

Economic Activities of Dubrovnik during the Plague Epidemics in the Fourteenth Century*

Plague epidemics marked significantly the entire 14th century in many ways. However, the historiography about Dubrovnik does not discuss to what extent plague affected Dubrovnik's economy. The author discusses in this brief contribution the possibilities, archival sources and methods of such investigation.

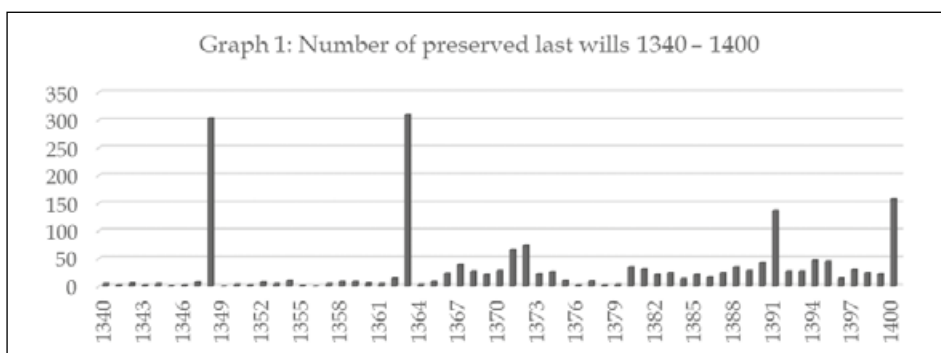
Key words: Dubrovnik; plague; epidemics; 14th century; economy; archival sources

Plague epidemics were one of the most important phenomena that influenced economic and social processes during the fourteenth century in Europe. Many historians claim that plague epidemics were responsible for many important technological improvements, as well as for many economic and social changes.¹ The historiography about pre-modern Dubrovnik has investigated the plague periods rather well, as well as the history of development of Dubrovnik's Health Office.²

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- 1 Benedictow, *The Complete History of the Black Death*, passim; Herlihy, *The Black Death and the Transformation of the West*, passim; Ziegler, „Educational, Agricultural, and Architectural Impact of the Black Death“, 102-108; Nardo, *The Black Death*, 53-63; Gottfreid, *The Black Death: Natural and Human Disaster in Medieval Europe*, 129-160; Williman, *The Black Death*, passim; Bergdolt, *La peste nera e la fine del medioevo*, 303-329.
- 2 See e.g.: Milošević, *Lazareti u Dubrovniku*, passim; Ravančić, „Dubrovnik's Invention of the Quarantine“, 81-95; Blažina Tomić, Blažina, *Expelling the Plague*, passim; Grmek, „Le concept d'infection dans l'antiquité et au Moyen-Âge“, 9-55; Jeremić, Tadić, *Prilozi za istoriju zdravstvene kulture starog Dubrovnika*, passim.

However, the impact and consequences of plague epidemics on Dubrovnik's economy and society still has to be investigated in detail, though some pioneer research was undertaken more than fifty years ago.³ Primary sources consulted for the research of plague epidemics in Dubrovnik were mostly chronicles and records of Dubrovnik councils, together with some other narrative and legislative sources. However, as recent research has demonstrated, one should consider other written sources from the period,⁴ such as last wills (*Testamenta Notariae*) and records of economic activity preserved in Dubrovnik State Archives within archival series *Diversa Canellariae*, *Diversa Notariae* and *Debita Notariae*.⁵



