

## THE POPULATION OF THE DUBROVNIK REPUBLIC IN THE FIFTEENTH, SIXTEENTH, AND SEVENTEENTH CENTURIES

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**ABSTRACT:** According to tax evidence in Dubrovačko Primorje and a census performed for the purpose of reducing surplus vineyards in Konavle, the Dubrovnik Republic (Ragusa) had almost 90,000 inhabitants by the end of the fifteenth century and was rather overpopulated. From then on to the end of the seventeenth century the population started to decrease: in the first half of the sixteenth century the Republic had more than 50,000 inhabitants; in the second half of the sixteenth century, between 50 and 60 thousand; in the 1630s, about 40,000; and in 1673/4, only 26,000 inhabitants. In the second half of the fifteenth century, due to Turkish expansion, the Dubrovnik Republic gave shelter to a large number of Christian refugees from Bosnia and Herzegovina, offering them the less fertile land. Numerous epidemics, the Candian War, the 1667 earthquake, and emigration reduced the population immensely. The population of the Republic never again reached its previous levels, since there was in fact no need for it to grow.

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Although the Republic of Dubrovnik had a long tradition of census-taking for different purposes, these early inventories have not been preserved.<sup>1</sup> From the perspective of contemporary observers from the fifteenth to the mid-seventeenth century, the population of the city of Dubrovnik was roughly estimated from 15,000 to 40,000, and that of the Republic from 50,000 to 80,000 persons (Table 1). Historiographers tend to discard these values, however, as being overestimated, although most of their arguments fail to be sci-

Table 1. Contemporary estimates of the population in the town of Dubrovnik and the Dubrovnik Republic (15th-17th century)

Estimate's Author	Year	Dubrovnik (town)	Dubrovnik Republic
Philippus de Diversis <sup>2</sup>	1440.	40,000	
Giovanni Battista Giustiniani <sup>3</sup>	1553.	30,000	55,000
Leonardo Bollani <sup>4</sup>	1555.	25,000	
Dubrovnik Senate <sup>5</sup>	1570.		50-60,000
Frano Gundulić <sup>6</sup>	1573.		80,000
Soranzo's anonymous travel writer <sup>7</sup>	1575.	15,000	
Serafino Razzi <sup>8</sup>	end of 16th c.	30,000	
Anonym <sup>9</sup>	1624.	30,000	60,000

<sup>1</sup> Bogumil Hrabak, *Izvoz žitarica iz Osmanlijskog carstva u XIV, XV i XVI stoljeću*. Priština: Zajednica naučnih ustanova Kosova, 1971: p. 530, note 4; Vladimir Stipetić, »Brojčani pokazatelj razvoja stanovništva na teritoriju negdašnje Dubrovačke Republike u minula tri stoljeća (1673-1981) - pokušaj valorizacije ostvarenog priraštaja u prvih 200 godina.« *Anali Zavoda za povijesne znanosti JAZU u Dubrovniku* 27 (1989): p. 93; Stjepan Krivošić, *Stanovništvo Dubrovnika i demografske promjene u prošlosti*. Dubrovnik: Zavod za povijesne znanosti JAZU u Dubrovniku, 1990: 19-20.

<sup>2</sup> This data was first referred to by Petar Matković, (»Putovanje po Balkanskom poluotoku XVI vieka.« *Rad JAZU* 124 (1895): p. 27), and later on was also accepted by Karl Kovač (»Crte o statistici i o vojničkim ustanovama u Republici dubrovačkoj.« *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* 27 (1916): p. 303), Ilija Sindik (*Dubrovnik i okolina*. Beograd: SKA, Naselja i poreklo stanovništva 23, 1926: p. 38), and Bogumil Hrabak (*Izvoz žitarica*: p. 530, note 4) referring to Brunelli's edition of the description of Dubrovnik by De Diversis. S. Krivošić (*Stanovništvo Dubrovnika*: p. 13), states that neither in Brunelli's edition nor in Božić's translation is there any mention of the number of inhabitants of either the city of Dubrovnik or the Republic as a whole. De Diversis only states that, "due to a large number of inhabitants, the city is unable to meet their needs with domestic food production", and furthermore, that "there are so many consumers that for the town and its area it is necessary to provide 70,000 'stars' of corn (trans. note: 1 star equals

entifically based.<sup>10</sup> Petar Matković presumed that the city of Dubrovnik could not provide enough space for as many as 30 or 40 thousand residents.<sup>11</sup> Karl Kovač also had his doubts about the estimated population of Dubrovnik when comparing it with Venice. In his opinion, there were but a few cities with "such a large number of inhabitants".<sup>12</sup> After Matković had bound himself to the denial of early estimations, he was succeeded by a number of researchers. Their estimated values range from 5 to 10 thousand inhabitants for the city area, and from 20 to 60 thousand for the entire Republic (Table 2).

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100 Venetian liters) or even more" and (in connection with the development of cloth manufacturing) "that many people have arrived in town" and that "the town population has increased so much" that the building of an aqueduct was taken in consideration".

<sup>3</sup> Itinerario di Giovanni Battista Giustiniano sindaco in Dalmazia ed Albania (Simeone Gliubich, *Commissiones et relationes venetae*, II. Zagreb: JAZU, Monumenta spectantia historiam Slavorum Meridionalium 8, 1877: p. 249).

<sup>4</sup> Leonardo Bollani was a Venetian chancellor in Kotor. Simeone Gliubich, *Commissiones et relationes venetae*, III. Zagreb: JAZU, Monumenta spectantia historiam Slavorum Meridionalium 11, 1880: p. 73.

