiei and Botoșani, crossing the interfluves from Bahlui, Miletin and Sitna, a straight road was redirected toward Hârlău-Târgu Frumos, the same as Siret axe was deviated in Mărășești area from its classic route toward Tecuci- Galați, along the old mountainous road toward Focșani-Buzău-Bucharest. This deviation toward west left therefore no chance for the development of a necessary alternative route Iași – Galați, along Prut river, at least from the perspective of making dynamic some areas with important agricultural potential, this area remaining isolated, being practically the last area “touched” by modernization from the Romanian space, at least from the social – cultural perspective( through the prism of demographic indicators which were here marked by traditionalism till after the Second World War). Otherwise the neighbour Bessarabia was in that period at a lower level of infrastructure development, this province being almost completely with no roads till the inter belly period when it had only 230 km of paved roads.

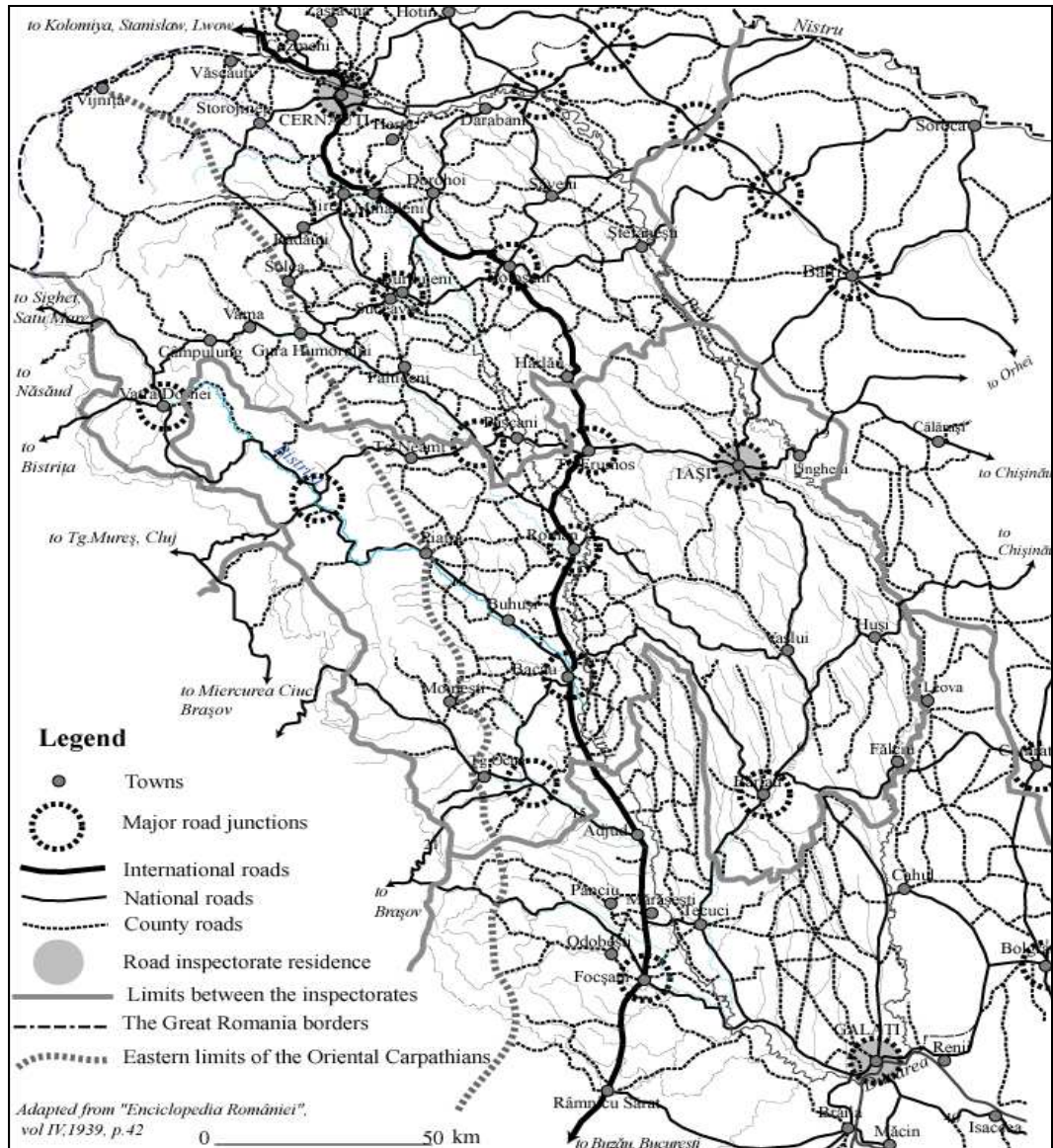
Besides this wave of diffusion come also from the Habsburg Empire, there were manifested other two secondary directions of diffusion along the Carpathian passes Oituz and Pângărași having as targets Piatra Neamț town, and the multiple confluence from the middle basin of Trotuș River (around Onești town). The origin of those routes was found in the Transylvanian towns Brașov and Târgu Mureș which were earlier connected to a modern ruttier network and the purpose was in fact the searching for some outlets toward the Low Danube. These transversal roads were meant to reduce the effect of barrier exercised by the Oriental Carpathian chain, in the north having already been arranged a trans-Carpathian route, partially transversal, between Cernăuți-Gura Humorului-Vatra Dornei and Bistrița.

