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# EMIGRATION FROM DALMATIA (CROATIA) TO THE UNITED STATES FROM 1892 TO 1924 – ANALYSIS OF THE ELLIS ISLAND DATABASE

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Although emigration from present-day Croatia, particularly from Dalmatia, to the United States has often been discussed in papers dealing with the Croatian diaspora and emigration waves, there has been no well-documented analysis of the places of origin, ages of the emigrants, or the dates and causes of their emigration. This paper analyses the intensity of emigration from Dalmatia to the USA in the late 19th and early 20th centuries and information about the immigrants by consulting the Ellis Island Database. Methodology included both descriptive and inferential statistics. A database search by ethnicity (using the parameter "Dalmatian") resulted in 24,901 records. The largest group were young adults (aged 15–26), who accounted for 51.8%. The immigrants were predominantly males from rural settlements on the islands or in the hinterland. The most important push factors were the harsh economic situation (brought about by grapevine pests, underdeveloped industry, the lack of arable land etc.) and the intention to avoid conscription into the Austro-Hungarian Army.

Keywords: emigration, Dalmatia, Croatia, USA, Ellis Island Database



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## INTRODUCTION

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There are numerous factors that cause currents of migration, but none of them can compare in volume with that which comes from the desire inherent in most men to "better" themselves in material respects (Ravenstein, 1889). Out of the total number of immigrants who have come, in historic times up to the 21st century, to what is now the USA, nearly 70% came from Europe, and the reasons for migrations were in most cases economic (Daniels, 2002). Immigrants from Eastern and Southeastern Europe, including those from the territory of present-day Croatia, mostly came to the United States before the restrictive immigration acts of 1921 and 1924 were passed. One of the purposes of those acts was to reduce the number of immigrants from those parts of Europe, because they were thought to be unassimilable (Fuchs, 1983). Barrett and Roediger (1997) point out that Southern and Eastern Europeans dominated the ranks of those who came to the USA between 1895 and 1924 and "remade" the American working class in that period.

The largest community of Croats outside Croatia is in the United States of America.<sup>1</sup> According to the 2015 American Community Survey, there were 409,949 persons of Croatian ancestry (+/-12,718) in the United States. The Republic of Croatia (population 4,284,889 in 2011) is a traditional emigrational country. From the mid-19th century onward, several waves of emigration can be identified, each with specific features regarding the causes of emigration and final destinations of the emigrants. One major wave occurred in the late 19th and early 20th centuries, as part of a mass emigration wave from Europe, particularly from Eastern and Southern Europe. It was at its strongest between the 1890s and the outbreak of the First World War (Čizmić, 1998).

One area of Croatia particularly affected by emigration was Dalmatia (the southern littoral region). The dominant economic activity there was agriculture, particularly viticulture. When phylloxera arrived in Europe in the mid-19th century, it destroyed most of the vineyards in renowned wine-producing countries (France, Italy), which enabled the Dalmatian wine-producers to prosper briefly. Several French companies had established vineyards in Dalmatia (Gale, 2011) and the "Golden Age of the Croatian Adriatic" was flourishing. As a result of phylloxera in France, the price of Dalmatian wines rose sharply, stimulating the production and export of Dalmatian wines. Consequently, large areas of land were turned into vineyards on terraced island and mainland hills (Lajić, 1992). Then, at the turn of the century, the Dalmatian vineyards were plagued by phylloxera, with devastating effects

on the region's economy. People were forced to emigrate to more prosperous countries, primarily the United States, in order to support their families (Čuka, Mirošević, Faričić, & Graovac Matassi, 2017).

Although emigration from Croatia and Dalmatia to the United States has often been discussed in papers dealing with the Croatian diaspora and emigration waves (e.g. Antić, 2002; Čizmić, 1998; Čizmić, Sopta, & Šakić, 2005; Nejašmić, 1991, 2008), there has been no well-documented analysis of the emigrants' places of origin and ages, the years in which they left and the reasons (except for one paper on emigration from Dalmatia from 1921 to 1928, when emigrants went to South America and Australia; Mirošević, 1988). In fact, most discussions rely on local reports from affected areas, which highlight the harsh economic situation that practically forced the population to emigrate. Most authors (Čizmić et al., 2005; Nejašmić, 1991, 2008; Lajić, 1992) argue that the emigrants were usually young males, but this is not supported by actual evidence, other than contemporary newspaper articles, archival documents and reports. At the time, there were no official statistics on emigration. The Dalmatian islands were most severely affected, due to their meagre natural resources (the karst terrain, and the lack of surface and underground waters and arable land). The island population peaked in the early 1920s, then declined sharply due to long-term emigration and the subsequent fall in the birth rate (Čuka et al., 2017; Graovac, 2004; Faričić, 2012; Lajić & Mišetić, 2006). It is also important to emphasise the demographic aspect of emigration at that time. Namely, in the late 19th century, Croatia entered stage two of the demographic transition, characterised by the decline in mortality resulting in increasingly rapid population growth. This stage lasted until the early 1930s, when birth rates started declining also (Nejašmić, 2008).

The primary aim of this paper was to analyse the intensity of emigration from Dalmatia to the United States, but also to investigate which areas in Dalmatia were affected the most, and to find connections between the emigrants' ages, years of emigration and the socio-economic and political situation in their homeland. Another aim was to investigate whether emigrants from Dalmatia differed from emigrants from other European countries in terms of their age and gender. The final aim was to single out the areas of the highest and lowest emigration using spatial analysis (i.e. hot spot analysis). The main source of information was the database of the American Family Immigration History Centre, i. e. the Ellis Island records. A database search of those who declared themselves as Dalmatians resulted in 24,901 records.