<sup>5</sup> Jorjo Tadić, *Španija i Dubrovnik u XVI v.* Beograd: SKA, 1932: p. 110; Jovan Radonić, *Dubrovačka akta i povelje*, Beograd: SKA, ser. I, II/2, 1938: pp. 200 and 222.

<sup>6</sup> Lujo Vojnović, *Depeschen des Francesco Gondola, Gesandten der Republik Ragusa bei Pius V und Gregor XIII (1570-1573)*. Wien, 1909: p. 138. In 1573 Frano Gundulić reported from Rome that he informed the pope of the city and the Republic having 80,000 inhabitants.

<sup>7</sup> P. Matković, »Putovanje po Balkanskom poluotoku«: p. 27.

<sup>8</sup> Serafino Razzi, *La storia di Ragusa*. Ragusa: Tipografia Serbo-Ragusea A. Pasarić, 1903: p. 180.

<sup>9</sup> Grga Novak, »O Dubrovačkoj Republici god. 1624.« *Anali Historijskog odjela Centra za znanstveni rad JAZU u Dubrovniku* 13/14 (1976): p. 6 (according to "Relazione della Repubblica di Ragusa" by an anonymous writer).

<sup>10</sup> One exception is the estimate by Miloš Blagojević (»L'agricoltura nell'economia ragusea del Medioevo«, in *Ragusa e il Mediterraneo*. Bari: Cacucci editore, 1990: pp. 36-37). Based on De Diversis's record citing the annual consumption of wheat in the Republic as 70,000 stars, Blagojević concluded that the Republic had 17-18,000 inhabitants in the year 1440. This could be quite a realistic estimate of the population of the Republic for the first half of the 15th century, as other indicators show that the Republic, before the great migration from Bosnia and Herzegovina, had a considerably lower population than later on. According to a 1333 estimate for example, Pelješac had a little more than 3,000 people, and according to Krivošić (*Stanovništvo Dubrovnika*: p. 52), Dubrovnik (town) had the same number of people in the middle of the fourteenth century.

<sup>11</sup> P. Matković, »Putovanje po Balkanskom poluotoku«: p. 27.

<sup>12</sup> K. Kovač, »Crtice o statistici«: p. 303.

Table 2. Historiographical estimates of the population of the town of Dubrovnik and the Dubrovnik Republic (15th-17th century)

Estimate's Author	Released in	Year	Dubrovnik (town)	Dubrovnik Republic
Lujo Vojnović <sup>13</sup>	1912	on the eve of 1667	8-10,000	
Božo Cvjetković <sup>14</sup>	1923	mid 16th c.		60,000
Konstantin Jireček <sup>15</sup>	1924	16th c.		50,000
Jorjo Tadić <sup>16</sup>	1953	end 15th c.	5-6,000	20-25,000
Mijo Mirković <sup>17</sup>	1958	15th c.	6,000	
Zdravko Šundrica <sup>18</sup>	1959	mid 16th c.		35-40,000
Jorjo Tadić <sup>19</sup>	1962	end 15th c.	6-7,000	25,000
Ante Marinović <sup>20</sup>	1963	16th c.		25-30,000
Bogumil Hrabak <sup>21</sup>	1971	1540 - 1570		40-50,000
Bogumil Hrabak <sup>22</sup>	1971	end 16th c.		30-40,000
Vinko Foretić <sup>23</sup>	1980	on the eve of 1667	6,000	
Bernard Stulli <sup>24</sup>	1989	mid 16th c.	up to 10,000	up to 40,000
Stjepan Krivošić <sup>25</sup>	1990	1450 - 1650	6,000	
Stjepan Krivošić <sup>25</sup>	1990	on the eve of 1667	5,000	
Miloš Blagojević <sup>26</sup>	1990	1440		17-18,000

<sup>13</sup> Lujo Vojnović, »Prva smrt Dubrovnika (6 aprila 1667).« *Letopis Matice Srpske* 87/288/4 (1912): p. 64.

<sup>14</sup> Božo Cvjetković, *Dubrovačka diplomacija*, I. Dubrovnik, 1923: p. 9.

<sup>15</sup> Konstantin Jireček, »Pregled dubrovačke historije.«, in: Milan Rešetar, *Dubrovačka numizmatika* I. Sremski Karlovci, 1924: p. 12.

<sup>16</sup> *Historija naroda Jugoslavije*, I (chapter XII written by Jorjo Tadić), Zagreb, 1953: p. 639.

<sup>17</sup> Mijo Mirković, *Ekonomska historija Jugoslavije*. Zagreb: Biblioteka Ekonomskog pregleda, 1958: p. 98.

<sup>18</sup> Zdravko Šundrica, »Popis stanovništva Dubrovačke Republike iz 1673/74. godine.« *Arhivski vjesnik* 2 (1959): p. 427.

<sup>19</sup> Jorjo Tadić, »Ragusa e il suo porto nel Cinquecento.« *Archivio storico Pugliese* 15/I-IV (1962): p. 250 (quoted according to S. Krivošić, *Stanovništvo Dubrovnika*: p. 18).

<sup>20</sup> Ante Marinović, »Pomorsko-pravni propisi sredovječnog dubrovačkog statuta.« *Pomorski zbornik* 1 (1963): p. 413.

<sup>21</sup> Bogumil Hrabak, *Izvoz žitarica*: p. 531.

