

## SOCIO-ECONOMIC ROLE OF TRANSPORT IN THE MIDDLE AGES

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### ABSTRACT

As a result of invasions of «barbarian» tribes that have affected the majority of ancient civilizations, movement of goods and people along many routes in the Middle Ages (late V to XV) has decreased dramatically or even has been interrupted. Naturalization of economy occurred primarily in Western Europe, exchange of goods fell sharply. At the same time the

geography of communication lines gradually expanded and technical innovations appeared that improved reliability, speed and efficiency of transportation. Thanks to this, nations that used to be on the periphery of the civilized world moved to a broad historical arena, economic, cultural, mental prerequisites were accumulated for further rapid development of commercial capitalism in Europe.

*Keywords:* history of the Middle Ages, transport links, exchange of goods, economic institutions, civilized development.

**Background.** *The Middle Ages commonly refer to the period of world history from the collapse of the Western Roman Empire (the end of V century), which marked the end of existence of ancient (Greco-Roman) civilization, prior to Renaissance of ancient traditions, which began in XIV–XV centuries, and then Modern Age, which paved the way for industrial revolution.*

*As a result of invasions of «barbarian» tribes that have affected most of the ancient civilizations, strong political, demographic and economic transformations took place in the world. They affected seriously traffic and trade. **Movement of goods and people along many routes has decreased dramatically or even has been interrupted** [1]. This was typical for the Western Mediterranean and Western Europe in general, where on ruins of the Roman Empire «barbarian» kingdoms were formed.*

*It should be noted that the decline in traffic and trade was evident already in the late Roman Empire, the economy of which was becoming less and less tradable, less market-oriented, and this was one of main reasons for its fall [2, p.71].*

*«Transport and trade relations on the whole space from Iberian Peninsula to the Black Sea ... began to weaken dramatically and even completely disappear. <...> It took the whole millennium for first destruction of relations, and then a long stagnation, when semi-natural economy of the village in the best case was focused on a primitive exchange with our closest neighbors' [2, p.72].*

*Disorganization of exchange destroyed economy and, as indicated by one of the most authoritative experts on the history of the Middle Ages Jacques Le Goff, «the first victim of the collapse of ancient trade system became Roman roads. Medieval roads that appeared later, from a material point of view, were not only roads, but pathways' [3, p.36].*

**Objective.** *The objective of the author is to investigate the role of transport in the Middle Ages in western and eastern countries.*

**Methods.** *The author uses analysis, historical method and comparison.*

**Results.** *Almost all overland roads were unpaved, which made it extremely difficult or even impossible to use them during spring and autumn impassability. However, they were often so narrow that two carriages could not pass each other. The remaining sections of paved Roman roads were often taken to pieces by neighborhood residents to take stone for their needs [4].*

*«Medieval road was depressingly long, slow». Daytime passages «varied depending on the nature of the terrain from 25 to 60 km» [3, p. 166].*

*Feudal institutions hindered the improvement of roads and hampered land transport links. In fact, it was profitable not to build or repair roads and bridges, but to degrade and to destroy them [5, pp.355–356]. Firstly, because of existing laws every item that fell to the ground when the cart broke down or turned turtle became the property of the feudal lord – the owner of the land. Second, the longer was a trip, the more revenue received a lord from the convoy that accompanied the passing and had to protect their lives and property. And often the convoy was really not allocated, all limited to the issuance of a receipt for payment of convoy money, which did not protect passing people, but was a form of extortion. In addition, feudal lords organized numerous customs, fees up to 2/3 of the value of transported goods were charged for passage.*

*If naturalization of the economy led to degradation of transport, poor road conditions and inability of reliable exchange, for its part, forced to «make himself all what is needed ...» [3, p.257]. **Naturalization of the economy, a sharp reduction in exchange naturally led to regress.** For example, with termination of import of soda from the Mediterranean disappeared Rhine glass art [3, p.44].*

*In the context of road degradation it was necessary to rely on natural transport routes: river and sea. Changes in configuration of transport system changed the geography of cities: the decline was in overland trade and transportation hubs, giving place to those located on banks of rivers [3, pp.36–37].*