We should emphasise that this number did not represent the total number of emigrants from Dalmatia. Up to 1918, Croatia, and therefore Dalmatia, was part of Austria-Hungary, so some people declared themselves as Croatians, Austrians or Hungarians. Long-term governance of the Venetian Republic over Dalmatia from the early 15th century until the end of the 18th century, brought a certain number of immigrants from the Italian peninsula to Dalmatia. During the 19th century, the period of national awakening in Europe, they developed a sense of being Italian, so a small share of emigrants to the US from Dalmatia declared themselves as Italians. Nevertheless, the sample analysed in this paper was more than indicative and sufficient for conclusions to be drawn. This research makes a significant contribution to the investigation of emigration from Dalmatia, because the conclusions are based on a comprehensive analysis and actual results, rather than on local reports.

## **HISTORICAL BACKGROUND**

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### **Immigration to the USA**

Since its foundation, the USA has been one of the most important immigration countries in the world. The flow of immigrants fluctuated in accordance with economic conditions in the United States and abroad, and in response to changes in US immigration policies (Martin & Midgley, 2006). Between 1850 and 1913, more than 40 million people emigrated from Europe to the New World, and the USA absorbed nearly two thirds of them. The early migrant flows came mostly from Northwest Europe (particularly the United Kingdom and Scandinavian countries), but eventually shifted to South and East Europe. After 1890, the "new emigrants" came mostly from Southern Europe (Italy, Spain and Portugal) and Central and Eastern Europe (Austria-Hungary and the Russian Empire, especially its western part – present-day Poland) (Hatton & Williamson, 1992).

One of the most important ports of entry was Ellis Island in New York Harbor. In fact, between 1903 and 1924, 69.8% of the total of 15,739,135 immigrants to the USA entered through Ellis Island. According to the Ellis Island Database, between 1892 and 1954, the number was over 12 million. Several periods of immigration can be distinguished, particularly with regard to countries of origin. According to Vecoli (1996), there were three major waves of immigration. In the first wave (1841–1890), almost 15 million immigrants were recorded. Of these, over four million were German, three million Irish, three million British, and one million Scandinavian. In the second wave (1891–1920), over 18 million arrived, of whom almost four million were from Italy, 3.6 million from Austria-Hun-

gary, and three million from Russia. In the period from 1920 to 1960, immigration fell due to restrictive immigration policies, economic depression and the Second World War. Then, in 1965, the third wave began, and is still in progress. However, a shift in national origins has been evident in the last wave. Of the total of 16 million immigrants, almost a quarter have come from Mexico, a quarter from Central and South America and the Caribbean, and 35% from Asia. Unlike the first two waves, when most immigrants were European, in the last wave they comprised only 12%.

According to an alternative classification by Martin & Midgley (2006), there were four waves of immigration; the first up to 1820 (before entries were recorded), the second from 1820 to 1860, the third from 1880 to 1915, and the fourth from 1965 onwards.<sup>2</sup> Immigrants from the territory of present-day Croatia (up to 1918, the Kingdom of Croatia and Slavonia and the Kingdom of Dalmatia within the Austro-Hungarian Empire, and after that Kingdom of Serbs, Croats and Slovenes and from 1929 Kingdom of Yugoslavia) formed part of the third immigration wave. They were among the first to come to the United States after the Ellis Island station was officially opened in 1892.

Several studies have examined the composition of emigrants from different European countries (e.g. Carlsson, 1976 for Sweden; Erickson, 1972 for Great Britain; Fitzpatrick, 1984 for Ireland; Hvidt, 1975 for Denmark; Swierenga, 1986 for Holland). According to these studies, most immigrants were young adults. In fact, only 8% of those who entered the USA between 1868 and 1910 were over 40, and 16% were under 15 years of age. Males accounted for 64% of all immigrants between 1851 and 1910 (Hatton & Williamson, 1992).

## **Emigration from Croatia (Dalmatia)**

Croatia is a traditional emigrational country in which emigration has been a significant process in the last 120 years. One of the most important emigration waves from present-day Croatia, including Dalmatia, was in late 19th and early 20th centuries, when the majority of international emigrants went to the USA. Overseas emigration was massive in the 1880s and became a serious social and political issue (Holjevac, 1967). According to Čizmić (1974–75), more than 86% of the emigrants were farmers. However, since there was no unified emigration register, most research dealing with emigration from Croatia relied on local reports and newspapers, or on the partial data of the Land Statistical Office, which collected data only for one part of Croatia (the Kingdom of Croatia and Slavonia) from 1899. For other parts of Croatia (Istria and Dalmatia), the statistical data related to emigration were not collected, so most data mentioned in the literature were actually estimates (Nejašmić, 2008).

Emigration from Dalmatia started earlier than from other parts of Croatia (largely from the 1860s), but due to the lack of official statistics, estimates of the volume of emigration vary. According to Makale (1912), 58,158 persons emigrated from Dalmatia in the period from 1890 to 1910. On the other hand, Foretić (1969) claims that from 1900 to 1910, approximately 6% of the population emigrated from Dalmatia (about 39,000 people). In total, from 1880 to the beginning of the First World War, approximately 100,000 people from Dalmatia emigrated overseas (Nejašmić, 2008). However, in 1921, the Kingdom of the Serbs, Croats and Slovenes passed a law related to emigration records, and the Emigration Department, in cooperation with the General Emigration Commissariat, was in charge of keeping records of emigrants and return migrants. According to the data of the General Emigration Commissariat, as many as 15,285 people emigrated from Dalmatia between 1921 and 1928, but due to immigration acts passed in the USA, they mostly moved to South America and Australia. Detailed data on the emigrants of that period reveal the following: 78.9% of them were male, 49.3% were aged 18–30 and 30.6% were aged 31–50, while 62.5% were farmers. Based on these data, the emigrants were actually the most productive, vital part of the population. However, the statistics did not include data on places of origin (region/county), so it is not possible to determine which parts of Dalmatia were most affected by emigration.