Stjepan Krivošić came forward with a most convincing analysis regarding the population of the city itself. He elaborated upon Matković's idea by comparing the urban area of Dubrovnik to the areal size and population of other Dalmatian and European cities of the time. Taking the rate of consumption of the population and birth rates into consideration as well, Krivošić proved that the population figures of Dubrovnik's contemporaries were by far overestimated. According to Krivošić, the city of Dubrovnik had about 6,000 inhabitants from the mid-fifteenth to the mid-sixteenth century, and prior to the great earthquake of 1667, about 5,000 inhabitants.<sup>27</sup>

However, Krivošić failed to estimate the overall population of the Republic. One mean of reaching an estimate of that value would be by an analysis of the number of households in the region of Dubrovačko primorje, based on the available inventories that were made on the occasion of the cutting of vines. For the region of Konavle, the inventories of the local units (the so-called *kaznačine*) could be used to this end.

In order to stimulate wheat production, the Ragusan government resorted to special measures against the growing of grapes. Each family was allowed to grow grapes on a piece of land equivalent to one quarter of a *soldo*, the latter of which equaled 1,680 square meters. The family head was the category attributed to every married man, widower, and widow alike, regardless of the number of children and household members. From time to time, a specially assigned commission would supervise the area, cutting the vines that exceeded the amount permitted by law.

Since all the available records on these commissions' activities deal with Dubrovačko primorje (from Petrovo Selo to Imotica), it is still not clear whether the limitation of grape-growing was applied to this region only, or to the whole territory of the Dubrovnik Republic. Primorje witnessed the work of two commissions. One was assigned to supervise the area from Slano

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<sup>22</sup> Ibid.

<sup>23</sup> Vinko Foretić, *Povijest Dubrovnika do 1808*, II. Zagreb: Matica Hrvatska, 1980: p.133.

<sup>24</sup> Bernard Stulli, *Povijest Dubrovačke Republike*. Zagreb - Dubrovnik: Arhiv Hrvatske - časopis Dubrovnik, 1989: p. 59.

<sup>25</sup> S. Krivošić, *Stanovništvo Dubrovnika*: p. 51.

<sup>26</sup> M. Blagojević, »L'agricultura«: p. 37.

<sup>27</sup> S. Krivošić, *Stanovništvo Dubrovnika*: p. 51.

westwards, as far as Imotica, while the second was in charge of the land from Slano eastwards to Petrovo Selo. The brook descending from Majkovi to Slano represented the natural boundary between the two areas.

The commissions' records most often contained the names of the heads of the village households as well as the number of families in each household. Some records refer only to the heads of the households, whereas others refer only to the family heads. The most valuable inventories are those containing both heads of households and family heads.

Judging by the fluctuating figures displayed in a succession of censuses, and keeping in mind that the vineyard lots were assigned according to the number of families, it is obvious that the peasants, whenever possible, cheated the commissions by reporting more families than there really were.<sup>28</sup> As the records concerning the number of families is not reliable, it will not be used for the purpose of this analysis. On the other hand, the data regarding the number of households and the names of their heads were not manipulated, and can therefore be used as a source for further examination. In addition, the aforementioned data has been sifted by means of genealogical analysis, which has contributed to the accuracy of the censuses (households can be traced by the comparison of family names in a succession of censuses), and by comparing the Majkovi village records with the registers of Majkovi fraternities where the heads of the households were registered as members.<sup>29</sup> The results of this comparison offer proof of the accuracy of the commissions' enumeration of households (Table 3).

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<sup>28</sup> Analyzing the 1642 inventory of eastern Dubrovačko primorje, which lists the names of the heads of households and family heads alike, one can reconstruct the peasants' cheating methods. Namely, these inventories reveal an exceedingly great number of married sons and sons-in-law within a majority of households, which is slightly unusual. Subjecting these data to genealogical analysis, and comparing it with the 1673/4 census, it is evident that only one of the sons or sons-in-law remained in the household as heirs. So as to falsify the number of household members, the head of the household reported to the commission his married sons as members of the common household even though they had left it earlier. The same was the case with sons-in-law who had never actually shared a common roof with them. The peasants resorted to these tricks so as to increase their vineyard quota.

<sup>29</sup> *Matrikule bratovština Gornjih i Donjih Majkova iz 1560. godine* (Arhiv Župnog ureda Majkovi - Archives of the Majkovi Parish).

Table 3. Number of households according to the Majkovi fraternities' registers in 1560

Settlement	Number of households		
	1546	1560	1583
Grbljava	13	15	17
Donji Majkovi	43	49	51
Gornji Majkovi	41	42	47
Ratac (Prljevići)	12	10	13
<i>Majkovi</i>	109	116	128

Sources: *Vigne tagliati in Terrenove* (1546), ser. 17, sv. 4 (Povijesni arhiv Dubrovnik); *Matrikule bratovština Gornjih i Donjih Majkova iz 1560. godine* (Arhiv Župnog ureda Majkovi); *Libro de Taliar le Vite da Slano a Imotizza* (1583, 1606, 1610, 1626, 1642), ser. 17, vol. 19 (Povijesni arhiv Dubrovnik).

The records of the commission in charge of the western half of Dubrovačko primorje date from the years 1498, 1577, 1583, 1606, 1610, 1626, and 1642,<sup>30</sup> while those of the eastern half date from 1498, 1546, 1583, 1606, and 1642.<sup>31</sup> Records from 1553 and 1554 also exist, but they are either incomplete, or, as the one taken in 1514, they enumerate only the family heads and not the heads of households.<sup>32</sup> A region-wide enumeration of heads of households was taken in Dubrovačko primorje in 1543,<sup>34</sup> but the existing record of it is incomplete. Still, this census serves as valuable evidence that can be compared with the commission's 1546 data.

<sup>30</sup> *Libro di tagliar le vite in primorie da basso* (1577), ser. 17, vol. 15; *Libro de Taliar le Vite da Slano a Imotizza* (1583, 1606, 1610, 1626, 1642), ser. 17, vol. 19 (Povijesni arhiv Dubrovnik - Historical Archives of Dubrovnik).

