

Part 2

FAMILY AND FERTILITY

DOI 10.15826/B978-5-7996-2656-3.05

Chapter 4.

MARITAL FERTILITY IN ALBANIA DURING WWI

Siegfried Gruber

Historic background

Albania was a part of the Ottoman Empire until 1912, when it proclaimed its independence from the Ottoman Empire. In the First Balkan War (1912) the neighbouring states of the European parts of the Ottoman Empire, Greece, Bulgaria, Serbia, and Montenegro, declared war on the Ottoman Empire and conquered these European territories except the small part which still belongs to Turkey. Montenegro, Serbia, and Greece wanted to partition the Albanian territory among them and only with the help of the Great Powers (Austria-Hungary and Italy) in 1913 an independent Albania was internationally recognised. During WWI the neighbouring states tried again to get hold of Albanian territories and with neither an international commission nor an Albanian central government exercising control over the whole country, the situation deteriorated rapidly. Encouraged by the successful occupation of Albanian territory by Greece and Italy in southern Albania, the Serbs and Montenegrins invaded northern Albania in early 1915 and in January 1916, the Austrians drove the Serbs and Montenegrins out of their new holdings to occupy Northern and Central Albania as far south as the Vjosa River, which served as a northern border to the Italian holdings.

Fertility in Albania

Albania was, apart from Kosovo, the last country in Europe to enter the demographic transition. After WWII Albania had the highest fertility

in Europe with a total fertility rate (TFR) of about 6.0 children, which even rose to almost 7.0 children in 1960 (Aassve, Gjonca and Mencarini, 2006: 8) and a subsequent decline to 2.2 children in 2002, still the second highest in Europe – only in Kosovo fertility was higher (Gjonca, Aassve and Mencarini, 2008: 261; Falkingham and Gjonça, 2001). My own research has shown that despite a reported average number of 5.2 children per father (Coon, 1950: 23) the highest average number of children living in the own household was 2.6 children for ever-married men at an age of 55 years and 2.7 children for ever-married women at an age of 45 years according to the population census of 1918 (Gruber, 2001: 9). A thorough analysis of fertility patterns is still missing, while some aspects like urban fertility patterns (Gruber, 2004) and the influence of migration on fertility (Gruber, 2011) have already been dealt with.

In the beginning of the 20th century Albania became a major research area for ethnographers and travellers, who published also about the marriage patterns in this country. Fertility patterns were analysed only later in the 20th century, based on fieldwork in 1929/30. The American anthropologist Carleton S. Coon noted that “in northern Albania (*Malsia e Gegnisë*) girls are married as soon as they come to sexual maturity and begin bearing children as soon as they are biologically able. There is no time of peace” (Coon, 1950: 27). There is not much known about fertility in Albania in the first half of the 20th century because registration of vital events was quite underdeveloped within the Ottoman Empire: Albania introduced national vital statistics only in the 1920ies (Rothenbacher, 2013: 168) and it took quite some time to reach full coverage. Christians (Catholics in the North and Orthodox in the South) had church books for registering vital events, but their analysis is still in its infancy. No such registration was required for Muslims, who constituted the majority within Albania (about 70 percent). As a consequence, most publications start with data from 1950 onwards (Gjonca, Aassve and Mencarini, 2008: 265).

Statistical information during Communist times was regarded as a state secret (Falkingham and Gjonça, 2001: 309) and so the first major publication about the fertility transition in Albania was published only in 2001 (Falkingham and Gjonça, 2001). These are the reasons why Albania appears on the maps of the Princeton European Fertility Project only about the status in 1960. Overall fertility in 1960 was highest in Albania and neighbouring Kosovo (Coale and Watkins, 1986: map 2.13).

Population characteristics in Albania

The borders of Albania were drawn at the expense of Albania and therefore many Albanians lived outside its borders while ethnic minorities were rather small within its borders. Muslims constituted the majority in Albania (about 70 percent), while there was a Catholic majority in the Northwest of Albania and an Orthodox majority in Southern Albania (mostly outside the territory of the census of 1918).

The educational level of the population of at least 15 years in Albania was still quite low in 1918: only 2.5 percent of the male population in rural areas were literate. The corresponding figure for women was 0.1 percent. The city population had higher shares of literate people: 29.5 percent of men and 6.1 percent of women.