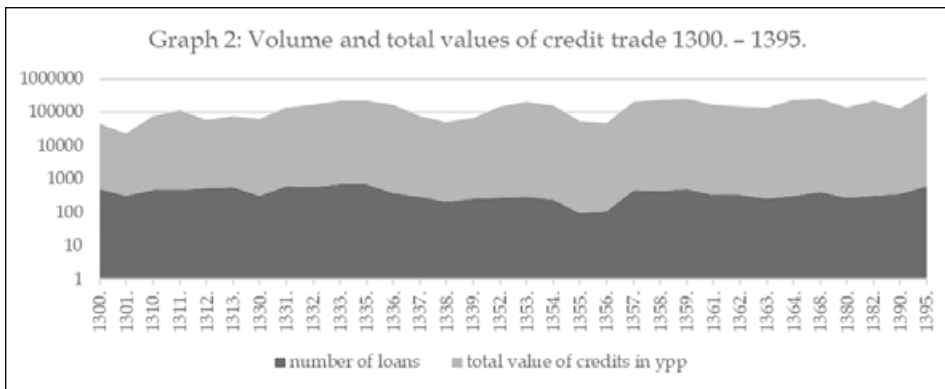
Since the preserved Dubrovnik chronicles date mostly from the later period, the narratives and information sealed in them sometimes are not as accurate as we would like them to be. Specifically, some of the epidemics that struck the city during the fourteenth century and were recognized as plague (*pestilentia*, *peste*) seem not to be plague but some other diseases that were not so catastrophic for the city, its inhabitants, and their economy. According to the chronicles, plague epidemics of the fourteenth century affected Dubrovnik and its territory in: 1348, 1357/58, 1361, 1363, 1371, 1372, 1374, 1391, and 1400. However, if one confronts this information with the data preserved in other above-mentioned sources, the result might be a bit surprising since quantitative analysis of preserved last wills does not reflect demographic oscillations in all the periods for which chronicles state there was an epidemic. Namely, as Graph 1 demonstrates, one can notice a significant increase of the preserved testaments only in 1348, 1363, 1371/72, 1391, and 1400.

3 Dinić, „Uticaj kuge od 1348. na privredu Dubrovnika“, 11-33.

4 Kralj Brasard, „Grad i kuga: Dubrovnik 1691. godine“, 115-170; Kralj Brassard, „Dubrovačke protu-epidemijske mjere“, 11-37; Ravančić, „Epidemije kuge u Dubrovniku“, 45-66; Ravančić, *Vrijeme umiranja*, passim.

5 HR-DADU-12-1, *Testamenta Notariae*; HR-DADU-15 *Diversa Cancellariae*; HR-DADU-9 *Diversa Notariae*; HR-DADU-10 *Debita Notariae*. In the previously mentioned work of Dušanka Dinić some of such archival sources were consulted but similar investigation should be undertaken for the rest of the fourteenth century.

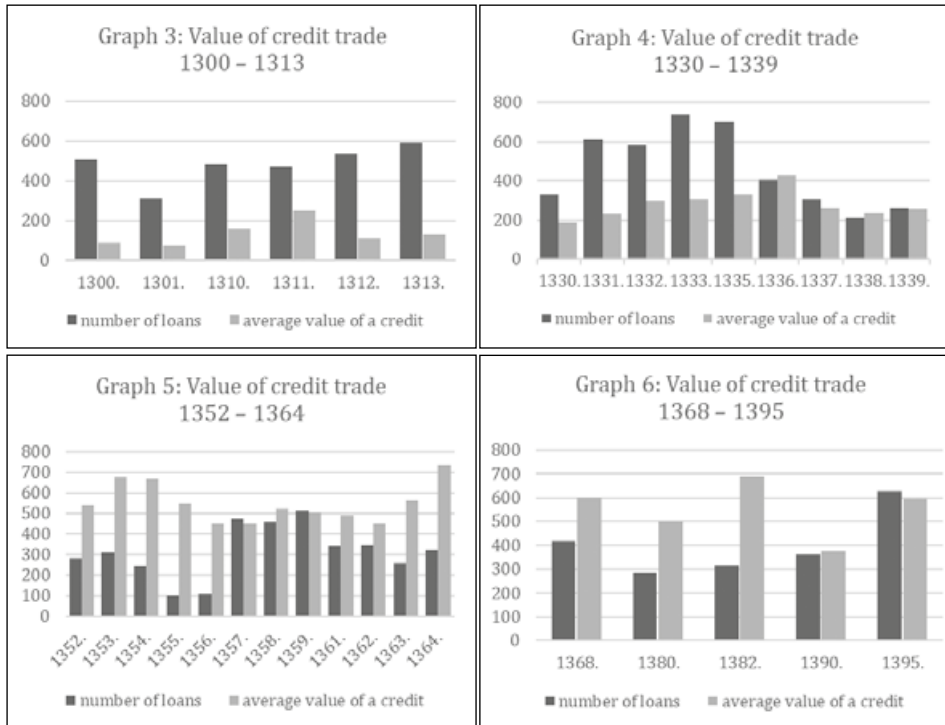
At the same time, legislative sources, such as the minutes of the city councils, can only give a partial picture of Dubrovnik's everyday life in the 14th century, since the reports on the councils from the period between 1368 and 1377 have been lost. Nevertheless, these records reveal much information about the changes in the organization of the authorities at the time of the plague epidemic in Dubrovnik. Moreover, the famous decree from 1377 establishing the first effective quarantine in the world clearly testifies that the Dubrovnik authorities wanted to keep the city, its port and market on the Mediterranean trade map, despite the dangers of plague epidemic spreading. Moreover, this quarantine system during the next several decades (between 1397 and 1426) was further improved and soon became the first public sanitary (and health) office in the Mediterranean.⁶