According to Nejašmić (1991, 2008) some of the most important push factors that caused emigration from Dalmatia in the late 19th and early 20th centuries were economic in nature, and, to a lesser extent, political: 1. the 1891 trade agreement between the Austro-Hungarian Empire and Italy, which made local producers uncompetitive on the market, 2. farmers' debts, 3. grapevine downy mildew (*Plasmopara viticola*) infecting the vineyards, 4. phylloxera (*Dactulosphaira vitifoliae*) infecting the vineyards, 5. underdeveloped industry and the lack of arable land, 6. underdeveloped other economic sectors, 7. the increase in agricultural density, 8. the unresolved political position of Croatia.<sup>3</sup>

On the other hand, the USA recorded intense economic development which required a work force. Additionally, according to Nejašmić (1991), emigration from Dalmatia intensified due to the dissemination of information about the "New World" (reported by emigrants to their countrymen back home), the rise of innovations, better traffic connections, the vicinity of major ports, increased competitiveness in overseas transportation (cheaper passage) etc. Another important factor for emigration that should be mentioned was demographic transition. In the 1880s, the death rate in Croatia started decreas-

ing, while the birth rate remained high, so there was a high rate of natural increase and population growth (Nejašmić, 2008). In economically unstable times, population growth was another push factor that prompted young people to emigrate, because their resources were insufficient to meet the needs of their families.

A significant decline in the intensity of immigration to the USA started in 1921, particularly from 1924, when immigration acts limited the annual quotas of immigrants permitted from individual countries. From then on, emigrants from Croatia mostly moved to South American countries (Chile and Argentina in particular) and to Australia (Nejašmić, 1991; Mirošević, 1988).

## **RESEARCH AREA**

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Dalmatia, precisely, the Kingdom of Dalmatia was the southernmost territorial unit of the Austro-Hungarian Monarchy, encompassing 12,835 sq. km from the Rab Island in the north, up to Boka Kotorska Bay in the south. It was established in 1817 and lasted until 1918, i.e. the break-up of Austria-Hungary at the end of World War I. Simultaneously, the Kingdom of Italy (as one of the victorious countries in WWI) occupied large parts of Dalmatia and held them until 1923.<sup>4</sup> Other parts of Dalmatia became part of the newly established Kingdom of Serbs, Croats and Slovenes (from 1929 Kingdom of Yugoslavia). From 1918 until today there have been no territorial units that have included the entire Dalmatian territory as was the case in the Austrian Kingdom of Dalmatia, but "only" the vernacular region of Dalmatia. Nowadays, four southernmost Croatian counties (Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva) cover almost the exact territory as the Kingdom of Dalmatia, and that is the reason why they were considered as a spatial scope of the research.

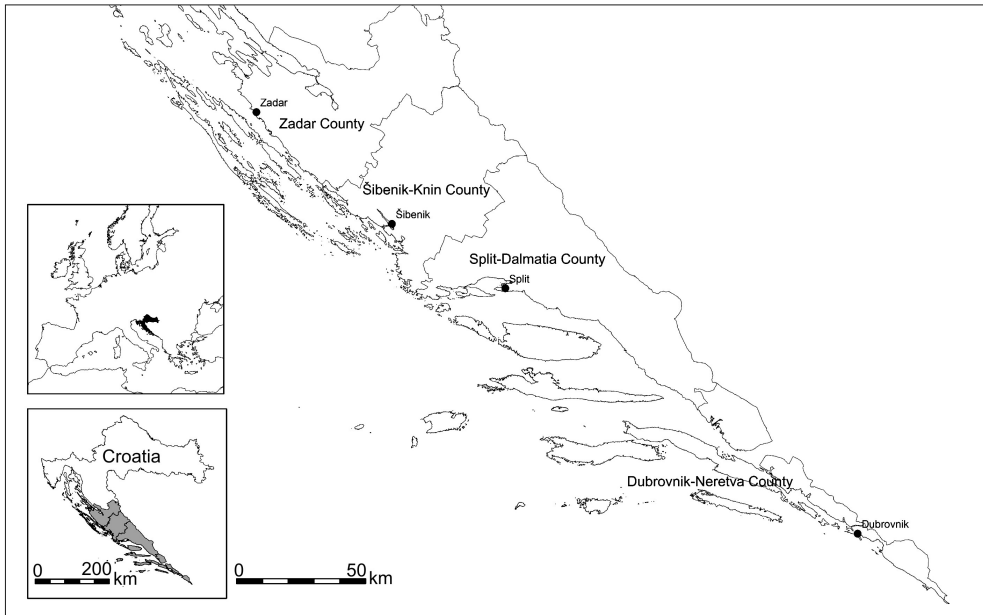
## **DATA AND METHODS**

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The analysis in this paper is based on the records provided by the Statue of Liberty – Ellis Island Foundation Inc. During 2011, we searched the records by ethnicity using the search parameter "Dalmatian". The search resulted in 24,901 persons who claimed to be Dalmatian according to their ethnicity. Due to the language barrier, and the fact that many were illiterate and unable to help the officials recording their personal information (names and surnames, age, places of origin etc.), many entries were written incorrectly. Also, some names appeared in multiple entries, so 1,776 entries were not taken into consideration in the analysis. Consequently, descriptive statistics (age and sex of the immigrants, and year of arrival) were used on a sample of 23,125. Since one of the aims of the paper

was to make a spatial analysis of emigration from Dalmatia (i.e. four southernmost counties in Croatia), we identified the place of origin (575 settlements) for 14,835 emigrants. This reduction was necessary because we were not able to determine the exact place of origin for 8,290 emigrants due to incorrect spelling. However, they declared themselves Dalmatian and had surnames typical of Dalmatia (for that reason, they were included in the descriptive analysis, but not in the spatial one).