We can state therefore, that the main impulse given to the modernization of the ruttier transport network from the Western Moldavia came from the Habsburg Empire with a stronger north- west vector, (according to the natural potential of the accessibility potentials firstly), from east and south, at least until 1960 non existing any wave of progress. Without being definitively established, a great part of the major ruttier network from the contemporary period was finished within this interval, later being brought only some corrections according to a logic which was placing the Western Moldavia in a peripheral position, oriented toward an exterior node situated in the central part of the vast

Danubian valley from the south – east of Wallachia, that is Bucharest, the capital of the United Principalities and later of the Romanian Kingdom.

**THE STAGE OF MARGINALIZATION OF THE ROAD TRANSPORT NETWORK FROM MOLDAVIA**

The period 1860-1948 was marked by a centralizing logic which diminished the nodal position of Iași city as well as other Moldavian towns and had rather harmful effects from economic and social point of view, creating an excessive dependence on the ruttier transport network from this part of the country in comparison with the major nodes placed beyond it (Bucharest, Brașov, etc., Figure 4).



**Figure 4.** The road network of Western Moldavia during inter-wars period

The effects of this exaggerated centralization were felt more strongly in the Eastern part (Prut – Siret interfluve) which was disadvantaged also by the existence of some opaque frontiers with less points of connection. Beyond Prut River, after 1812 the road network was practically entirely drawn again, having as polarizing centre Odessa harbour. The divergent evolution of the ruttier network between the eastern and western part of the historic Moldavia placed Iași town in an extremely sensible position which is maintained nowadays as well, considerably diminishing its polarising potential assured by its placing in the southern part of the hilly Valley of the middle Prut, natural area of convergence for the entire Carpathian – Nistrian space. This peripherization, process which may be followed pretty faithfully after 1860 was mentioned at least until the end of the post belly period, in a time when the historic Moldavia was found reunited within the Romanian Kingdom and seemed to give a chance to some towns which were looking for the lost centralization, among which Iași was the first. Although the effort of modernisation had continued, the importance of Moldavia within the European road networks had been considerably reduced, from a position of crossing of the some transcontinental roads, it became a simple space of transit on north –south direction.

The only national road (according to the classification used in the inter belly period ) was that which was using in large part the old road along Siret river, connecting Cernăuți town to Bucharest city on the route which was including Botoșani town, in stagnation after 1860, Roman, Bacău and Focșani towns.

Iași and Galați towns, the main urban centres of the Western Moldavia had become just secondary nodes, being just crossings of national roads, favoured in a way between 1918-1940 years by the new possibilities of polarization of vast rural spaces situated from the east of Prut River. If in the case of Galați town the dense county roads network was a compensation, Iași town had the disadvantage of being in the neighbourhood of vast areas which were poorly integrated in the major network of communications (Bârlad Plateau, the hilly Valley of Jijia River), situation which gradually accentuated a series of disparities within the space between Prut river and the Carpathians., which is visible nowadays as well.