Albania's economy was still dominated by agriculture: Only 12.6 percent of the population registered in the census of 1918 lived in the six cities having at least 3,800 inhabitants. The largest city, Shkodra, had 23,000 inhabitants, while Tirana, which became after WWI the capital, had only 10,000 inhabitants (Seiner, 1922: 7). Half of the urban population in 1918 were engaged in the production and sales sector. These sectors were dominated by small enterprises and shops in the bazar as traditional crafts dominated while industrial production was only in its very beginnings.

The overwhelming majority of the population lived in the countryside and depended on agricultural activities. The mountainous parts of the country were dominated by animal husbandry while cultivation of land dominated in the valleys and lowlands. In the most fertile areas large estates existed while in the mountains small plots and pastures dominated.

Patriarchal culture and household structures

The Albanian society in the beginning of the 20th century was still highly influenced by a patriarchal culture and so had not been much challenged by the Ottoman Empire. Especially the mountainous parts of the country were only loosely integrated into this empire and the new nation state had troubles in establishing its administration and juridical system in a society which had been shaped by customary law until that time, too.¹ In the beginning of the 20th century Albania (especially Northern Albania) became of major interest to ethnographers as a site

¹ For more information on the influence of customary law on marriage behaviour see Kera and Papa, 2003: 31–44.

of alleged extreme backwardness and patriarchal values. A comparative analysis of patriarchal features in households (e.g. male household heads and patrilocal marriage) and demography (female age at marriage and preference of sons over daughters) of 266 historical European societies showed that rural Albania in 1918 ranked highest among them (Szołtysek, Klüsener, Poniati, Gruber, 2017: 241).

More than half of the rural population lived in multiple family households (using the typology proposed by Hammel and Laslett, 1974), while a quarter lived in simple family households.

Age at marriage

Most quantitative information about marriage patterns in Albania around 1900 is based on the analysis of the population census of 1918 at the start of the 20th century. The average age at marriage (SMAM: singulate mean age at marriage, see Hajnal, 1953) was 18.0 years among women, and 26.6 years among men according to the census. There were considerable differences among rural and urban Albania, ranging from 17.8 years for women and 26.1 for men in rural Albania and 19.1 for women and 30.1 for men in urban Albania, in Shkodra age at marriage was highest in Albania, 20.0 for women and 34.0 for men (Gruber, 2017: 144). The male age at marriage is therefore higher than postulated for the “Eastern European marriage pattern” (Hajnal, 1965: 101).

The mean age difference between spouses was 9.3 years (also caused by uneven sex ratios) and therefore very high according to European standards. The older the husband the larger the age difference to his wife was (Gruber, 2017: 146). This age gap was even similar to the maximum in an analysis of 77 lesser developed countries in the time period 1950 to 2005 (Carmichael, 2011: 426). In the Southern Albanian region of Mallakastër, 4.2 percent of married men were married to more than one wife (Nicholson, 2006: 48). Overall in 1918 we find 4.4 percent of all married men living with more than one spouse. Polygamy among Muslims was most widespread in the eastern regions of Albania and least common among the urban population (Gruber, 2012: 106).

The Population Census of 1918

In the absence of available vital registration data, a pertinent source for this kind of fertility research is the population census conducted by the Austro-Hungarian army in 1918 in Albania (see Nicholson, 1999).

This census is the first for Albania (although not covering the whole territory of present-day Albania) in which the original data is still available on the level of the persons recorded, and it is of high quality given the circumstances under which it was taken (Gruber, 2007: 257). It is still widely unknown, and thus in a demographic atlas of Albania data from 1926 is considered the earliest population data (Bërxfholi, 2003). Gjonça mentions only the preliminary census of 1916, and gives the credit for the first general census conducted in Albania to the 1923 census (Gjonça, 2001: 38f.).

The Austro-Hungarian army occupied the majority of the territory of the newly created independent Albanian state (except parts in the south and southeast), and established a new administration in 1916. Officers of the Austro-Hungarian army collected the census data with the assistance of Albanian officers (Seiner, 1922: 3). The census-takers were instructed to make sure that no persons were excluded from the count, such as female children (Seiner, 1922: 4). These efforts appear to have been successful, since the census counted almost the same number of men and women, whereas in censuses of other countries in the region, there was always a clear male majority in the population (for Serbia see Sundhaussen, 1989: 80).