In addition, preserved records of various economic activities, which are kept in Dubrovnik State Archives, reveal that in spite of the dangers of spreading of plague, the merchants and inhabitants of Dubrovnik did not stop their mercantile activities even during the plague epidemics. As Graph 2 indicates, the number of mercantile credits and loans during the fourteenth century was (more or less) stable, and the total value of these credits was gradually increasing towards the end of the century.⁷

⁶ About development of Dubrovnik health office see e.g.: Blažina Tomić, *Expelling the Plague*, passim.

⁷ Data for Graphs 2-6 was taken from Voje, *Kreditna trgovina u srednjovjekovnom Dubrovniku*, 187-218.

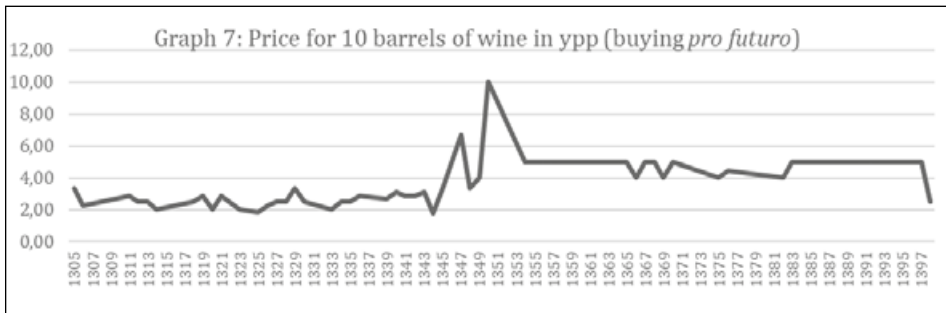


At the same time, if one observes data from credit trade contracts divided into four separate time frames, as demonstrated in Graphs 3-6, it becomes certain that at the beginning of the century, the number of credits and loan contracts were much higher than the average value of these credits, while already in the mid of the century, the number of loan contracts was lesser, but the value of these credits were much higher than earlier. Such a trend can be explained only by the fact that in the exact same period Dubrovnik society has experienced significant economic growth and a certain social change, which narrowed down the number of credit investors. Moreover, as Graph 4 suggests, this change happened in the 1330s, which corresponds to the time of the closing of the nobility and the Major council of Dubrovnik.⁸ As can be seen in Graph 5, the war between Venice and Genoa (1350-1354), which had its reflections in the Adriatic, caused that number of loans decrease due to the risk of investments, while the value of these credits increased, probably due to the chances of profit in case of the successful investment trade business. It seems that political changes in Dubrovnik's hinterland (the rise of Tvrtko Kotromanić in Bosnia in 1353, and the death of Serbian Emperor Dušan in 1355) also had reflection on Dubrovnik credit trade, since such trend of loans decrease continued in 1355 and 1356.