<sup>31</sup> *Vigne tagliati in Terrenove* (1546), ser. 17, vol. 4; *Libro di tagliar le vite* (1583, 1606), ser. 17, vol. 16, *Libro delli Signori Offtiali di tagliar le vite da Slano a Petrovo Selo* (1642), ser. 17, vol. 28 (Povijesni arhiv Dubrovnik).

<sup>32</sup> *Libro de li condannati per li officiali de tagliar le vite de 1553-1554*, ser. 17, vol. 7; *Executione de li officiali de desradicar le vigne in Slano* (1553), ser. 17, vol. 8 (Povijesni arhiv Dubrovnik).

<sup>33</sup> *Libro de le vigne tagliate in Terrenove, piantade contra li ordeni* (1514), ser. 17, vol. 2 (Povijesni arhiv Dubrovnik).

<sup>34</sup> *Kaznačine Primorja* (1543), ser. 18 (*Officiales Rationum*), vol. 3a (Povijesni arhiv Dubrovnik).

The original inventory document from 1498 is not to be found. However, the data it contained is available, because they were published by Ilija Sindik.<sup>35</sup> According to Sindik, the census did not enumerate households, but families, which is not likely to be true. He also viewed the 1546 record as an inventory of families; in this case he was again most certainly mistaken.<sup>36</sup> The reason for Sindik's misinterpretation could be due to the fact that the inventories subsequent to them made a distinct enumeration of the households on the one hand, and families on the other, the latter being the basic category. He probably believed that the inventories containing only one of the two categories revealed the data on families and not households. This would certainly not be possible, because figures several times greater would have been obtained had it been an inventory of family heads, since the average number of families per household ranged from 1.8 to 4.

While analyzing the data from 1498, it was essential to draw a sample. This inventory was not widespread, as it failed to include the villages of Majkovi, Štedrica and Stupa. Because the original document was nonexistent, it was difficult to establish whether some of these villages had already been covered in the inventories of neighboring localities (e.g., Štedrica may have been treated as part of Topolo, Stupa as part of Ošlje). Additionally, due to some later changes in administrative distribution (Slano), the original data could not be compared with the data from a subsequent census. Therefore, a sample of 4 parishes from the western half of Dubrovačko primorje and 4 parishes from the eastern half was chosen. There is complete and comparable data available for all of the parishes in the sample, so that a full succession of censuses can be followed. I consider this sample a representative one, since the data examined covers 58.5% of the western part, and 71.13% of the eastern part.

The results of the analysis reveal that there were about 2,078 households in Dubrovačko primorje in 1498 (provided it was a census of households and not families), or twice as many as compared with the 1673/4 census (Table 4).

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<sup>35</sup> I. Sindik, *Dubrovnik i okolina*: pp. 32-34. The original was classified in the same series as other reports, called "Raporto de li officiali che furon in terre nuove ad tagliar le vigne piantate contro li ordini" (I. Sindik, *Dubrovnik i okolina*: p. 112). Today, however, the original is no longer to be found in series 17 (*Vigne*).

<sup>36</sup> I. Sindik, *Dubrovnik i okolina*: pp. 32-34.



Table 4. Number of households in the Dubrovačko primorje in the year 1498 - selected parishes

Parish	Number of households			
	1498	1546	1577	1583
Smokovljani	97	...	91	93
Lisac	267	...	181	192
Doli	87	...	100	104
Banići	140	...	86	90
<i>Dubrovačko primorje (western part, 58,5%)</i>	591	...	458	479
permanent index	100	...	77.50	81.05
(western part 100%)	(1,018)	...	789	810
Trsteno	238	158	...	210
Orašac	96	69	...	146
Kliševo	277	146	...	208
Osojnik	108	63	...	75
<i>Dubrovačko primorje (eastern part, 71,13%)</i>	719	436	...	639
permanent index	100	60.64	...	88.87
(eastern part 100%)	(1,060)	613	...	848
<i>Dubrovačko primorje</i>	(2,078)	...	...	1,658

Sources: as in notes 30, 31 and 35.

From 1498 to 1546,<sup>37</sup> the number of households in eastern Dubrovačko primorje, and most probably the western part as well, fell to almost half as much (index 57.83). The reason for this should be sought in the numerous epidemic diseases in the first half of the sixteenth century. After 1546, the number of households began to increase, then experienced a slight decline in the early seventeenth century, which was followed by a rapid fall after 1642 (Candian War, earthquake of 1667). Compared with the year 1642, in 1673/4 there were 149 households less in the western half of Dubrovačko primorje (index 79.25; see tables 5 and 6), and in the eastern half as many as 330 less (index 60.43; see tables 7 and 8).<sup>39</sup>

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<sup>37</sup> The 1545 and 1546 reports contain data related solely to the eastern half of Dubrovačko primorje. In fact, only the 1546 report has been preserved. It was made in such a way that it produced the data from the preceding year, as well. In the course of the current year, some changes had taken place that urged the commission to, in line with enumerating all the households in 1546, do the same with the households already enumerated a year before which had actually ceased to exist. The commission was supposed to note by name all the heads of village and serf households, explicitly stating that neither the households nor their families were found there. Sindik's opinion is that the families moved out of those households during that year by conditions under which peasants lived. (I. Sindik, *Dubrovnik i okolina*: p. 79). This, however, was not so. We are dealing with a trick pulled off by the peasants, who, in order to increase their permitted share of land for grape-growing, reported whoever they could to the commission. Proof of this can be found in the inventory of the heads of households taken in 1543. Unfortunately, it is not complete (including roughly 70% of the households), but shows that the heads of households reported in 1543 can be traced as such in 1546, while those who had been reported in 1545 could be found neither in the next year's report nor in that of the year 1543. The peasants most likely reported their relatives from Dubrovnik or elsewhere, for the commission failed to check their information.