The research project, “The 1918 Albanian Population Census: Data Entry and Basic Analyses,” based at the University of Graz and funded by the Austrian Science Fund (2000–2003), sought to convert the data into machine-readable form.² The census data of 1918 is a rich source for a variety of questions related to studies about population structure and behaviour. Up to now, the data of 285 villages and 6 cities have been entered in a database, which contains 140,611 persons.³

The Child-Woman-Ratio and challenges to its use

Since the census data does not provide information about the number of children ever born, we need to use the information about the number of children who were alive at the time of the census. Information about the mortality in Albania in the beginning of the 20th century is missing, too. In this paper I use therefore the Child-Woman-Ratio (CWR) to analyse the fertility level in Albania during WWI. It is the number of children under the age of five years divided by the number of women in the childbearing

² <<http://www-gewi.uni-graz.at/suedost/seiner/index.html>>.

³ <<http://www-gewi.uni-graz.at/suedost/seiner/availability.html>>.

age, multiplied by 1000. It is an indirect measure of fertility and biased downwards, because children who died before the census was taken are not included in the calculation (Pullum, 2004: 423).

The first challenge to its use is caused by the date of the census: the census date was March 1st, 1918. The number of children under the age of five years would therefore consist of the months January and February of 1918, the years 1917, 1916, 1915, 1914, and the months of March to December of 1913. The census enumeration form included a column for the date of birth and a column for the age in years. Most people reported their age (92.2 percent) and not their date of birth (only 14.6 percent reported at least the year of birth). Only 8.2 percent of one-year-old infants were reported with their exact birth date. It is therefore not possible to use the months of birth in 1913 with less than one percent of these children having reported their birth date. The analysis is therefore based upon the children born in the calendar years 1913–1917, which correspond to the ages 1-5 years. The census instructions did not specify whether ages should be recorded in completed years or started years. An analysis of people with reported ages and birth years shows that reported ages were generally the difference between the birth year and 1918.

The second challenge is caused by the quality of the age reporting, which is affected by the low level of education respective literacy and to a large extent missing vital registration system. Many people were not reporting exact ages in the census, but have rounded them to multiples of 5 and 10. In an analysis of 115 historic populations within Europe, the highest levels of age heaping were found in areas of present-day Belarus, southern Romania, and Albania in 1918 (Szołtysek, Poniat, and Gruber, 2018: 17). This age heaping was pronounced on final digits 5 and especially 0, therefore we shall use in our analyses age-groups centered around these final digits (e.g. 18–22 years) instead of the generally used age groups in demographic analyses. This will minimize distortions caused by approximated ages, but still cannot eliminate them. All computed ages in this analysis must therefore be treated as approximate ages.

The next challenge is the possibility of missing girls in the census. Coon, who collected data in northern Albania during the autumn, winter and spring of 1929–30, gives a sex ratio of 163.0 at birth (Coon, 1950: 26f.) meaning that there were 163 male to 100 female births. These figures were obviously exaggerated because of a patriarchal bias, although the analysis of census data for the sex ratio of children aged one and younger shows also an uneven sex ratio of 121.5 (Kera and Pandelejmoni, 2008: 132). This sex ratio implies either that there was actually

a major surplus of male births in Albania, or that the mortality rate was higher among female babies, or, more probably, that very young female children were not reported entirely in the census. Seiner's published results for the whole population of Albania showed an almost balanced sex ratio of 100.6 men to 100 women (Seiner, 1922: 8) which is in contrast to other Balkan countries. The sex ratio at birth should be about 105 (Hobbs, 2004: 133f.), therefore sex ratios below 100 and above 105 will be adjusted to 105 in this contribution.

The final challenge is posed by calculating age-specific fertility rates: there are children which cannot be assigned to their mother, because they do not live in the same household or because the mother is already dead. In addition, there are women who are too old to be the mothers of their children. Children without mothers and of mothers, who are more than 52 years older than the reported child will be distributed proportionally to women of ages 15 to 52 for age-specific calculations.