8 For more about this process see e.g.: Janeković Römer, „The Closing of the Nobility and Council of Dubrovnik in the Political and Social Context of the Thirteenth and Fourteenth Century“, 7-36; Vekarić, *Vlastela grada Dubrovnika*. 21-23; Janeković Römer, *Okvir slobode*, 61-68.

This trend was slightly disturbed in the period between 1357 and 1359, and this can be explained by the fact that in that period, Dubrovnik changed its supreme sovereign, which was followed also by a certain change of power within Dubrovnik aristocratic clans.⁹ Similar trend of smaller number of loans with higher value of credits continued in the 1360s and 1380s, which was disturbed in 1390s (Graph 6), probably due to the terrible war between the supporters of King Sigismund and his Angevin rival, Ladislaus of Naples. In this fight, Dubrovnik formally supported Sigismund, but at the same time it maintained good relations with Duke Hrvoje Vukčić Hrvatinić, who was Ladislaus' chief supporter in Croatia and Bosnia. This ambivalent political position put Dubrovnik's merchants and trade into a hazardous position, and this reflected on credit trade.

These mentioned instances suggest that Dubrovnik's credit trade in the fourteenth century might have been influenced by political and social change within the city, and such hypothesis corresponds with the historiographic understanding about Dubrovnik's economy.¹⁰ Therefore, it is to be expected that natural disasters such as famine, earthquakes or epidemics also affected the Dubrovnik economy. But to what extent, it remains to be explored in detail. For such research, one should consult extensively the above-mentioned archival sources *Diversa cancellariae* (30 volumes),¹¹ and *Diversa notariae* (10 volumes)¹² with more than 300 pages in each preserved volume. In these volumes, Dubrovnik notaries recorded various business' contracts and agreements between citizens and inhabitants of Dubrovnik, and many of them were trade contracts. Unfortunately, thus far, most of these records have not been published, nor read and analyzed in detail. However, based on earlier historiography and research, some processes can be commented on, and some conclusions can be drawn.



Therefore, if we look at wine trade throughout the fourteenth century, one can easily notice some similarities with the above graphs containing data about credit trade. The most obvious one is the rise of prices or value of credit in the second half of the century.

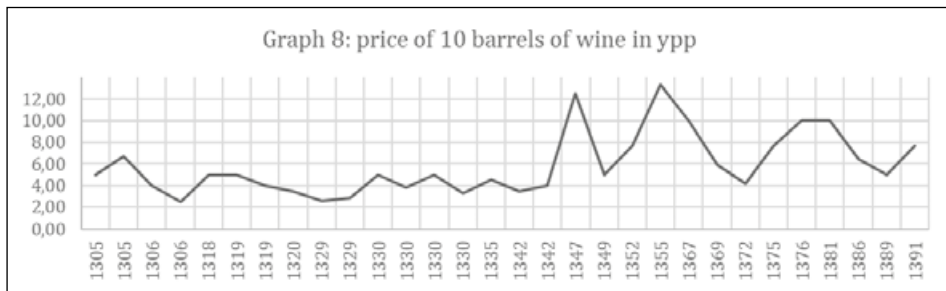
9 Vekarić, *Vlastela grada Dubrovnika*, 231-234.

10 Raukar, *Srednjovjekovne ekonomije i brvatska društva*, 12-13.

11 *Diversa Cancellariae* vols. 4 to 33 contain more than 5000 folios, i.e. app. 11400 pages.

12 *Diversa Notariae* vols. 1 to 10 contain more than 2000 folios, i.e. app. 4300 pages.