<sup>38</sup> In 1673/4 the data for Đonta Doli were included in the Doli registration unit.

<sup>39</sup> (Zdravko Šundrica), »Stanovništvo prema popisu 1673/1674, koji je provela Dubrovačka Republika.« *Statistički godišnjak općine Dubrovnik 2* (1980): pp. 235-295.

Table 5. Number of households in the western part of the Dubrovačko primorje (1577-1673) by villages

Parish-village	Number of households						
	1577	1583	1606	1610	1626	1642	1673
<i>Dubrovačko primorje (west)</i>	789	810	781	785	739	718	569
Imotica	25	27	26	17	25	26	20
Štedrica	22	22	30	28	27	28	24
Topolo	63	64	60	65	64	68	58
Stupa	28	28	25	25	19	14	12
Ošlje	53	52	48	44	44	41	42
Zaton Doli	45	47	50	50	48	48	44
Đonta Doli <sup>38</sup>	22	25	27	27	28	22	...
Doli	33	32	34	36	37	36	42
Smokovljani	51	54	54	59	55	52	48
Visočani	40	39	36	38	31	33	27
Trnovica	15	17	15	18	22	21	17
Točionik	23	24	22	24	21	23	19
Lisac	48	50	46	50	44	42	32
Podimoć	28	33	33	33	29	26	15
Čepikuće	48	50	46	44	46	47	38
Podgora	19	18	18	19	20	16	12
Mravinca	21	20	22	22	21	30	20
Trnova	18	19	18	22	19	20	18
Banići	24	23	22	23	22	21	13
Kružica	23	28	23	23	17	17	12
Grgurići	66	64	64	63	58	52	34
Slano (west)	74	74	62	55	42	35	22

Table 6. Number of inhabitants of the western part of the Dubrovačko primorje (1498-1673)

Year	Number of households			Number of inhabitants per household	Number of inhabitants		
	Total	Chain index	Permanent index		Total	Chain index	Permanent index
1498	(1,018)	100	(178.91)	(10.00)	(10,180)	100	(353.23)
1577	789	(77.50)	138.66	(8.48)	(6,690)	(65.72)	(232.13)
1583	810	102.66	142.35	(8.27)	(6,699)	(100.13)	(232.44)
1606	781	96.42	137.26	(7.46)	(5,826)	(86.97)	(202.15)
1610	785	100.51	137.96	(7.32)	(5,746)	(98.63)	(199.37)
1626	739	94.14	129.88	(6.76)	(4,996)	(86.95)	(173.35)
1642	718	97.16	126.19	(6.20)	(4,452)	(89.11)	(154.48)
1673/4	569	79.25	100	5.07	2,882	(64.73)	100

Sources for Tables 5 and 6: see notes 30, 35 and 39.

Table 7. Number of households in the eastern part of the Dubrovačko primorje (1546-1673) per parish and villages

Parish-village	Number of households				
	1546	1583	1606	1642	1673
<i>Dubrovačko primorje (east)</i>	613	848	862	834	504
Slano (east)	10	9	8	9	6
Banja	20	29	30	15	11
Donji Majkovi	56	68	77	73	54
Gornji Majkovi	53	60	54	47	30
Dubravica	12	17	17	16	13
Brsečine	37	53	64	52	27
Trsteno	109	140	143	174	73
Orašac	69	146	149	117	88
Mravinjac	28	34	45	37	28
Mrčevo	17	21	28	27	17
Kliševo	46	77	62	71	31
Gromača	26	48	53	41	23
Ljubač	29	28	24	32	13
Osojnik	63	75	71	75	69
Petrovo Selo	38	43	37	48	21

Table 8. Number of inhabitants of the eastern part of the Dubrovačko primorje (1498-1673)

Year	Number of households			Number of inhabitants per household	Number of inhabitants		
	Total	Chain index	Permanent index		Total	Chain index	Permanent index
1498	(1,060)	100	(210.32)	(10.00)	(10,600)	100	(461.67)
1546	613	57.83	121.63	(9.52)	(5,836)	(55.06)	(254.18)
1583	848	138.34	168.25	(8.08)	(6,852)	(117.41)	(298.43)
1606	862	101.65	171.03	(7.18)	(6,189)	(90.32)	(269.56)
1642	834	96.75	165.48	(5.78)	(4,820)	(77.88)	(209.93)
1673/4	504	60.43	100	4.56	2,296	(47.63)	100

Sources for Tables 7 and 8 are given in notes 33, 37 and 41.

As the number of households in the period from 1498 to 1642 has already been established, in order to reconstruct the population of Dubrovačko primorje, it is further necessary to obtain the number of household members during that time. This can be done by analogy if we compare Dubrovačko primorje with a similar Dubrovnik region - Konavle.

A population census was taken in Konavle in 1536. Its records have been misplaced in the Historical Archives of Dubrovnik, but fortunately, copies pertaining to three villages (Bačev Do, Dunave and Lovorno) have been preserved.<sup>40</sup> Although this was a tax census, in which it is expected that the number of taxpayers was falsified, it provides a fairly accurate picture of the average 9.91 members per household. In support of the idea that this census was a representative one is the fact that there are small fluctuations in the number of household members in these three villages - Bačev Do (9.4), Lovorno (10.1), and Dunave (10.4). Similar fluctuations have been observed in the later census in 1673/4, but with smaller average values (Tables 9 and 10).

<sup>40</sup> I have been presented with these copies by courtesy of Niko Kapetanić who had made them a few years back. According to him, the same bound contained two more inventories of Konavle local units (kaznačine) dated from the sixteenth century.