*The critical role was played by river traffic in the formation of ancient Russia, the pillar of which became a network of waterways linking the North-Western Europe and Byzantium (the famous route «from the Vikings to the Greeks») and the countries of the East (across the Volga and the Caspian Sea). Most Old Russian cities arose on strategically important sections of river communications, including – in the field of trails where ships were dragged overland from one river to another.*

*However, navigable rivers were not everywhere and navigation at any moment could be lost. For example, in 1304 in the drought shipping on the Rhine was stopped, so that it was impossible to transport fruits of unusually generous crop of cereals and grapes along rivers, and «lack of the high cost of land vehicles did not allow them to replace a waterway, that failed» [3, p.234]. As a result, on*

the market of agricultural products was observed a sharp drop in market conjuncture.

The highest speed (up to 300 km per day) and carrying capacity were provided by sea traffic. However, sea transport could serve only coastal regions, and navigation was very unreliable, not only due to small dimensions and relatively primitive equipment of ships, but also because of pirates.

In Europe till the end of XIII century, when compass and steering wheel appeared, maritime navigation in winter froze: in the Mediterranean from early December to mid-March, and in the northern seas for a longer term [3, p.223].

A low level of development of transport and exchange of goods in medieval Europe made consequences of crop failure catastrophic [3, pp.283–284], while in the ancient world because of transport and trade the risk of hunger significantly reduced [1, p.235].

In many regions outside Western Europe, but even in the early Middle Ages, the state of transport was not so deplorable.

Byzantium inherited from the Roman a network of land roads and sea ports, began to play a key role in trade between East and West [2, p.77].

Arab trade, based on a combination of sea and caravan routes, was developing, often in competition with the Byzantine [2, pp.74–75].

In China, at the beginning of VII century, was built a number of navigable canals, for the construction of which the authorities mobilized up to a million people a year or more. A so-called Grand Canal stood out, which linked northern and southern parts of the country [6, pp.34–35]. These artificial rivers really helped the development of trade in the first two centuries of the Tang Empire, when there was an economic growth [6, pp.48–50].

As for main lines in China, unlike the Western, they were kept in excellent state [4]. Sea trade was developing in the southern directions, as far as India, where there was a «connection» with Arab sea routes [7, pp.38–40]. That is, a reliable communication was provided between East and West Asia, and through them – to Europe.

It should be noted that not only the construction but also the use of transport links, merchandise management in China were state-controlled – «management of collection, transportation and distribution of goods has become ... a main function of imperial bureaucracy» [8, p.610]. At the same time, development of transport and on this basis regional specialization and urbanization caused a rise of private trade and entrepreneurship. However, without proper transformation of public institutions, private initiative did not get at that moment sufficient space and did not allow for the high dynamics of socio-economic growth.

**The main positive content of the Middle Ages can be regarded as the aging of conditions for breakthroughs in the development** that had been achieved later, during the Renaissance, Modern Age, era of the modern economic, scientific and technological progress, which followed the Industrial Revolution.

This aging occurred due to conservation (despite many losses) of traditions of ancient civilizations, including ancient and formation of a new experience, new knowledge and innovation.

**All this fully applies to the transport sector, which should be divided into two interrelated processes:**

**expansion of the geography of transport links and emergence of technological innovations that increase reliability, speed and efficiency of transportation.** Both of them opened up new opportunities for exchange, economic and cultural development, which is particularly important given that many previously existing practices have been lost. Indeed, in the early Middle Ages, many communications were broken down, many geographical and other knowledge were forgotten, in particular, the hypothesis of globosity of Earth [2, p.73].

A new value was obtained by geographical factor. Development of Norman navigation, in which looting and seizures combined with trade, contributed to formation of new communications, linking traditionally peripheral North Europe with the Mediterranean and the East.

As noted by William McNeil, « development of the Central European Plain, as well as the conquest of the northern seas created an economic base for the elevation of the North-West Europe to the level of prosperity, power and culture that surpassed the ancient centers of Mediterranean civilization» [8, p.595].