The first special unitary law for roads was issued in 1868 under the guidance of the engineer Panait Donici who was minister of public works in that period. This law was stipulating the maintenance of the large roads from the state budget through a department which had under control ten territorial circumscriptions. The local roads (communal, vicinal and county roads) were under the jurisdiction of the local authorities, the work benefits being gradually eliminated. This progress was materialized after 1870 in the quick evolution of building roads and bridges (appearing now the metal bridges as well). Therefore, in the Old Kingdom, from 1800 km of bridges arranged in 1870 they reached to 26 426 km in 1905, from which 3036 bridges had the status of national roads. Till 1929, there were various amendments to this law, this year being created an autonomic organism ( The Autonomic House of State Roads) which depends on the Ministry of Public Works and Communications) with own budget and provided by specific incomes. This evolution wanted to keep pace with the new realities derived from the extension of the monitoring process. But as previously, the county and communal roads were left in the local authorities care, creating therefore the premises of some disparities related to their quality. Important



progresses were registered in the first part of the 20th century regarding the materials that were used for roads arrangement and maintenance, paved and concreted parts of the national roads being extended as well.

The way in which the road network of the region was organized in that period was displaying several deficiencies that are explainable through its peripheral status. If in the north, the existence of a less served area in the southern part of Suceava Plateau may support explanations of political reasons, being crossed by the former frontier between the Romanian Kingdom and the Austrian – Hungarian Empire, the convergence area from the confluence of Suceava and Siret rivers being ignored in crossing the main ways of communication as well, to the south we can't accept but a severe lack of economic thinking when we notify the inexistence of a possible connection between Bârlad and Siret valleys (as that between Bacău and Vaslui or between Adjud and Bârlad) or the neutralisation of some shorter routes (which were previously frequented) between Iași town and other important towns such as Roman or Botoșani

Some areas were maintained in an extreme isolation with reminiscences up to nowadays although the spatial logic proposes relatively facile connections. Therefore, the Subcarpathian area of Vrancea was at that time (as it is nowadays) completely separated of Tazlău-Cășin Depression and the central part of the hilly Plain of Jijia River was divergently crossed, greatly diminishing the possibilities of communication, the network (as it was existing) being oriented toward the county capitals (Iași and Botoșani in our case), the easily accessible sections as well as those created by the valley of Jijia River and its affluent (the Miletin especially) being completely ignored. If in the mountainous area, the existence of some various road endings may be explained by the relief fragmentation or by the reduced density of population, in the extra Carpathian hilly regions in Bârlad Plateau especially, this situation explains firstly the decreased economic interest represented by an area dominated by a largely self – sufficient social – economic life. We may invoke as well the effects of the administrative structure of the road networks which were several times crossing some physical – geographical regions, the same as in the invoked cases.

The region situated under the jurisdiction of Iași Inspectorate gave the impression of a more disarticulation of the network with large disparities between the western part (Roman and Bacău counties especially) and the eastern part. Galați and Cernăuți counties were managing denser networks (if we mention only the national and county roads) and more coherent with a better serving of the space, mainly from connectivity perspective. The fact that no major connection on the east – west direction between Moldavia and Transylvania hadn't been underlined, was a reflex of both the excessive centralization of the Romanian ruttier network and of the political situation from the inter belly period, as the frontier with the Soviet Union was practically closed, diminishing thus the possibility of traffic on that direction. In addition, all the connections to the other north –south international route which was connecting Bucharest to Brașov and Cluj were rather sinuous, especially in the central part of the limit between Moldavia and Transylvania.

This situation was in the disfavour of the relationships between the two provinces, maintaining disparities which in time have become more acute, preserving the barrier effect induced by the Oriental Carpathians whose



particularities weren't in their greatness but rather in their extending on width with several parallel peaks, transversal valleys and passes, etc, all of them making harder the circulation in comparison with the Southern Carpathians which separate Transylvania from the south of the country.