The second similarity relates to the price disturbance exactly in the mid-fourteenth century. Graph 7 depicts fluctuations of prices of wine that was bought in advance, which was kind of credit or loan given to producers, while Graph 8 shows prices of wine bought in direct trade (after grape harvest).¹³ Beside the above-mentioned similarities, these latter graphs show sudden increase of price of wine in the period when Dubrovnik was affected by plague epidemic,¹⁴ which suggests direct impact of the plague on the prices of certain products and the market. However, as Graph 7 suggests, this impact was not permanent, and already in 1350s prices of wine stabilized, though the average price of wine in the second half of the century remained slightly higher than in the first half of the century.



On the other hand, Graph 8 shows greater oscillations since the price of (already produced) wine can vary due to the current (political or economic) situation. Namely, the demographic decline triggered by the plague epidemic caused a labor shortage, which resulted in lower wine production followed by higher prices. Similarly, insecure situation in the hinterland triggered by the death of Emperor Dušan caused an instant rise of prices, since hinterland was one of Dubrovnik merchants' prime markets.

Some similarities can be noticed in the fourteenth century grain trade in Dubrovnik, too. As it can be seen in Graph 9,¹⁵ the price of grain gradually rose throughout the fourteenth century with some periodical steep increases. Already in the late 1320s, the price of grain rose. Though Dubrovnik's merchants and authorities tried to obtain wheat or barley at reasonable prices, it was not possible,¹⁶ since – as Giovanni Villani testifies – there was a great shortage of food in Italy and grain prices were skyrocketing.¹⁷ At this point, it is important to emphasize that Dubrovnik grain market was largely dependent

13 Data for graphs 7 and 8 are collected from: Dinić Knežević, „Trgovina vinom u Dubrovniku u XIV veku“, 58-62.

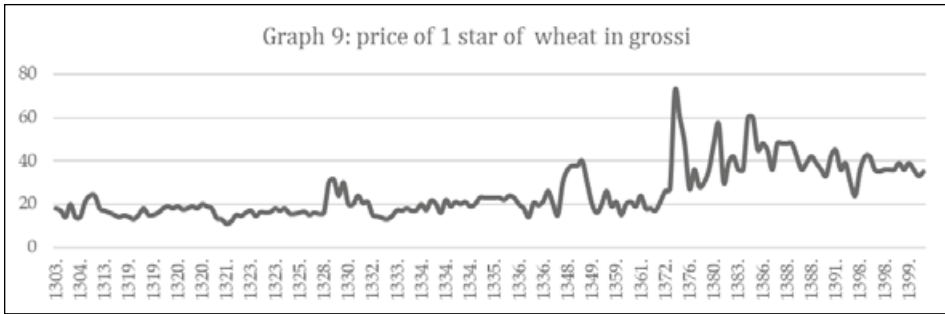
14 Unfortunately, Graphs 4 and 5 do not contain data for 1348 and 1349, so comparison of values and total number of credits and loans in these years with prices of wine and other products throughout the entire century is not possible.

15 Data for Graph 9 was collected from: Dinić Knežević, „Trgovina žitom u Dubrovniku u XIV veku“, 121-124.

16 Dinić Knežević, „Trgovina žitom u Dubrovniku u XIV veku“, 89-90.

17 Jansen, „Giovanni Villani on food shortages and famine in Central Italy (1329-30, 137-8)“, 20-22.

on imports from hinterland, Albania, southern Italy, and the Levant. Therefore, the destabilization of these markets could cause an increase in grain prices in Dubrovnik. So, as soon as situation in Italy stabilized, grain prices in Dubrovnik soon normalized. The next significant but temporary increase was in 1348, when Dubrovnik experienced the first visit of the Black Death. Nevertheless, the price came back to normal relatively soon, which suggests a relative economic resilience of the Dubrovnik market.