As a result of the changing geography of communications advantage was gained by trade routes from the Baltic along the Dnieper and the Black Sea to Byzantium («from the Vikings to the Greeks») and along the Volga and the Caspian Sea to Persia («from the Vikings to the Persians»), which, as already mentioned, was a catalyst Ancient Rus formation.

In IX–X centuries, these international trade routes became the core of economic, cultural and political life of the then Russia, which strengthened external relations and became a large, dynamic European power. On river main lines an integral network of Old Russian cities was formed, focusing on trade and transportation service. The very layout of many urban areas (in particular, Staraya Ladoga, Gnezdovo near Smolensk, Kiev Podol) was directly interfaced with the service of passing boats that could seek the shore near houses and mansions [9].

According to S. V. Tsvetkov, entire settlements might specialize in organizing trails between rivers of the Baltic Sea, the Dnieper and Volga [10, p.181]. Even the word «Rus», according to many historians, originally stood for rowers, participants of expedition hike on rowing vessels [9].

Subsequent displacement of main trade routes as a result of military-political transformations in the Black Sea steppes, and in connection with the Crusades in the Mediterranean, their separation from Russian territory has become one of the factors of negative socio-economic changes, including fragmentation of Rus, its weakening on the eve of the Mongol invasion, long-term results of which had tragic consequences for the country.

Speaking of the Mongol Empire in the middle of XIII century, uniting the vast Eurasian space from China in the East to the Black Sea in the West, it should be noted that its rulers paid great attention to the maintenance of ancient caravan routes, construction of new roads and postal services, providing reliable transcontinental overland traffic. In addition, they took measures to develop sea and river transportation in China, began reconstruction of the Grand Canal [7, pp.381–382].

A dense network of communication, which covered the whole Asia and was created by the



Mongols, contributed to the diffusion of innovations, in particular, the penetration to the Middle East and to Europe from China of such inventions as gunpowder, compass and book printing [8, p.693]. In Western Europe took place synergy of many borrowed technical and technological inventions with originating capitalist institutions that gave impetus to the socio-economic recovery in the region.

In the Mediterranean, successors of the ancient trading city-states vying for supremacy at sea (thalassocracy) [1], became Venice and Genoa.

Venice, began to strengthen in IX–X centuries, later became the first naval power in Europe, playing a leading role in shipbuilding and maritime trade, and uniting many coastal areas. The total population of the Republic of Venice from XI to XVI century rose from 0,5 to 2 million people, and in the state-forming city, one of the three largest in Western Europe in XVI century the population was 170 thousand people [2, pp.79–80]. The tonnage of the Venetian fleet in XIV century, that is, prior to the beginning of the Age of Discovery, reached 40 thousand tons with the average tonnage of a ship of 150 tons [3, p.264].

Venetian trade contributed to borrowing and implementation in Western Europe of many innovations (production of sugar from cane, silk weaving, glass-blowing, advances in shipbuilding and strengthening of commercial capitalism. The important factors in development of this republic were a high level of banking, allowing large-scale monetary transactions, and creation of favorable conditions for foreign ship owners and merchants, whose rights were not restricted in comparison with the Venetians [2, p.78].

A very important point: thanks to Venetian and Genoese trade with the countries of the Eastern Mediterranean it became possible to build up an economic base, artistic and intellectual development, without which Renaissance would not occur [8, p.711].

In Northern Europe during the late Middle Ages on sea routes trade-political Hanseatic League dominated. It was created in 1241 by uniting three North German cities of Lubeck, Bremen and Hamburg. By the end of XV century the League united 64 port cities. Hanseatic fleet monopolized transportation in the Baltic Sea and the representative bodies of the League worked in many places, including Novgorod [2, p.83].