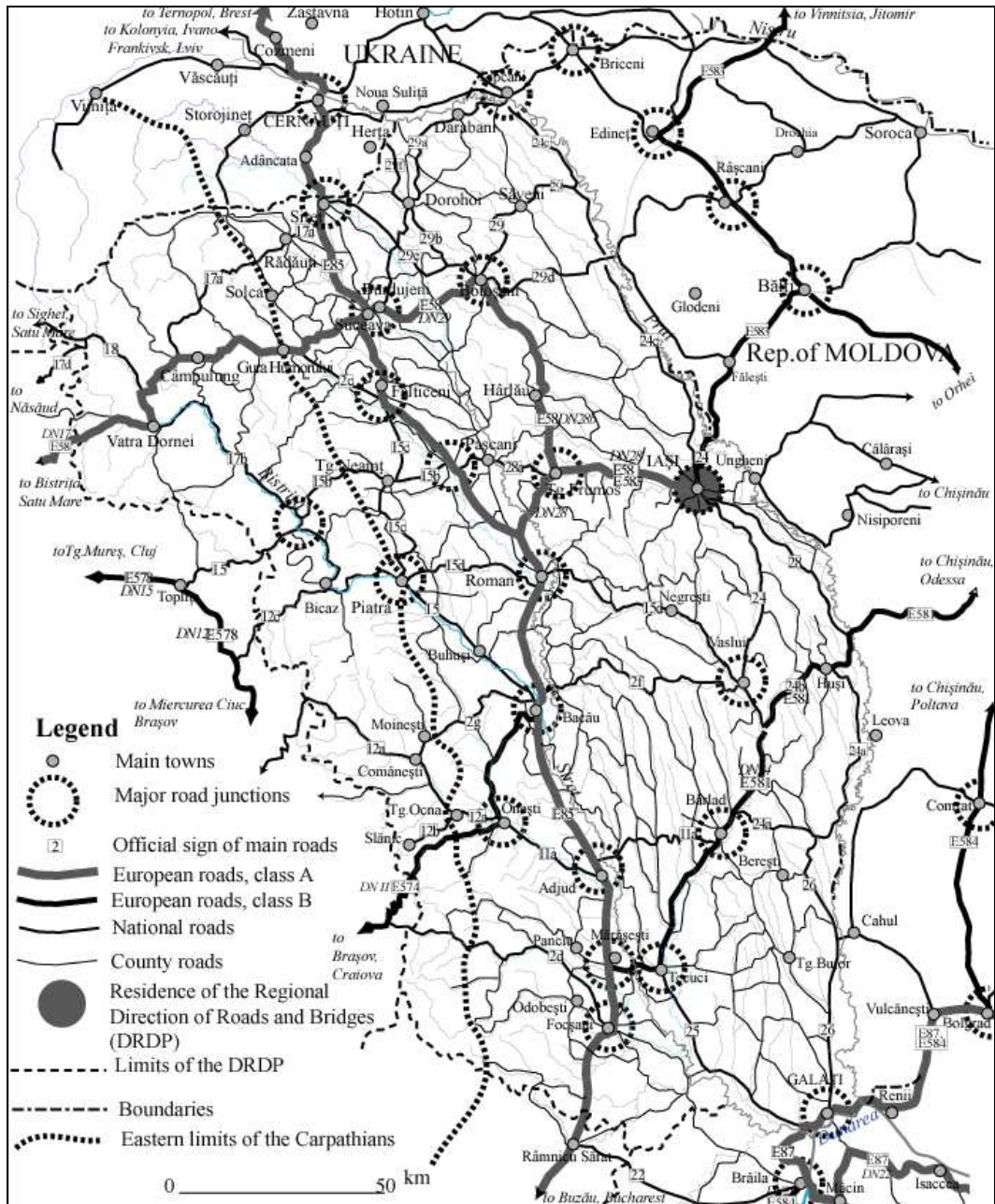
### **THE STAGE OF POST-WAR RECONSTRUCTION OF THE ROAD NETWORK**

In the post belly period an enormous effort was made along the communist regime especially for remodelling the communication network at national level, inclusively through a more rigorous ranking of the routes, according to the development necessities imposed by the principles which stayed at the basis of Romanian social – economic system after 1945. The western Romania has become again a frontier region, stressing its peripheral status with all the corrections made to the ruttier network. Its centralized organization has persisted, having the same essential principle, the maintaining of the capital as main node of convergence, of structuring the network. A part of the sinuous sections of some important roads (national and international ones) were resettled in the hierarchical frame, inclusively with the aim of obtaining a higher coherence or a more efficient centralization (nodding). In some cases, the restructuring was felt as a compensation for some urban centres situated in the position of railway head (Botoșani, Huși for instance), the ruttier transport strongly competing the railway transport, especially after the nationalization performed in 1948 (Turnock, 1990).