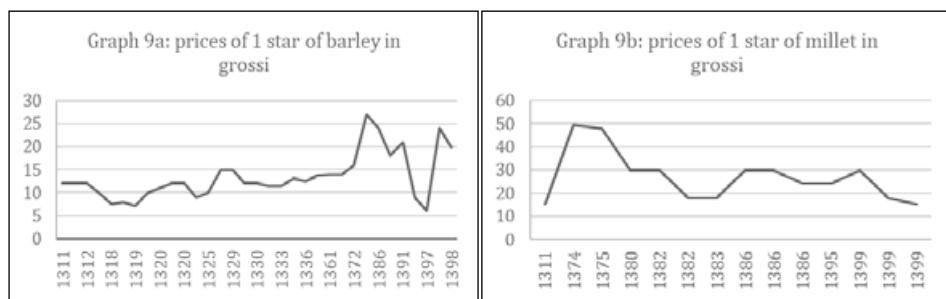


However, the next even steeper increase struck Dubrovnik market in 1373 – a year after, as it was demonstrated in Graph 1, Dubrovnik and the Adriatic basin experienced another plague epidemic. At this point, it is interesting to note that not even the data on testaments suggest a severe epidemic, this increase of wheat price indicates quite opposite conclusion. A similar increase of wheat price occurred again in 1380 and 1386. In 1380, plague ravaged the entire Adriatic basin except Dubrovnik territory, and the production of grain in southern Italy was quite reduced. Moreover, at that time, most of the Adriatic was caught in the war between Genoa and Venice, and pirate ships were obstructing the entire maritime trade in the region.¹⁸ In 1386, southern Italy was in the middle of dynastic struggle between Queen Joanna and King Ladislaus of Naples, which certainly affected grain production in the region, and at the same time at the Levant, there was another plague epidemic striking heavily upon Constantinople,¹⁹ while the immediate Dubrovnik hinterland, i.e. Bosnia, was under Ottoman attack which managed to ravage up to the Neretva River valley.²⁰

18 Jansen, „Maritime warfare and piracy. Three texts on Genoa and Venice (1380-1403)“, 159; Dinić Knežević, „Trgovina žitom u Dubrovniku u XIV veku“, 103-105.

19 Tsiamis, Poulakou-Rebelakou, Tsarkis, Petridou, „Epidemic waves of the Black Death in the Byzantine Empire (1347-1453 AD)“, 193-201.

20 Foretić, *Povijest Dubrovnika do 1808.*, 167.



As Graphs 9a and 9b suggest,²¹ similar price growth trends in the second half of the fourteenth century are also visible in the barley and millet market. Unfortunately, the collected data do not cover the entire century, and therefore we are completely lacking data on barley prices in the middle of the fourteenth century, while no data is available for millet prices for the first half of the century.

On the other hand, it should be noted that grain (as well as wine) did not increase in price in 1391, when Dubrovnik was again affected by the plague. A similar effect of unchanged commodity prices, although the city probably experienced social and demographic trauma, can be observed in the Dubrovnik wine market in 1363, 1373 and 1380. Such a result cannot be fully explained without a detail investigation of *Diversa Cancellariae* and *Diversa Notrariae* archival series. Still, some explanations are possible. Firstly, one should know that wine and grain were somehow protected commodities in medieval Dubrovnik. Both were considered as food and daily sustenance, and Dubrovnik authorities made sure that there was never a shortage of them. Thus, Dubrovnik had officials dedicated to taking care of grain reserves in the city,²² and similarly, each year, Dubrovnik authorities appointed several officials whose duty was to inspect quantities and quality of wine in the city.²³ Secondly, wine production in Dubrovnik was quite good and Dubrovnik mostly managed to produce enough wine for the domestic market. Their problem was cellaring, i.e. the impossibility of keeping good wine for more than 6 to 8 months. Therefore, when the wine began to deteriorate in May and June, the Dubrovnik authorities resorted to importing wine. Then again, situation with unaffected grain price in 1391 could be explained by the fact that Dubrovnik authorities paid special attention to grain import in 1390,²⁴ probably because in this year plague was ravaging the city of Rome and there was a great fear that plague would soon spread around even on the eastern Adriatic coast. As Dubrovnik authorities did not want to experience situation from 10 years ago, when grain prices went