Married women contributed the most important part to general fertility, because births out of wedlock were extremely rare in Albania. As a consequence I shall concentrate in the analyses on married women and specifically on married women whose husband was present at the time of the census. Absent spouses (mainly for occupational reasons – either seasonal or for longer time periods) reduce marital fertility and we want to eliminate this effect in this analysis. I shall apply age standardization in analysing sub-groups of women to compensate for possible different age structures. As standard I shall use the age structure of all married women with spouses present.

Table 1

Data used in the analysis

	Cases
Overall in database	140,611
Children 1–5 years	20,997
Women 15–50 years	37,726
Women 15–50 years, married, both spouses present	22,132

Source: Gruber, Kaser, Kera, and Pandelejmoni, 2018.

Marital fertility in Albania during WWI

Our first analysis will be to compare the marital fertility in Albania during WWI to the marital fertility of other countries in South-eastern Europe before WWI, because published census data allows to calculate CWR for married women. More elaborated measures like period or cohort total fertility rates are available only from 1950 onwards (Falkingham and Gjonça, 2001: 312). The measured results show that rural Albanian marital fertility (green bars in figure 1) during WWI was lower than in neighbouring countries one or two decades earlier⁴. Especially in Romania in 1899 rural marital fertility was considerably higher. Urban marital fertility (red bars in figure 1) was in all these countries lower than rural marital fertility, only in Albania both were at the same level (without adjustment urban marital fertility was even a bit higher than rural marital fertility). and Albania during WWI had the highest level together with Romania in 1899. Urban marital fertility in Serbia in 1900 was a bit lower and in Bulgaria in 1910 clearly lower than in Albania during WWI. Greek marital fertility was very high among these countries and the published data does not distinguish between urban and rural populations. Therefore we can assume that rural marital fertility must have been similar to the one in Romania in 1899. The adjustment of the Albanian data (see above) does not much influence the results. In all the other countries in figure 1 sex ratios of children up to five years did not exceed a level of 106, therefore no adjustment was needed.

This result can be caused by two different reasons: first, WWI reduced rural marital fertility in Albania, as was generally the case in countries affected by WWI. The second reason could be that pre-WWI rural marital fertility was already lower than in Serbia and Romania around 1900. We would need data about pre-WWI fertility to know which of these two possibilities is more likely.

⁴ These were the last censuses conducted before WWI which have data for calculating CWR and which are available. CWR for married women are slightly inflated because all children are assigned to these married women, although a small fraction of the children belonged to unmarried or widowed mothers.

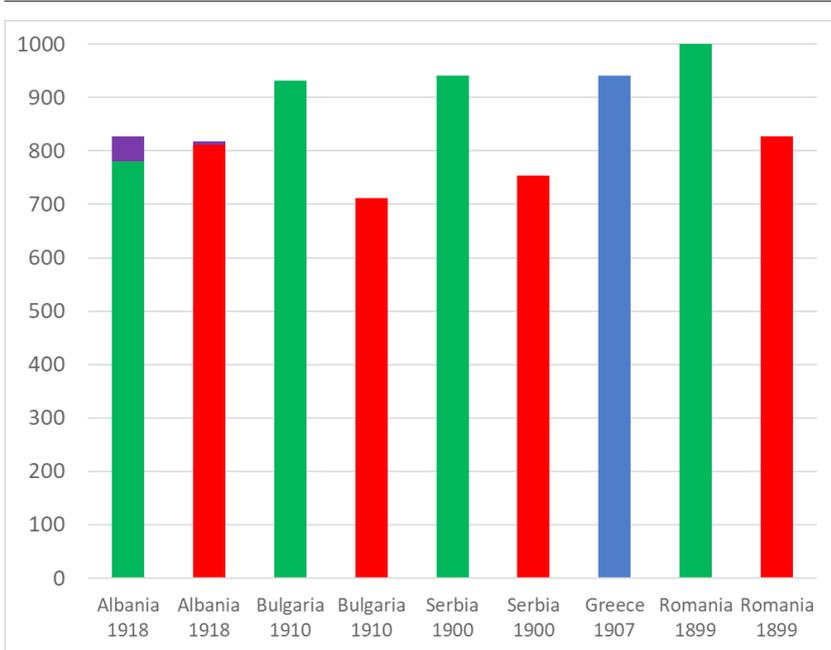


Figure 1: Marital fertility (CWR) of Albania 1913–1917 compared to other Southeastern European countries

Source: *Albania 1918: Gruber, Kaser, Kera, and Pandelejmoni, 2018.*

Bulgaria 1910: Главна дирекция на статистиката, 1923: 3f., 6f., 15f.; Greece 1907: Service du Recensement, 1907: 157; Romania 1899: Serviciul Statisticeii Generale, 1905: 8, 14, 20, 26, 48–55; Serbia 1900: Uprava državne statistike, 1905: 33–38, 74.