The most spectacular in the case of the region under study was the recovery in general of the classic route of Siret Road, changing Suceava in an important ruttier node( besides its status of railway node, inheritance of its positioning on the frontier until 1918) and guiding the international road E85 on Moldova Valley, between Spătărești and Roman, a more facile route than the previous ones which were going round Dealul Mare ( the Big Hill) through Botoșani – Târgu Frumos, using Bucecea and Ruginoasa – Strunga passes. Beside the advantage of reducing the distance, it was however manifested an increase of isolating Botoșani and Iași towns in comparison with the major European network. This route was wanted as a duplicate of the railway section which belongs to the „extra Carpathian ring” (Pop, 1984, p.204).

This situation was in a way solved in the latest years, either by the introduction of some new roads such as the National Roads 17, 29, 28 and 28b which are presently constituted as the European Road E 58, considered as an east- west route which is necessary for the connection of the Republic of Moldavia and of the Southern part of Ukraine to the main sections of the European transport from the west and centre of the continent. Its relatively sinuous route is a result of a conjuncture compromise, the hypothetic highway provided to be built between Iași and Târgu Mureș, following to assume this role.

This status as European road of category A was also obtained by the National Road 21(DN 21), part of an artery which connects the main urban centres from the northern and western part of the Black Sea (E 87). In the category of European roads of category B, there were introduced the following sections: Tișița - Albița , part of an artery which makes the connection between E 85 and E 87; the National Road 11 (DN11) Bacău – Brasov, part of an artery which connects E 87 and E 79 between Bacău and Craiova (figure 5).



**Figure 5.** The contemporary oad network of Western Moldavia

This new skeleton of transcontinental roads which cross Moldavia is completely different of the previous ones, apparently denser, but demonstrating the same dependence on the major nodes that are outside the region. Moldavia, in overall, isn't connected to Galați and Brăila harbours and to Constanța harbour implicitly, through one European road, and Iași is just a stage in the disjunctive long European road, having no precise identity. A much clearer identity was acquired by Focșani – Tețcani section from E85, continued with the

National Road 28(DN 28) up to Iași by their enlarging and rehabilitation made at the end of the 1990s. This route has become one of the best roads from the Romania of nowadays. It was naturally imposed a connectivity of the great Danubian harbours Galați and Brăila to the important ruttier and railway node from the south – eastern Transylvania, that is Brașov, by the introduction in the European circuit of the National Road 25 (DN 25) (Galați – Tecuci) and of the National Road 11a (DN 11a) ( on Adjud – Onești section), being obtained therefore the connection of the entire Moldavia to E87, which, theoretically at least, unifies the main harbours from the low Danube and Constanța.

The ruttier network of national and county importance was strongly adjusted in the period of the Communist regime, being less adjusted after 1989 and eliminating some of the previous deficiencies. Many of county roads endings have therefore disappeared, especially in the half west of the region under study, being several times in tight connection with the administrative limit, occurring therefore discordances between counties (between Bacău and Vaslui counties, but especially between Neamț and Iași counties).

The route of some national roads was corrected (Vaslui-Roman etc.), new roads from this category being arranged such as Vaslui – Bacău which reunified in fact two sections of the former national roads Bacău – Bârlad and Vaslui – Roman, Adjud – Bârlad, etc., both being east- west transversal roads, extremely important for the dis enclave of the western part of Bârlad Plateau.

However, the level of serving some regions continues to be reduced as in the case of the Eastern part of the hilly Plain of Jijia River or of Bârlad Plateau in overall. It is maintained the repulsive feature of some mountainous and Subcarpathian areas ( the north – east part of Bukovina Ridges, Tarcău Mountains, Oușoru Massive which function as veritable barriers) and the absence of some natural connections on roads which are imperiously required to be modernized as well..