21 Data for Graphs 9a and 9b was taken from Dinić Knežević, „Trgovina žitom u Dubrovniku u XIV veku“, 124-125.

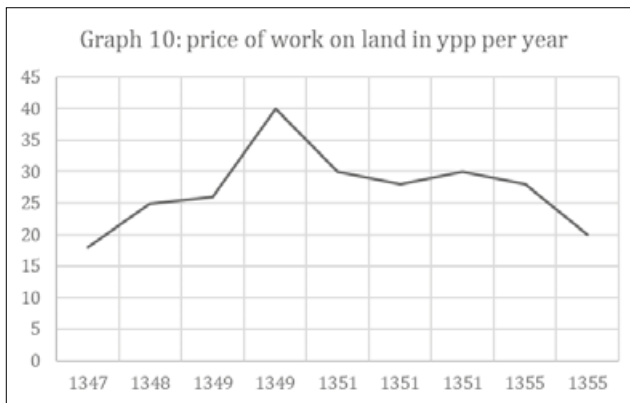
22 Lonza et al., *Statut grada Dubrovnika*, lib. 1 cap. 19; lib. 8 cap. 52.

23 Ravančić, „Alcohol in Public Space“, 54-55; Ravančić, „*Imago vini*: Predodžba o vinu u srednjovjekovnom Dubrovniku“, 107-120.

24 Dinić Knežević, „Trgovina žitom u Dubrovniku u XIV veku“, 113-114.

skyrocketing because of the plague, they organized themselves and bought sufficient quantities of grain in time, and then stored it in the communal warehouses. Unfortunately, at this point I do not have data on the prices of wine in those exact years because the archival series of *Diversa Cancellariae* and *Diversa Notariae* have not yet been thoroughly investigated. Thus, for a more accurate answer to the question about the possible factors that caused this “stability” in the price of wine, we should wait for the results of further research, since there can be many reasons for this, namely the economic, climatic, political or some other factors that could affect the price of wine (or grain).

However, for a better understanding of these mechanisms and in order to examine to what extent the plague epidemic could cause price changes, as well as whether the plague could stop economic activities in Dubrovnik, one can refer to the work of Dušanka Dinić Knežević, in which she examined some effects of the plague on the Dubrovnik economy in 1348.²⁵ As it is clear from Graph 10,²⁶ the demographic decline caused by the plague in 1348 caused a temporary increase in the annual prices of manual labor. This increase occurred in 1349, but it did not last long, since Dubrovnik was able to compensate for such a demographic loss very quickly by immigration from the hinterland.

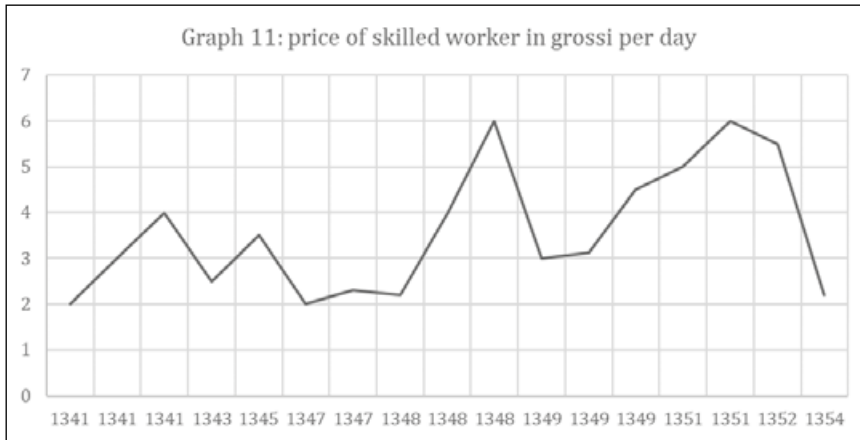


However, such a rapid demographic renewal was not sufficient if one wanted to employ a skilled worker, such as a bricklayer or a carpenter, because apprentices had to undergo training for such jobs that could last several years. Thus, as shown in Graph 11,²⁷ the price of the daily wage of such workers increased already in 1348 and remained higher for several more years, until the emergence of a new generation of craftsmen.