The development of sea transport and trade contributed to the modernization of public institutions. Even in the ancient Roman state merchants associations emerged, which allowed individual entrepreneur to possess not a whole ship, but only a part of it [1]. This practice is being revived in the Middle Ages. As I. M. Kulisher notes, «we do not find people in Hanseatic trade during the Middle Ages who owned several ships entirely. <...> The number of participants in the Hanseatic ships rarely exceeded ten, but there were shares in the form of 1/32 and 1/64, in Italian trade there were often 1/16, but sometimes also 1/50 and 1/70. In Italy, these shares like stocks ... are inherited, alienated, laid» [5, p. 357].

With such a system, firstly, business risks were diversified, and secondly, additional capital was raised for development of sea transport and trade. After all, a share in ownership of the ship could be purchased by many, who cannot afford to own a whole ship.

**Thus, in the field of shipping and sea trade occurred not a simple revival of economic institutions that existed in ancient Rome, but also formation of capitalist institutions, in particular, prototypes of joint-stock companies, which later became a main form of business.**

At the same time preconditions were created for the separation of commercial and transport components of shipping.

If originally a trader himself was carrying goods on his own ship, or a small group of traders – ship owners sailed together, with appearance of small shares of ownership of the ships the situation, of course, changed. The ship is conned by one of traders-co-owners – and often «there is an independent shipman, to whom ship-owners charge vessel and cargo. Usually, however, he has not only to take transport goods, but also to sell them, and for it to participate in profits or he is granted a right to load his goods for sale, so that it is he is simultaneously a trader. Or he was a commission agent of traders that entrusted him goods – he is obliged to sell at their expense items and with this money to buy new ones. Usually a shipmaster receives a share in the ownership of the vessel – 1/4, 1/8, etc., so that roles of ship-owner, shipmaster, charterer are closely interwoven and intertwined» [5, p.357].

It should be added that, interwoven different components of marine trade and transport operations are already designated as part of a whole, and this makes it possible for their subsequent separation, then it will be economically viable.

Paper [1] noted the impact of navigation on formation of the spirit of freedom, initiative and enterprise in ancient civilizations, including the Minoan and Greek. We see the same in the Middle Ages. For example, Geert Mak calls formed in this period «fine cultural and political dividing line between the western – sea – provinces and the rest» of the Netherlands. In the western provinces, «a man was open to sea everything new that comes from afar», he «had a freedom to choose», he could «go his own way». In the eastern provinces, «people were more timid, cautious and obedient to authority» [11, p.36].

**The accumulation of technical innovations allowed for a new quality of transport connections necessary for formation of effective global communications, integrating all parts of the world into a single economic space.**

In the field of land transport the biggest innovation of the Middle Ages became common at the beginning of the second millennium, a so-called «new harness», which, unlike the ancient did not hinder horse breath. It allowed to better use horse draft power and combined with appeared at the same horseshoes to transport even heavy loads with the help of animals, faster than oxen [3, p.259; 4]. However, in a poor state of roads for movement of goods for a long time not only horse transport was used, but also muscular force of people was applied. Even in XI century serfs (dependent peasants) in Laumsfeld (Lorraine) had to carry on their shoulders sacks of grain at a distance of six (!) miles [3, p.262].

A particular significance had technical progress in shipbuilding and navigation. First of all, it concerned the increase in speed, handling quality and tonnage of ships, as well as year-round navigation due to the use of a compass and more accurate maps [2, p.85; 4], which increased reli-



ability and regularity of trade. According to A. Maddison, after 1000, new advances in design of ships and navigation in many ways defined the dynamics of development in Western Europe [12, p. 130].

Communication breakthrough was done at the beginning of XV century by Portuguese shipwrights, which adapted the design of sailing ships (caravels) to the navigation conditions in the Atlantic [2, p.87; 4]. Thus a basis was created for displacement of communications from inland seas to oceans, land development and provision of sustainable intercontinental trade.

More and more countries began to quickly get involved to economic relations with Europe, accelerate a process of international division of labor. «At the same time, maritime shipping (transport in general), the progress of which, in fact, had caused this acceleration, in turn, got a huge, like «reverse», impetus for further development» [2, p.94].

**Conclusion.** Transport progress was one of the decisive factors that ended the era of the Middle Ages, and since the Age of Discovery, opened to mankind a way to the formation of a global market society.

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