It is also noticed the formation of two areas of convergence of the main roads:

- one in the North, in a large space marked by Roman, Fălticeni, Suceava, Botoșani, Hârlău and Târgu Frumos towns, having in centre Siret Valley crossed only by county roads. The most important role is played by „the gate from Târgu Frumos” as Victor Tufescu named it in 1939, which was opening the western part of Moldavia toward the main node of convergence from the middle Prut, having in centre Iași town;

- the other one in the South, territorially more concentrated, comprising firstly Tecuci – Tișița and Focșani nodes, insufficiently coherently connected, thing which is explicable also by the floating character of the valley of the Inferior Siret and of the affluent which converge to this area.

The first area regulates the longitudinal traffic along the main axe and the transversal traffic on the main trans-Carpathian route from Suceava to Vatra Dornei and further to Dej. Iași town has a lateral position to this one, being rather a frontier node with no special importance for the moment, although the generated traffic should impose it, with the condition of the creation of a faster connection toward Ungheni town from the Republic of Moldavia, this one being the main ruttier node from Prut Valley in this state. The second area of convergence regulates the longitudinal traffic both toward Roman – Siret and toward Sculeni or Albița, secondary towards the Danubian harbors, being however in deficit from the connectivity perspective to the possible routes of

transversal traffic as it is Bacău - Braşov road. In this way, a modernization of DN 2c (National Road 2c), Focşani-Târgu Secuiesc should increase its importance as major ruttier node at national scale.

For the first time, Prut River is accompanied by national roads along its valley (with deviations imposed by the local morphology). Unfortunately, the sections which form them are divergent, their quality is rather inferior, therefore, that we can not talk about of a traffic to justify creating a second major longitudinally road between Galaţi-Iaşi-Rădăuţi-Prut, otherwise extremely necessary for the reduction of the effect of barrier imposed by the frontier, generator of economic gaps. Such an artery should lead to a better connection of the ruttier network from the Republic of Moldavia to the Romanian network.

### **CONCLUSION**

The analysis of the evolution of the road network from the western part of Moldavia along more than two centuries underlines the reduced degree of coherence which doesn't correspond to the natural offer, paradoxically more and more depending on a centralized logic as we get near the modern age.

The coherence assured by the coordinator axe that unifies the northern part of the region with the Low Danube (Galaţi town more exactly) was gradually abandoned, subordinating the main roads of the region of the centre of convergence made up in the southern part of the country, around the capital, more or less justified from natural and human perspective. The absence of coherence besides the modest quality of transport infrastructure proves to be an impediment in the development of the interregional changes (Rey & all, 2006, p.102). It is anti- economical and against any tentative of judicious planning of the territory to exclude from the basic network of a whole region an important road which is to connect the former political – administrative centre (Iaşi town) to the only harbour of the region, essential outlet for the invigoration of the economical flows, the latter being cut off of the axe which in fact has generated it, assuring it for a long time a specificity among the Danubian harbour, that of timber harbour.

For the entire eastern part of the country, the deviation of the old commercial road of Siret from Tecuci –Focşani area toward Bucharest, was an error which should be repaired. Naturally, this road should have been oriented towards the harbours from the confluence of Danube with Prut and Siret rivers, naturally extended transversally over Dobrogea Plateau, toward Constanta, the only important maritime outlet of the country. But this one is a tribute given to the extremely conservatory vision of a capital which seems to ignore the suburbs. These discordances were analyzed inclusively in the case of certain researches of large scale (Tălângă, 2000, p. 158-161). They only diminish the spatial equity considered to be one of the key factors in the creation of an efficient transport network, a possible desiderate, everywhere in the world, might be achieved only through a public – private partnership, through a combination between the national interest (centred several times on the capital) and the interests of the local communities (Docherty, Shaw, 2009). In this way, the respect for space (understood in the way Ion Ianoş presented, 2008) is to suffer as well. The analysis which has been displayed in the classical spirit of the historic geography, illustrates as obviously as possible the harmfulness of such rush decisions that are in dissonance with the local necessities for the development of a functional ruttier network. It worth to give a chance to the

convergence areas, to the poles and nodes selected along a secular evolution of a transport network in the region under study in the spirit of the theories of a polycentric development (Peptenatu & all., 2009).

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