FIGURE 1  
Researched area



In addition to descriptive statistics, two inferential methods were used in the paper, one being the two-sample difference of proportions test and another hot spot analysis. Two-sample difference of proportions test is appropriate for dichotomous (binary) categories like gender or yes/no questions (Chapman McGrew, Lembo, & Monroe, 2014). In this case, it was done on sex composition in order to determine whether there were statistically significant changes in the share of female immigrants in the selected years.

In order to investigate the spatial distribution of the Dalmatian immigrants, hot spot analysis was carried out, based on the number of immigrants (14,835) for which we could determine the place of origin (575 settlements). Hot spot analysis is a spatial statistic method used to determine where features with either high or low values cluster spatially (Mitchell, 2005). It observes the value of every feature (settlements in this case) within the context of the values of the neighbouring features. If a feature with high value is surrounded by other features of high value, then positive (hot) cluster is present. Conversely, negative (cold) cluster is the result of neighbour-



ing features with low values. A single feature with high or low values will not be designated as a hot spot. The Getis-Ord  $G_i^*$  statistics (Getis & Ord, 1992) is used in hot spot analysis and it is calculated for every feature in a dataset. It is expressed in z-scores and p-values, which indicate statistically significant positive (hot) or negative (cold) clusters. If the z-score of the researched feature falls between -2.06 and 2.06, then no statistically significant positive or negative clustering is present, but a random area. Hot spot analysis was done in GIS ArcMap software.

Getis-Ord  $G_i^*$  is given as:

$$G_i^* = \frac{\sum_{j=1}^n w_{ij}x_j - x\sum_{j=1}^n w_{ij}}{s(n\sum_{j=1}^n w_{ij}^2 - (\sum_{j=1}^n w_{ij})^2 / n - 1)^{1/2}}$$

$$\bar{x} = \sum_{j=1}^n x_j / n$$

$$s = (\sum_{j=1}^n x_j^2 - \bar{x}^2 / n)^{1/2}$$

where:

$x_j$  – the attribute value for feature  $j$ ,

$w_{ij}$  – the spatial weight between feature  $i$  and  $j$ ,

$n$  – the number of features,

$\bar{x}$  – arithmetic mean,

$s$  – standard deviation

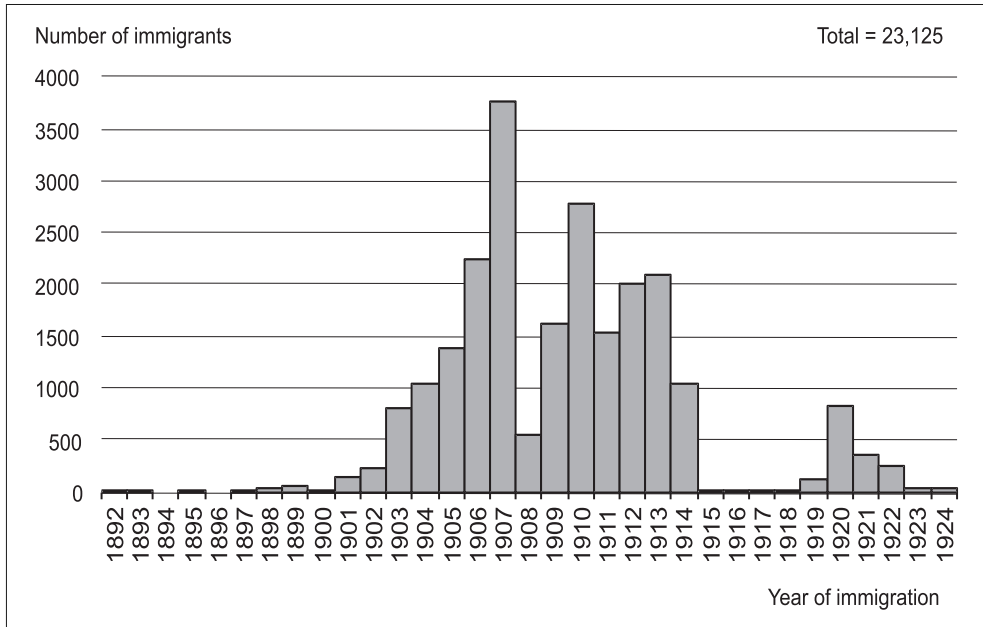
## RESULTS AND DISCUSSION

The analysis of years of entry for Dalmatian immigrants to the USA showed that immigration intensified significantly at the beginning of the 20th century, which coincides with the general immigration trend to the USA, and reached its peak in 1907 (Figure 2). This increase can be linked to the spread of phylloxera and the destruction of the wine production industry. Unlike important wine-producing European countries such as France, Spain or Italy, Croatia was spared phylloxera for several decades. But between 1900 and 1905, the Dalmatian vineyards were severely infected and destroyed (Gale, 2011). After introducing new American species resistant to phylloxera, and grafting European species onto the local vines, the vineyards began to recover. But families who depended exclusively on wine production could not survive without any sort of income for several years, so their young male members were encouraged to emigrate. This marked the beginning of mass emigration, mostly to North America (Johnston & Crkvenčić, 1954). Between 1880 and the outbreak of the First World War, about 420,000 people emigrated overseas from Croatia (Nejašmić, 2008).