Differences in marital fertility in Albania during WWI

We have seen in figure 1 that marital fertility in Albania during WWI was almost the same for rural and urban women. This is in contrast to general fertility, which was higher for rural women because of a lower age at marriage for rural women. There was some variation between rural regions ranging from about 750 in Zhuri to 1010 in Berat. Most regions had quite similar values, while the two regions with the highest levels were situated in the south of the census territory. Marital

fertility levels in the six cities with available census data (the data for the city of Berat has been destroyed) show a similar variation from a low of 670 in Durres (a port city) to a high of 917 in Shkodra, the largest city in the census territory.

Religious differences in marital fertility in Albania during WWI were almost negligible in rural as well as in urban areas. There were so few literate women, therefore the analysis of the effect of literacy on marital fertility during WWI is based on the literacy of the husband. Women of literate men had higher fertility than women of illiterate men, which was true for rural as well as urban women.

The next analysis will concentrate on the influence of occupational groups on marital fertility during WWI. This analysis is once again based on the occupational group of the husband because so few women had a reported occupation and those with a reported occupation were doing generally domestic work. The occupational groups are based on the major groups of HISCO (van Leeuwen, Maas, and Miles, 2002), but groups 0/1, 2, and 3 are combined into “white collar workers”. Men without reported occupation of their own are assigned to the occupational group of the household head in case this was a kin related person. In rural areas the majority of men were engaged in agricultural work and therefore all other groups are put into one group. In rural areas women of men engaged in agriculture had slightly higher fertility than men engaged in non-agricultural work. In an urban environment women married to men in the white collar sector had the highest fertility with women married to men in the sales sector were following in the second place. The other four occupational groups had very similar fertility.

Table 2

Marital fertility in Albania during WWI, by subgroup

	Rural	Urban
By region		
Kruja	877	
Puka	858	
Shkodra	861	
Tirana North	811	
Zhuri	748	

Gruber

	Rural	Urban
Gora	897	
Tirana South	927	
Berat	1010	
By city		
Kruja		779
Shkodra		917
Durres		672
Elbasan		840
Kavaja		786
Tirana		804
By religion		
Muslim	821	822
Catholic	867	843
Orthodox	867	830
By literacy		
Illiterate	825	784
Literate	1012	934
By occupational group		
White collar		965
Sales		892
Service		812
Agriculture	828	825
Production		808
Others		808
Non-agriculture	780	
Overall	827	818

Source: Gruber, Kaser, Kera, and Pandlejmoni, 2018.

Age-specific marital fertility in Albania during WWI

Finally we shall have a look at age-specific marital fertility in Albania during WWI in comparison to the age-specific marital fertility of other societies. Albanian fertility during WWI was clearly pre-transitional and therefore we can compare it to natural fertility schedules. The concept of natural fertility was introduced by Louis Henry (Henry, 1961a) and refers to “the fertility which exists or has existed in the absence of deliberate fertility control” (Henry, 1961b: 81). Fertility control exists when the behavior of the couple depends on the number of children already born and will change when the maximum of desired children is born (Henry, 1961b: 81).

Hutterite women (married between 1921 and 1930), often seen as the society with highest reported marital fertility in mankind and having the highest fertility in Henry’s study, too (Henry, 1961b: 84), is used as a comparative case. In figure 2 the fertility curves do not show absolute levels of fertility, but relative values with the highest age-specific value of the three curves set at 100. The purpose is to compare marital fertility over the life course and we shall here concentrate only on rural populations. Hutterite marital fertility (a rural population anyhow) shows a steady reduction from the highest levels at age 15–19 and a sharp drop after age 40. This pattern fits quite well to female fecundity. In contrast rural Albanian women during WWI had rather low fertility around age 20 and their highest fertility levels in their mid-30ies⁵. Therefore these two fertility patterns are very different from each other. All other societies in Henry’s study have the maximum of marital fertility in the age group 20–24 years (Henry, 1961b: 84). The same is the case with some comparative data from neighbouring countries: Bulgaria in 1905/06, Dalmatia in 1900, and Serbia in 1900 (Gruber, 2019:170–172).