Table 9. Number of members per household in some Konavle villages in 1536 and 1673/4

Village	1536			1673/4		
	Number of households	Number of persons	Persons per household	Number of households	Number of persons	Persons per household
<i>Total</i>	148	1,467	9.91	105	528	5.03
Bačev Do (Gruda)	58	546	9.41	40	199	4.97
Dunave	40	417	10.42	37	201	5.43
Lovorno	50	504	10.08	28	128	4.57

Sources: see notes 41 and 42.

Table 10. Number of households in Konavle and some Konavle villages (1536-1673)

Village	Number of households			
	1536	1549	1588	1673/4
<i>Total</i>	148	123	125	105
Bačev Do (Gruda)	58	46	39	40
Dunave	40	32	37	37
Lovorno	50	45	49	28
<i>Konavle</i>	(1,244)	1,034	971	829
Sample of villages (%)	(11.90)	11.90	12.87	12.67

Sources: see notes 41 and 42.

Several censuses of Konavle have been preserved. They were taken in particular local units (*kaznačine*) which correspond, with some minor exceptions, to the territorial boundaries of the villages of today. The censuses made in 1549 and 1588<sup>41</sup> could be regarded as the most prolific source, as they list all the heads of households in Konavle, and thus enable us to compute with accuracy the number of households (Table 11).

Table 11. Number of households in Konavle (not including Cavtat and Obod) in 1549 and 1588 - by villages

Village	Number of households		Village	Number of households	
	1549	1588		1549	1588
<i>Konavle (total)</i>	1,034	971	Mihanići	42	35
Čilipi	94	73	Mrcine	50	52
Vitaljina	33	28	Pavlje Brdo	36	35
Gruda	46	39	Pločice	50	34
Duba	49	31	Poljice	29	27
Dunave	32	37	Radovčići	59	(59)
Đurinići	41	27	Popovići	54	42
Gabrile	44	52	Pridvorje	63	63
Kuna	14	15	Stravča <sup>42</sup>	...	25
Lovorno	45	49	Komaji	65	61
Ljuta	48	52	Vodovada	47	52
Močići	52	38	Zastolje	41	45

<sup>41</sup> *Kaznačine Konavala (1549)*, ser.18, vol. 3b, *Casnacine della Contrada di Canali (Ag-Dec.1588)*, ser.18, vol. 3c. See Radoslav Grujić, »Kaznačine u Konavlima XVI veka.« *Rešetarov zbornik iz dubrovačke prošlosti*. Dubrovnik, 1931: p. 94 (Grujić's estimate is not precise).

<sup>42</sup> In the year 1549 the number of households in Duba contains the data for Stravča, too.



The results obtained from these two censuses show that from 1536 to 1673/4 the number of households underwent a sharp decline in Konavle and Dubrovačko primorje alike.

The most valuable piece of data provided by the above censuses was that of the number of members per household, which was 9.91 in 1536. This figure can, with great precision, readily be applied to other Dubrovnik regions that have similar features - Dubrovačko primorje and Pelješac. Astartea, and particularly the islands, could not have followed the same pattern, as there were hardly any joint households. In these regions in 1673/4, the number of members per household was similar, however, but with lower average values: Konavle (4.86), eastern Dubrovačko primorje (4.56), western half (5.07), Pelješac (5.20). Since no other census is available for the period between 1536 and 1673/4 from which we could derive the average number of members per household, it was necessary to presume that the decline in the number of households was linear. During this particular time the average number of members per household in Konavle declined annually by 0.037, in eastern Primorje by 0.039, in western Primorje by 0.035, and on the Pelješac peninsula by 0.034.

In view of the above pattern, the known number of households and the average number of members per household, the total population residing in western Primorje (Table 6) and eastern Primorje (Table 8) between 1498 and 1673/4 has been reconstructed, in line with the population of Konavle between 1536 and 1673/4 (Table 12).

Table 12. Population of Konavle (excluding Cavtat and Obod) (1536-1673)

Year	Number of households			Number of inhabitants per household	Number of inhabitants		
	Total	Chain index	Permanent index		Total	Chain index	Permanent index
1536	(1,244)	100	(150.06)	9.91	(12,328)	100	(305.91)
1549	1,034	(83.12)	124.73	(9.43)	(9,751)	(79.10)	(241.96)
1588	971	93.91	117.13	(7.99)	(7,759)	(79.57)	(192.53)
1673/4	829	85.38	100	4.86	4,030	(51.94)	100

Sources: See notes 41-43.

Whether analogy could be established between Pelješac and other Dubrovnik regions has yet to be examined. Any analogy between Pelješac and the eastern half of Dubrovačko primorje can be disregarded. The fact that the latter was closer to Dubrovnik than all the other regions induced the migration of its rural population to the city. This process was especially prominent after 1667, when the whole Republic was heavily struck by an earthquake. Primorje was one of the regions that suffered the most. The city of Dubrovnik, itself a victim of the disastrous earthquake, was in urgent need of labor. As a result, the Primorje residents fled to the city in pursuit of jobs. The result was that only 47.73% of the 1642 population of eastern Dubrovačko primorje still lived there in 1673/4, while in the more remote western part 64.73% stayed.

The vicinity of the city had an impact upon Konavle, too. Because to their somewhat isolated position, Pelješac and Konavle were less exposed to hostilities and plunder. Primorje, however, particularly during the Candian War, was periodically raided by gangs of hajduks and outlaws from across the border.