25 Dinić, „Uticaj kuge“, 11-33.

26 Data for Graph 10 was taken from Dinić, „Uticaj kuge“, 16.

27 Data for Graph 11 was taken from Dinić, „Uticaj kuge“, 17-18.



Similar tendencies of a relatively quick return to earlier patterns from the time before the plague can also be observed in the movement of rental prices of Dubrovnik customs. As Graph 12 suggests,²⁸ the volume of active business decreased sharply in 1348 because of the plague, but already in 1349, the lease price returned to previous values suggesting that import and export duties and the number of trade contracts had normalized.



Although the analyzed data do not cover the entire fourteenth century, it is quite clear that Dubrovnik's economic activities were not permanently affected by the plague epidemics that visited the city rather frequently throughout the century. In that respect it is important to note that even at times when the city was threatened by an epidemic of the plague, the Dubrovnik authorities tried to avoid closing the Dubrovnik port and market, and to ensure that city functions normally in all administrative aspects.²⁹ The preserved records of Dubrovnik councils testify that, on the first news that there could

28 Data for Graph 12 was taken from Dinić, „Uticaj kuge“, 23.

29 Ravančić, „Epidemije kuge“, 50.

be possibility of epidemic, Dubrovnik authorities issued orders, according to which all the routes and merchants from the infected areas had to be closely monitored.³⁰ However, in cases of food shortage, Dubrovnik authorities issued decrees according to which certain people were appointed to go on trading mission seeking the needed product, in spite of the possibility that on such a journey they could catch plague and bring it to Dubrovnik.³¹ Finally, one should not forget that Dubrovnik authorities “invented” quarantine system exactly because they did not want to exclude city’s harbor and market from the trade routes even in the times of plague.³² Thus, this brief analysis suggests that plague epidemics of the fourteenth century could not stop economic activities of Dubrovnik, and that direct consequences of the epidemics in Dubrovnik on the economy were only temporary. Still, for the more exact answers regarding the volume and frequency of trade, as well as the types of merchandise during the times of plague, one should examine in detail the data preserved in archival series *Diversa Notariae* and *Diversa Cancellariae*.

Primary Sources and Literature

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HR-DADU: Hrvatska, Držvani arhiv u Dubrovniku, Dubrovnik

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30 More about this see: Ravančić, „Dubrovnik’s Invention of the Quarantine“, 84-85; Ravančić, „Epidemije kuge“, 55-58.

31 E.g: Dinić, *Odluke veća Dubrovačke Republike*, 375.

32 Ravančić, „Dubrovnik’s Invention of the Quarantine“, passim.

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SAŽETAK

Gospodarska djelatnost u Dubrovniku za vrijeme epidemije kuge u 14. stoljeću

Valovi epidemije kuge značajno su obilježili politički i gospodarski razvoj Europe tijekom čitavog 14. stoljeća. Dubrovnik kao važna sredozemna luka nije mogao izbjeći takvim tendencijama. U dosadašnjoj historiografiji dosta se je raspravljalo o važnosti Dubrovnika za razvoj javnozdravstvenih mjera no pitanje izravnog utjecaja epidemija kuge na dubrovačko gospodarstvo nije detaljnije istraživano. Sačuvano arhivsko gradivo sugerira da kužne epidemije nisu zaustavile gospodarsku aktivnost Grada, a uspješna implementacija karantene i javnozdravstvenih mjera omogućavala je gotovo nesmetanu cirkulaciju ljudi i roba istovremeno štiteći Dubrovnik od najvećih naleta epidemija u 14. stoljeću. U ovom kratkom prilogu, autor ocrtava raznolikost sačuvanog arhivskog gradiva te mogućnosti i metodološke pristupe istraživanja gospodarskih aktivnosti njihova dosega i fluktuacije pod utjecajem epidemija tijekom 14. stoljeća.

Ključne riječi: Dubrovnik; kuga; epidemije; 14. stoljeće; gospodarstvo; arhivski izvori