At that time, the USA was the most important destination for Croatian emigrants. According to the 1910 US Census, there were 73,239 persons born in Austria or Hungary, but their

mother tongue was Croatian. Additionally, there were also 92,234 persons whose parents were born in Austria or Hungary, but their mother tongue was Croatian (Daniels, 2002). According to Nejašmić's (2008) estimates, approximately 100,000 people from Dalmatia emigrated overseas, mostly to the USA. According to the Ellis Island Database, at least 23,125 Dalmatians were part of that emigration wave (Figure 2). In 1900, there were 593,784 people living in the Kingdom of Dalmatia (*Općinski rječnik za Dalmaciju*, 1908). It should be pointed out that the total number of Dalmatian immigrants to the USA was much higher.

FIGURE 2  
Dalmatian immigrants  
to the USA by year of  
arrival, 1892–1924



Source: Ellis Island Database

The data also revealed an intense increase in the number of Dalmatian immigrants between 1906 and 1907. One possible cause of this increase, besides the difficult economic situation in their homeland, was in order to avoid conscription into the Austro-Hungarian Army, which lasted ten years (three in active service and seven in army reserves) starting at the age of 20 (until 1889) or 21 (from 1889) (Oršolić, 2005). In addition, Austria-Hungary was preparing to annex Bosnia and Herzegovina from the Ottoman Empire (it happened in 1908), which was another reason to avoid being drafted. This hypothesis is supported by the fact that almost 25% of Dalmatian immigrants in 1907 were aged 17–20.

In 1908, there was a significant decline in the number of Dalmatian immigrants. This was caused by a serious financial crisis in the United States (so-called Panic of 1907), when

many state and local banks and businesses went bankrupt (Daniels, 2002). Many people, including Croatian and Dalmatian immigrants, became jobless and without income. The bad economic news spread was relayed quickly from the USA, and local Croatian newspapers were full of personal accounts by emigrants who described scenes of deprivation they would not have expected even in their homeland (Dubrović, 2008). A recession started in October 1907, but lasted for only a year, so in 1909, the number of Dalmatian immigrants started to increase again. By the First World War, the wine industry in Dalmatia had recovered, but the volume of vineyards was lower than in the second half of the 19th century. Significant numbers of farmers emigrated, while some who remained on the land decided to grow olives rather than vines. So, at the end of the 19th century, Dalmatian wine production had reached a peak (Čuka et al., 2017). In 1907, *La Dalmazia Agricola* published an article on emigration due to the phylloxera epidemic and other unfavourable factors in agriculture and the economy. It claimed that in 1906, up to 62,000 Croats, of whom 20,800 (one-third) were Dalmatians, had emigrated to America. Considering the stage of demographic transition in Dalmatia (stage two – characterised by high birth rates and declining death rates, which resulted in high population increase), and the economic difficulties it experienced in the late 19th and early 20th centuries, we can confirm that the results of previous studies by Easterlin (1961) and Hatton & Williamson (1992) applied to Dalmatia, too. These studies suggested that the rates of natural increase at home and income gaps between home and overseas destinations mattered a great deal.

Soon after the end of the First World War, the Emergency Quota Act, or 1921 Emergency Immigration Act, restricted the annual number of immigrants to 3% of the number of people from individual countries who had been living in the United States in 1910. The 1924 Immigration Act limited those quotas to 2% of the total of any given nation's residents in the U.S. as reported in the 1890 census. According to the Act, only 671 people from the Kingdom of Serbs, Croats and Slovenes (from 1929 Kingdom of Yugoslavia) were allowed to immigrate annually to the USA. Due to these legal restrictions and the economic crisis between the two World Wars, emigration from Croatia and Dalmatia to the USA decreased significantly.

Ravenstein (1889) points out in one of his "laws of migration" that most of the migrants tend to be young. Daniels (2002) in his book on the history of immigration in the USA states that almost 40% of Irish immigrants in the late 19th and early 20th centuries were between the ages of 20 and 24. Our analysis of the age of the immigrants showed that the average was 26.0, 24.6% were between 15 and 19 years of age and IQR (interquartile range, 50% of the results) encompassed ages 19–32