Therefore, an analogy could be drawn between the population trends on Pelješac and those in western Dubrovačko primorje, because both regions were physically remote from the urban center. This comparison should result in the estimation that Pelješac had about 20,000 inhabitants by the end of the fifteenth century, about 11,000 in the mid-sixteenth century, about 13,000 in the late sixteenth century, and about 8,000 in the mid-seventeenth century (Table 13).

According to the 1673/4 census, the ratio between the population of Konavle (Cavtat and Obod excluded), Dubrovačko primorje (including Petrovo Selo), and Pelješac on the one hand, and the remainder of the Republic's territory (excluding the city and the precincts) on the other, was 1:0.3727. In all likelihood this ratio underwent no significant changes during the period from 1498 to 1673/4. If we take into consideration the estimated population of the city of Dubrovnik established by Stjepan Krivošić (6,000 in the sixteenth century, and 5,000 both on the eve of the earthquake,<sup>43</sup>

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<sup>43</sup> S. Krivošić, *Stanovništvo Dubrovnika*: p. 51.

and after it in 1673/4),<sup>44</sup> and add to that the population of the suburban areas (Pile, Gruž, Bosanka), we will obtain the number of 80,000 inhabitants in the Dubrovnik Republic at the end of the fifteenth century, and between 50 and 60 thousand in the first half of the same century.<sup>45</sup> Beginning in the end of the sixteenth century, the number of residents declined, and was only half as much by the year 1673/4 (Table 14).

Table 13. Population of Pelješac, Dubrovačko primorje and Konavle (1498-1673)

Year	Pelješac			Dubrovačko primorje						Konavle		
	Number of households	Number of persons per household	Number of inhabitants	Western			Eastern			Number of households	Number of persons per household	Number of inhabitants
				Number of households	Number of persons per household	Number of inhabitants	Number of households	Number of persons per household	Number of inhabitants			
1498	(1,982)	(10,00)	(19,820)	(1,018)	(10,00)	(10,180)	(1,060)	(10,00)	(10,600)	(1,735)	(10,00)	(17,350)
1536	(1,421)	(9,91)	(14,082)	(730)	(9,91)	(7,234)	(760)	(9,91)	(7,532)	(1,244)	9,91	(12,328)
1546	(1,143)	(9,57)	(10,938)	(588)	(9,56)	(5,621)	613	(9,52)	(5,836)	(1,001)	(9,54)	(9,549)
1549	(1,181)	(9,47)	(11,184)	(607)	(9,46)	(5,742)	(632)	(9,40)	(5,941)	1,034	(9,43)	(9,751)
1577	(1,540)	(8,52)	(13,121)	789	(8,48)	(6,690)	(810)	(8,31)	(6,731)	(989)	(8,39)	(8,298)
1583	(1,581)	(8,31)	(13,138)	810	(8,27)	(6,699)	848	(8,08)	(6,852)	(979)	(8,17)	(7,998)
1588	(1,569)	(8,14)	(12,772)	(804)	(8,09)	(6,504)	(851)	(7,88)	(6,706)	971	(7,99)	(7,759)
1606	(1,525)	(7,53)	(11,483)	781	(7,46)	(5,826)	862	(7,18)	(6,189)	(965)	(7,32)	(7,064)
1610	(1,533)	(7,39)	(11,329)	785	(7,32)	(5,746)	(859)	(7,02)	(6,030)	(963)	(7,17)	(6,905)
1626	(1,443)	(6,85)	(9,884)	739	(6,76)	(4,996)	(846)	(6,40)	(5,414)	(958)	(6,58)	(6,304)
1642	(1,402)	(6,31)	(8,847)	718	(6,20)	(4,452)	884	(5,78)	(4,820)	(952)	(5,99)	(5,502)
1673	1,111	5,20	5,775	569	5,07	2,882	504	4,56	2,296	829	4,86	4,030

<sup>44</sup> V. Stipetić (»Brojčani pokazatelj«: p. 96, table 1), estimated that the city of Dubrovnik had 3,600 inhabitants in 1673/4, and 4,218 with its suburbs. This estimate is realistic according to the criterion of regular residence. But as the 1673/4 census was taken on the basis of the population present, this number should be increased by those city residents who, six or seven years after the earthquake, took part in its rebuilding, as well as soldiers. Genealogical analysis has offered proof that a number of males who had retired to their country estates were not counted, but later reappeared in registers as parents (on their return from the city). This might also account for the small average number of members per household, which according to the survey of the Pelješac region of Trstenica, amounted to about 6.0 in the 18th century (see Nenad Vekarić, »Stanovništvo Trstenice 31.12.1751. godine.« *Anali Zavoda za povijesne znanosti IC JAZU u Dubrovniku* 24-25 (1987): p. 147).

<sup>45</sup> See note 5.

Table 14. Population of the Dubrovnik Republic (1498-1673)

Year	Number of inhabitants			
	Pelješac, Dubrovačko primorje (with Petrovo Selo), Konavle (excluding Cavtat and Obod)	Dubrovnik islands, Rijeka dubrovačka (excluding Petrovo Selo), Zaton, Cavtat and Obod	Dubrovnik (with Pile, Gruž, Bosanka)	Dubrovnik Republic
1498	(57,950)	(21,598)	(9,000)	(88,548)
1536	(41,176)	(15,346)	(8,500)	(65,022)
1546	(31,944)	(11,905)	(8,000)	(51,849)
1549	(32,618)	(12,157)	(8,000)	(52,775)
1577	(34,840)	(12,985)	(7,500)	(55,325)
1583	(34,687)	(12,928)	(7,500)	(55,115)
1588	(33,741)	(12,575)	(7,500)	(53,816)
1606	(30,562)	(11,390)	(7,000)	(48,952)
1610	(30,010)	(11,185)	(7,000)	(48,195)
1626	(26,598)	(9,913)	(6,500)	(43,011)
1642	(23,821)	(8,878)	(6,000)	(38,699)
1673	14,983	(5,584)	(5,500)	(26,067)

This analysis proves that the most accurate estimate of the population was presented in the instructions the Senate gave in 1570 to its two envoys, Andrija Bundić and Frano Gundulić. Their task was to convince the pope and Venice that if the Dubrovnik Republic lost its freedom, Christianity would be put into jeopardy. In their words, 50 to 60 thousand "Christian souls" would be enslaved. In an attempt to stress the gravity of the situation, however, Frano Gundulić deliberately mis-quoted the population (80,000).