In searching for a similar pattern to the Albanian one, the pattern based upon rural Norway in the 1865 census is a good candidate. Marital fertility was also quite low around age 20 and the highest fertility level was in the age group 30–34 years. The pattern of Albania during WWI is very similar, but several years later in life. This is somehow astonishing, because Albania and the Hutterites in the early 20th century were societies with low female ages at first marriage, while Norway in 1865 had a high female age at first marriage.

⁵ Albanian age groups are centered around final digits 0 and 5 and therefore the curve in figure 2 is 2.5 years moved to the right.

This result is in complete contrast to the above-mentioned citation by Coon, who wrote that “in northern Albania (*Malsia e Gëgnisë*) girls are married as soon as they come to sexual maturity and begin bearing children as soon as they are biologically able. There is no time of peace” (Coon, 1950: 27). Coon’s remark is in line with a general reasoning that early marriage is connected to the desire of having many children and especially to have a male heir as soon as possible in life. But the data of the census of 1918 does not support this concept.

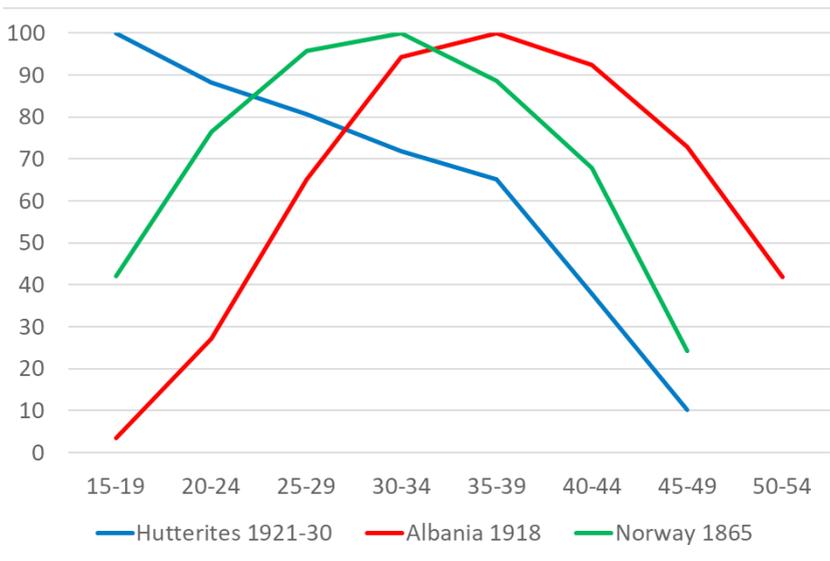


Figure 2: Age-specific CWR of married women in rural Albania 1918 compared. Source: *Hutterites 1921–30: Wetherell, 2001: 593.*

Albania 1918: Gruber, Kaser, Kera, and Pandelejmoni, 2018; Norway 1865: NAPP v. 2.3, 2017.

Conclusion

The Albanian population census of 1918 can be used for the Child-Woman-Ratio to calculate an indirect measure of fertility. There are some challenges to the application of this method, mainly because of

some data quality problems. Rural marital fertility in Albania during WWI was lower than in neighbouring countries one or two decades earlier, while urban marital fertility was higher than in most of the neighbouring countries. Marital fertility was almost the same for rural and urban areas, while there was some variation between rural areas and between cities. Religion had no obvious influence on marital fertility while literacy of the husband increased marital fertility. Agriculturalists had the highest rural fertility while people in the white collar sector had the highest urban fertility. Age-specific marital fertility showed its peak only around age 35, which is quite unexpected and does not fit the course of age-specific fertility of Hutterite women. Rural women in Norway 1865 on the other hand had a quite similar pattern to the Albanian ones. The reason for the very low fertility of young married women is still an open question. Possible hypotheses are: (1) This is an effect of WWI. (2) This is an effect of the very young age at marriage and the bad situation of young married women (much work and not enough food), so that their fecundity was affected.