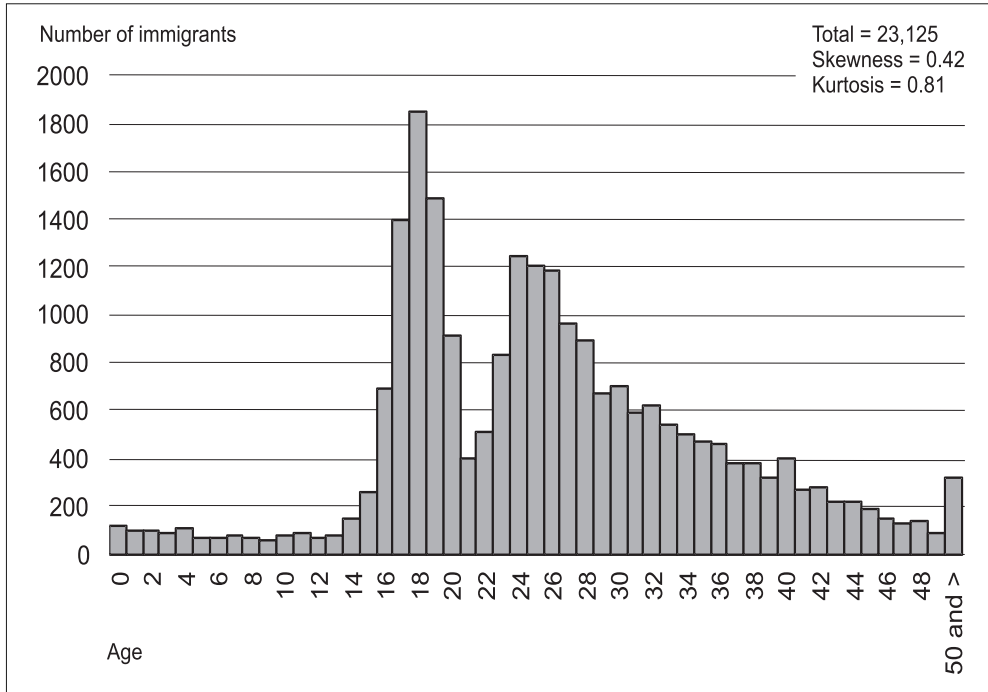
(Table 1, Figure 3). Standard deviation of the age is moderately high, which can also be seen from the coefficient of variation, meaning that the results are concentrated around the mean with rather few outliers. Eighteen-year-old males were the most numerous (recorded 1848 times). We can assume that the most important reason for emigration at that age was to avoid conscription into the Austro-Hungarian Army. There was a significant decline in the number of immigrants aged 20–22, which was the result of conscription, and an increase in those aged 23–26, the age when active army duty was completed. In fact, the most numerous group were young adults (aged 15–26), who accounted for 51.8% of all immigrants. The analysis showed that 5.5% were children (up to 14 years of age), 85.9% were aged 15–40, and 8.6% were over 40 years old.

TABLE 1  
Descriptive statistics of  
the immigrants' age

N	23125
Mean	26.04
Median	25
Mode	18
Frequency of Mode	1848
Standard Deviation	9.85
Coefficient of Variation	37.81
IQR	19-32

FIGURE 3  
Dalmatian immigrants  
to the USA by age,  
1892–1924

Source: made after: Ellis Island Database



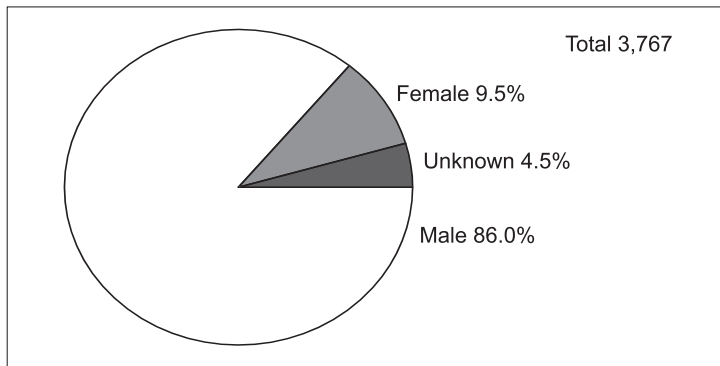
Source: Ellis Island Database

The emigration of young people posed a serious threat to the demographic development of rural Dalmatian areas. Although, at first, emigration relieved the negative effects of growing population in the unfavourable economic situation of the late 19th and early 20th centuries, after a while, the long-term negative effects of emigration of the young, fertile population became more evident – reduction of the labour force, of the fertile population, and consequently fertility decline. In the period before World War I, a great majority of the emigrants from present-day Croatia were men, and most of them only planned to stay in the USA until they earned enough money to return, but for many of them, temporary migration became permanent (Čizmić, 1996; Nejašmić, 1991). On the other hand, from 1913, entire families started to emigrate. In 1901, about 10% of the emigrants were women, but by 1912, their share had increased by more than 30% (Čizmić, 1996). According to Daniels (2002), most of the nineteenth century- and on into the twentieth-century migrants to the USA were male. Two-thirds of the Poles and almost nine-tenths of the Greeks were males. Since the Ellis Island Database does not include information on the gender of the immigrants, we analysed their names to determine whether they were male or female and to test the hypothesis that the male emigrants dominated. As the reference year we took the year 1907, when the largest number of immigrants was recorded. The results showed that 86.0% were male and only 9.5% were female. For the remaining 4.5% it was not possible to determine their gender from their names (Figure 4). The analysis was repeated for 1903 and 1920<sup>5</sup> – in 1903, there were 84.8% male and 7.2% female immigrants, and in 1920, 69.9% were male and 22.3% female. The two-sample difference of proportions test that we performed on the sex composition for 1903/1907 and 1907/1920, shows no statistically significant difference in the share of females between 1903 and 1907 ( $p = 0.12$ ), but a statistically significant increase from 1907 to 1920 ( $p < 0.00$ ). This increase in the number of female immigrants could be attributed to family reunions, i.e. wives, fiancées or other family members of Dalmatian people who had immigrated earlier. So, the results show that despite the increasing trend of female immigration, the men still dominated.