As compared with 1673/4, the population of the Republic was three times greater at the end of the fifteenth century, and two times greater at the close of the sixteenth century. Comparative analysis carried out by Vladimir Stipetić reveals that Dubrovnik was no exception as regards this pattern of decline.<sup>46</sup>

<sup>46</sup> V. Stipetić, »Brojčani pokazatelj«: pp. 99-107.

The research of Ambroz and Ranko Kapor confirms that the island of Korčula had about 8,000 inhabitants in 1525, about 5,000 in 1553, and only 2,087 in 1576 (the decline being caused by the scourges of war and disease).<sup>47</sup> According to Roman Jelić, the population of Zadar dropped from 5,803 in 1608 to 2,804 in 1695.<sup>48</sup> Miroslav Bertoša's survey of the population of Istria cites the number of 52,765 in 1554, about 70,000 in 1580, about 47,000 in 1601, and a low of 36,500 in 1625 (caused by the so-called *Uskok* War from 1615 to 1618).<sup>49</sup> According to Stipetić, all of Mediterranean Europe underwent a population decline in the first part of the seventeenth century. Spain experienced a fall from 8.5 to 7.5 million in the years between 1600 and 1650, Italy from 12 to 11 million, and Portugal from 2.02 to 1.75 million.<sup>50</sup>

This pronounced decline in the population of the Republic from 1498 to 1546 was the result of widespread epidemics. Local plague epidemics broke out in 1500, 1503 (Koločep, Šipan, Pelješac, Konavle), and 1506, when, according to Serafino Razzi, 1,500 people died. In 1516 Petrovo Selo in Rijeka Dubrovačka was infected with the plague. The population of the Republic was most severely afflicted by plague in 1526 and 1527, when Razzi and Ragnina recorded 20,000 deaths in their chronicles. Members of the nobility were not spared either. The chronicles note that 164 noblemen died of the plague, including among them the renowned poet, Šiško Menčetić. Epidemics were reported in 1528 (Ston, Župa Dubrovačka, Šumet), as well as in 1533 (the city of Dubrovnik), when 36 noblemen died along with 2,600 commoners. In 1539, 46 patricians and about 4,500 commoners perished from a pestilence of unknown origin. Super-death struck Pelješac in 1543, the population of Ston being cut down by 90%. An epidemic of the plague was also recorded in Rijeka Dubrovačka in 1545.<sup>51</sup> As a result, the population de-

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<sup>47</sup> Ambroz and Ranko Kapor, »Neki demografski podaci grada i otoka Korčule od XVI do početka XIX vijeka.« *Statistička revija* 30/3-4 (1980): pp. 225-231.

<sup>48</sup> Roman Jelić, *Stanovništvo Zadra 1608. godine*. Zadar: published by the author, 1985: p. 11.

<sup>49</sup> Miroslav Bertoša, »L'Istria veneta nel Cinquecento e nel Seicento.« *Atti del Centro di ricerche storiche a Rovigno* 7 (1977): p.145. Similar migration trends have been recorded in Pula, too. See Miroslav Bertoša, »Etnička struktura Pule od 1613. do 1797. s posebnim osvrtom na smjer doseljavanja njezina stanovništva.« *Vjesnik Historijskog arhiva u Rijeci i Pazinu* 15 (1970): pp. 55-56.

<sup>50</sup> Colin McEvedy and Richard Jones, *Atlas of World Population History*. Middlessex: Penguin Books, 1978, quoted by V. Stipetić, »Brojčani pokazatelj«: p. 100, table 4.

creased to about 50,000 in 1546 from the previous 88,000 in 1498. Nevertheless, all the above arguments favoring an estimated 88,548 inhabitants in the Republic in 1498, and their subsequent fate should, however, be accepted with reserve. Since this is based upon data from a missing original, it leaves ground for misinterpretation which will hopefully be clarified by future research. There is no doubt, however, that the Republic of Dubrovnik had more inhabitants in 1498 than in the sixteenth century. But there still remains the question of the accuracy of the analyzed values.

The decline of the Republic's population in the sixteenth and seventeenth centuries stems from diverse causes. An earlier large increase in the population was probably one of the most decisive factors. The republic had to shelter large numbers of Christian refugees from Bosnia and Herzegovina who populated less attractive rural areas. This sudden migratory influx exacerbated already difficult living conditions. The surplus population was then lessened by epidemics, the Candian War, the earthquake of 1667, and emigration (a phenomenon which has scarcely been examined so far). The Republic never succeeded in restoring its previous population level, since there was in fact no need for it to be so high.

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<sup>51</sup> Risto Jeremić and Jorjo Tadić, *Prilozi za istoriju zdravstvene kulture starog Dubrovnika*, I. Beograd: Biblioteka Centralnog higijenskog zavoda, 1938: pp. 91-100; Vladimir Taljeran, *Zrnca za povijest Stona*. Dubrovnik, 1935: pp. 106-107; Pavo Glunčić, *Iz prošlosti grada Stona XIV-XIX vijeka*. Beograd: SANU, 1961: p.115.