Acknowledgement

Research for this publication has been supported by funds of the Oesterreichische Nationalbank (Oesterreichische Nationalbank, Anniversary Fund, project number: 17494).

Published Sources

Главна дирекция на статистиката, ed., *Общи резултати от преброяване на населението в Царство България на 31 декември 1910 г.*, Vol. II: Възраст, семейно положение и грамотност на наличното население. София: 1923.

Seiner, Franz. *Ergebnisse der Volkszählung in Albanien in dem von den österr.-ungar. Truppen 1916–1918 besetzten Gebiete* (Schriften der Balkankommission, Linguistische Abteilung XIII). Wien: Hölder-Pichler-Tempsky: 1922.

Service du Recensement, ed., *Résultats statistique du Recensement général de la population effectué le 27 octobre 1907*, Vol. I, Athènes: 1909.

Serviciul Statisticeii Generale, ed., *Recensământul General al Populațiunei României din Decembrie 1899. Rezultate definitive*. București: 1905.

Uprava državne statistike, ed., *Popis stanovništva u Kraljevini Srbiji 31. decembra 1900. godine*, drugi deo (Statistika Kraljevini Srbije, vol. 24). Beograd: 1905.

References

Arnstein Aassve, Arjan Gjonça, and Letizia Mencarini. (2006). *The highest fertility in Europe – for how long? The analysis of fertility change in Albania based on Individual Data* (ISER Working Paper 2006-56). Colchester: University of Essex.

Bërzholi, Arqile, ed. (2003). *Atlasi gjeografik i popullsisë së Shqipërisë: Atlasi i shqipërisë/Demographic Atlas of Albania*. Tiranë: Shtypshkronja Ilar.

Carmichael, Sarah. (2011). “Marriage and power: Age at first marriage and spousal age gap in lesser developed countries.” *The History of the Family* 16: 416–36, doi:10.1016/j.hisfam.2011.08.002.

Coale, Ansley J. and Susan Cotts Watkins. (1986). *The decline of fertility in Europe: the revised proceedings of a Conference on the Princeton European Fertility Project*. Princeton: Princeton University Press.

Coon, Carleton S. (1950). *The Mountains of Giants. A Racial and Cultural Study of the North Albanian Mountain of Ghegs* (Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University XIII, no. 3). Cambridge.

Falkingham, Jane and Arjan Gjonça. (2001). “Fertility transition in communist Albania 1950–90.” *Population Studies* 55, no. 3: 309–18.

Gjonça, Arjan. (2001). *Communism, Health and Lifestyle: The Paradox of Mortality Transition in Albania, 1950–1990* (Studies in Population and Urban Demography 8). Westport, London: Greenwood Press.

Gjonca, Arjan, Arnstein Aassve, and Letizia Mencarini. (2008). “Albania: Trends and patterns, proximate determinants and policies of fertility change.” *Demographic Research* 19: 261–92.

Gruber, Siegfried.(2001). “The ‘tradition’ of many children in Albania... and the evidence: the Census of 1918.” Paper presented at the SSHA conference, Chicago, November 2001.

Gruber, Siegfried. (2004). “Albanian urban fertility in the beginning of the 20th century.” Paper presented at the ESSHC, Berlin, March 2004.

Gruber, Siegfried. (2007). “Die albanische Volkszählung von 1918 und ihre Bedeutung für die Wissenschaft.“ In *Seiner Zeit. Redakteur Franz Seiner und seine Zeit (1874 bis 1929)*, edited by Helga Kostka, 253–65. Graz: Academic Publishers, 2007.

Gruber, Siegfried. (2011). “The influence of migration on fertility in Albania around 1900.” *Annuario: The Albanian Yearbook of Historical and Anthropological Studies* 1: 122–55.

Gruber, Siegfried. (2012). “Household composition and marriage patterns in Albania around 1900.” *Balkanistic Forum* 1: 101–22.

Gruber, Siegfried. (2017). "The Influence of Religion on Marriage Ages in Albania around 1900." *Historical Social Research* 42, no. 2: 134–57, doi: 10.12759/hsr.42.2017.2.134–157.

Gruber, Siegfried. "Eheliche Fruchtbarkeit in Albanien während des Ersten Weltkrieges: ein abweichendes Muster?" In *Festschrift für Peter Teibebacher* (forthcoming).