The spatial analysis of places of origin showed that not all parts of Dalmatia were affected equally by emigration. Of the total number of emigrants classed by place of origin (14,835), 10.8% were from the four largest urban centres (the county centres of Zadar, Šibenik, Split and Dubrovnik) and the rest originated from rural areas. Islanders accounted for 32.9% of the total number. The highest proportion, 46.5%, emigrated

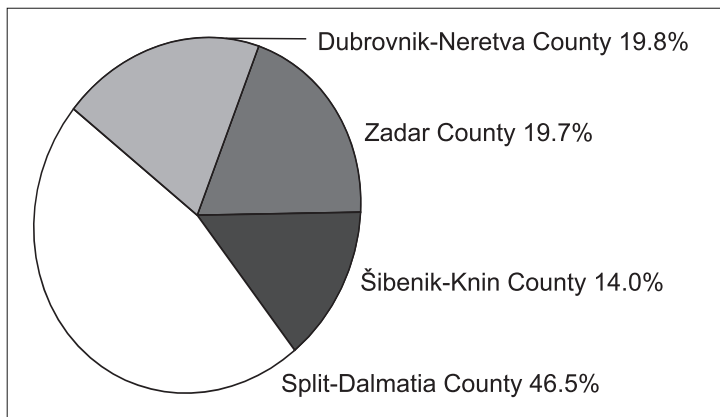
from the present-day Split-Dalmatia County (Figure 5). Many of them originated from the islands or hinterland. The hinterland of Split-Dalmatia County is characterised by a particularly rocky, hilly landscape with little arable land. The only larger fertile areas are karst fields, which were mostly used for growing wheat, with vineyards on the edges of the fields near the hills. The lack of arable land, overgrazing, increasing agricultural density, and vine pests, resulted in emigration from that area. From the areas rich in fertile land and water courses, such as the flysch-covered Zadar hinterland, or the River Neretva delta in Dubrovnik-Neretva County, a relatively small number of emigrants was recorded for the period researched. The islands were also affected by emigration because of high agricultural density and the fact that viticulture was the most important economic activity. For example, while the Zadar hinterland was not an emigration area at the time, some of the Zadar islands experienced serious depopulation from which they never recovered. Of the total number of emigrants from Zadar County, 52.9% were islanders.

➤ FIGURE 4  
Gender of Dalmatian  
emigrants who  
immigrated to the  
USA in 1907



Source: Ellis Island Database

➤ FIGURE 5  
Dalmatian immigrants  
by county of origin,  
1892–1924



Source: Ellis Island Database

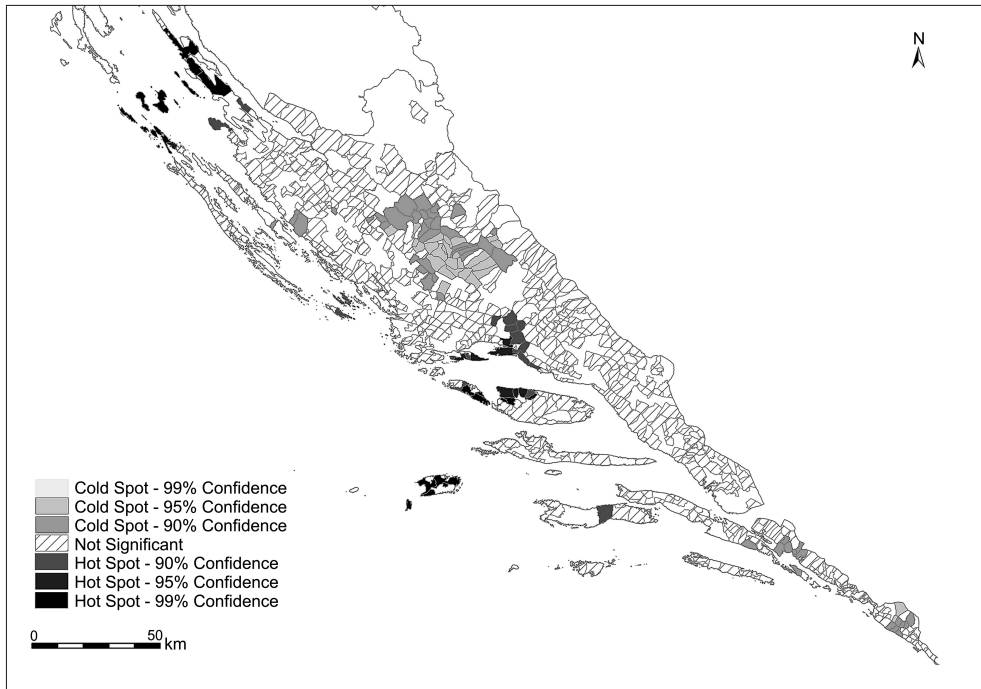
Hot spot analysis revealed three statistically significant cluster areas, two hot and one cold. One high-value area is located in the north-west of Dalmatia, encompassing the islands of Olib, Silba, Premuda, Molat, Ist and parts of the Pag Island (Figure 6). Another hot spot area is located in central Dalmatia and includes both coastal (Solin, Split) and insular settlements (on the Čiovo, Šolta, Brač and Vis islands). Even today, the Croatian islands face extremely unfavourable demographic development characterised by intensive depopulation, long-term natural decline and population ageing. Some islands and insular settlements are on the verge of extinction. One of them is the Island of Olib with its eponymous settlement. According to the latest census data (2011), the island has 140 inhabitants. For comparison, in the period 1892–1924, among Dalmatians recorded in the Ellis Island Database, 414 persons originated from Olib (Table 1), and the average population in the period 1890–1931 was 1,331, which means that approximately 31% of the population emigrated to the USA. It is likely that the total number of emigrants from Olib was even higher. Emigration from Croatian islands was so strong at the turn of the 20th century that it was frequently mentioned in contemporary periodicals. In 1910, *La Dalmazia Agricola* published an article in which it was stated that due to debt, taxes, phylloxera (preceded by peronospora) and the falling price of wine, as many as 300 men from the village of Grohote on the Island of Šolta (population 1,500) had left for America. Most emigrants were between the ages of 18 and 50, which had a particularly negative effect on the local workforce (Čuka et al., 2017). The islands with the largest total number of emigrants in the period analysed were Brač (697), Korčula (683) and Vis (570) (all located in Split-Dalmatia County).