Hajnal, John. (1953). "Age at Marriage and Proportions Marrying." *Population Studies* 7, no. 2: 111–36.

Hajnal, John. (1965). "European Marriage Patterns in Perspective." In *Population in History: Essays in Historical Demography*, edited by David Victor Glass and David Edward Charles Eversley, 101–43. London: Arnold.

Hammel, Eugene A., and Peter Laslett. (1974). "Comparing Household over Time and between Cultures." *Comparative Studies in Society and History* 16, no. 1: 73–109.

Henry, Louis. (1961a). "La fécondité naturelle. Observation – théorie – résultats." *Population* 16, no. 4: 625–36.

Henry, Louis. (1961b). "Some data on natural fertility." *Eugenics Quarterly* 8, no. 2: 81–91, doi: 10.1080/19485565.1961.9987465.

Hobbs, Frank B. (2004). "Age and Sex Composition." In *The Methods and Materials of Demography*, edited by Jacob S. Siegel and David A. Swanson, 125–73. 2nd edition, Amsterdam etc.: Elsevier.

Kera, Gentiana, and Enriketa Papa. (2003). "Familja, feja dhe e drejta zakonore në Shqipëri deri në gjysmën e parë të shek. XX." *Politika & Shoqëria*, 6.1, no. 11, 31–44.

Kera, Gentiana, and Enriketa Pandlejmoni. (2008). "Marriage in urban Albania (during the first half of the twentieth century)." *The History of the Family* 13, no. 2: 126–37, doi: 10.1016/j.hisfam.2008.05.001.

Nicholson, Beryl. (1999). *The Census of the Austro-Hungarian occupied districts of Albania in spring 1918. A preliminary note on the manuscript census schedules* (Centre for Scandinavian Studies Papers 5). Newcastle upon Tyne: Centre for Scandinavian Studies.

Nicholson, Beryl. (2006). "Women who shared a husband: Polygyny in southern Albania in the early 20th century." *The History of the Family* 11: 45–57.

Pullum, Thomas W. (2004). "Natality: Measures Based on Censuses and Surveys." In *The Methods and Materials of Demography*, edited by Jacob S. Siegel and David A. Swanson, 407–28. 2nd edition, Amsterdam etc.: Elsevier.

Rothenbacher, Franz. (2013). *The Central and East European Population since 1850* (The Societies of Europe 5). Basingstoke: Palgrave Macmillan.

Sundhaussen, Holm. (1989). *Historische Statistik Serbiens 1834–1914. Mit europäischen Vergleichsdaten* (Südosteuropäische Arbeiten 87). München: Oldenbourg.

Szołtysek, Mikołaj, Sebastian Klüsener, Radosław Poniak, and Siegfried Gruber. (2017). "The Patriarchy Index: A New Measure of Gender and Generational Inequalities in the Past." *Cross-Cultural Research* 51, no. 3: 228–62, doi: 10.1177/1069397117697666.

Szołtysek, Mikołaj, Radosław Poniak, and Siegfried Gruber. (2018). "Age heaping patterns in Mosaic data." *Historical Methods* 51, no. 1: 13–38, doi: 10.1080/01615440.2017.1393359.

Van Leeuwen, Marco H.D., Ineke Maas, and Andrew Miles. (2002). *HISCO: Historical International Standard Classification of Occupations*. Leuven: Leuven University Press.

Wetherell, Charles. (2001). "Another Look at Coale's Indices of Fertility, I_j and I_g ." *Social Science History* 25, no. 4: 589–608.

Data

Gruber, Siegfried, Karl Kaser, Gentiana Kera, and Enriketa Pandelejmoni. *1918 Census of Albania, Version 1.0* [Mosaic Historical Microdata File]. www.censusmosaic.org, 2018.

Minnesota Population Center. *North Atlantic Population Project: Complete Count Microdata: Version 2.3 [dataset]*. **Minneapolis, MN: University of Minnesota, 2017**, doi:10.18128/D040.V2.3.

The Digital Archive (The National Archive), Norwegian Historical Data Centre (University of Tromsø) and the Minnesota Population Center. *National Sample of the 1865 Census of Norway, Version 2.0*. Tromsø, Norway: University of Tromsø, 2008.