The only cold spot with low values is located in the hinterland of the Šibenik-Knin County, around the town of Drniš. The likely reason for the low values of emigration from the Drniš area was a more favourable economic situation, which was the result of coal exploitation since the early 19th century. According to the sources, in some years, up to 1,160 workers were employed to work in the mines, while the average employment varied, but it was around a couple of hundred (Peričić, 2000). Also, emigration from Drniš towards the US started later in comparison to insular and coastal areas and was also oriented towards continental parts of Croatia (Peričić, 2000).

According to Hatton and Williamson (1992), European intercontinental emigration should not be considered simply as part of a more general rural exodus. Additionally, a number of studies (Carlsson, 1976; Hvidt, 1975; Semmingsen, 1972) have

shown that overseas emigration rates from urban areas were as high as or even higher than from rural areas. However, our analysis shows that most emigrants from Dalmatia actually originated from rural areas. On the other hand, at that time, Dalmatia (and Croatia) was characterised by a relatively low level of urbanisation. Only four places in Dalmatia – Zadar, Šibenik, Split and Dubrovnik – were considered as larger urban settlements, while most of the others were rural, particularly in terms of the number of inhabitants, high percentage of population working in agriculture, and lack of higher-order services. In 1900, these four cities housed only 9.8% of the Dalmatian population. Since 90.2% of the Dalmatian population lived in rural areas, most emigrants originated from those areas.

**FIGURE 6**  
The hot spot analysis  
of emigration from  
Dalmatia



Source: made after: Ellis Island Database

## **CONCLUSIONS**

Our results revealed that Dalmatian immigrants in the United States exhibited similar characteristics to other European immigrants of the time, but also differed in some ways. As with European immigrants in general, most Dalmatian immigrants were male, but their proportion was much higher. Nevertheless, the share of females in the total number of immigrants increased significantly in 1920, compared to 1907. As for the age of the immigrants, the results were similar to the averages



of other European immigrants, but the most dominant group were young adults aged 15–26. So, the analysis showed that most US immigrants from Dalmatia were young males from rural areas, particularly from the islands and the hinterland parts of the region. The main push factor was the poor economic situation (caused by vine pests, debt, agricultural crowding, etc.). As local reports of the time suggest, the main goal of the emigrants was to earn money and return to their homeland. For that reason, most of the early emigrants were young males who also wanted to avoid being drafted into the Austro-Hungarian Army. Though they planned temporary stays, these usually became permanent, so in the period after the First World War, there was increased immigration by women, presumably wives, fiancées or other family members of immigrants from earlier periods. The Dalmatian islands were particularly affected by emigration, mostly due to scarce natural resources and the vicinity of ports from which they could emigrate. This is particularly true of the North and Central Dalmatian islands. These results were confirmed by the hot spot analysis. The islands' populations peaked in the early 20th century, and from then declined, some to the point of total depopulation. Our research was the first in Croatia to analyse the intensity of emigration from Dalmatia to the USA in the late 19th and early 20th centuries, providing information on the gender, age and place of origin of the emigrants, and it actually supported many hypotheses presented in previous research, but never verified by empirical evidence, only by local newspaper reports and chronicles.

## NOTES

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<sup>1</sup> The greatest number of Croats living outside Croatia is in Bosnia and Herzegovina, where they are a native population and one of three constitutive nations. Therefore, they are not counted in the Croatian diaspora.

<sup>2</sup> From 1915 to 1964 there was an immigration pause.

<sup>3</sup> Croatia was not an independent country, but a politically divided territory within the Austro-Hungarian Empire, and its economic development depended heavily on political decisions coming either from Vienna or Budapest. However, the main reasons for emigration in the period analysed were economic, not political.

<sup>4</sup> However, the city of Zadar, as well as Lastovo and Palagruža islands remained parts of Italy until 1943.

<sup>5</sup> The year 1903 was taken into consideration because it was the year of more intensive immigration (in comparison to previous years), and 1920 was chosen because in the previous years family reunion was frequent and it was the year before the first quota restrictions were imposed.

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## Emigracija iz Dalmacije (Hrvatska) u Sjedinjene Američke Države od 1892. do 1924. – analiza baze podataka Ellis Islanda

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O emigraciji s prostora današnje Hrvatske, posebice iz Dalmacije, u SAD pisali su mnogi autori u svojim radovima o hrvatskoj dijaspori i emigracijskim valovima, međutim nema sveobuhvatnije i detaljnije analize potkrijepljene konkretnim dokazima i brojkama o mjestu podrijetla, dobi, godini i uzrocima iseljavanja. U ovom radu analizira se emigracija iz Dalmacije u SAD potkraj 19. i na početku 20. st. na temelju podataka iz baze imigracijskoga centra na Ellis Islandu u njujorškoj luci. Primijenjene su metode deskriptivne i inferencijalne statistike. Pretraživanjem baze na

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ČUKA, A., GRAOVAC  
MATASSI, V., BLAČE, A.:  
EMIGRATION FROM...

temelju narodnosti (koristeći se parametrom Dalmatinac/  
Dalmatinka) nađen je 24 901 zapis. Analizom je utvrđeno  
da su najveći broj doseljenika činile mlađe skupine  
odrasloga stanovništva (15–26 godina), i to 51,8%. Imigranti  
su većinom bili muškarci iz ruralnih krajeva smještenih na  
otocima i u zaobalju. Najvažniji potisni čimbenici za  
iseljavanje bili su loša gospodarska situacija (bolesti vinove  
loze, nerazvijena industrija, manjak obradivih površina i sl.)  
te izbjegavanje novačenja u austro-ugarsku vojsku.

Ključne riječi: emigracija, Dalmacija, Hrvatska, SAD, baza  
Ellis Islanda



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