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## Rađanja izvan braka u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji od 1995. do 2020. godine

### Out-of-wedlock births in Osijek-Baranja and Vukovar-Sirmium counties from 1995 to 2020

U radu se razmatra pojava rađanja izvan braka na području Osječko-baranjske i Vukovarsko-srijemske županije u razdoblju od 1995. do 2020. godine. Glavni je cilj rada utvrditi prostorne razlike u učestalosti rađanja izvan braka u navedenim dvjema županijama, primarno na razini naselja. Posebno je razmatran odnos između etničke strukture i rađanja izvan braka, analizirana je međusobna povezanost odabranih varijabli s pojavom rađanja izvan braka na prostornoj razini upravnih gradova i općina. Analiza je provedena na temelju podataka vitalne statistike i popisa stanovništva.

The paper analyses out-of-wedlock births in Osijek-Baranja and Vukovar-Sirmium counties in the 1995–2020 period. The main objective is to identify spatial differences in the frequency of out-of-wedlock births, especially at the settlement level. Particular attention was paid to the relationship between ethnic structure and out-of-wedlock births. In addition, the relationship between selected variables and out-of-wedlock births is analysed at the level of administrative towns and municipalities. The analysis is based on vital statistics and census data.

**Ključne riječi:** rađanja izvan braka, druga demografska tranzicija, etnička struktura, Osječko-baranjska županija, Vukovarsko-srijemska županija

**Key words:** out-of-wedlock births, second demographic transition, ethnic structure, Osijek-Baranja County, Vukovar-Sirmium County

## Uvod

Rast stopa rađanja izvan braka u posljednjih je nekoliko desetljeća jedan od najdinamičnijih demografskih procesa druge polovice 20. i početka 21. stoljeća i smatra se jednom od osnovnih društvenih pojava u demografski posttranzicijskim društvima (Wertheimer-Baletić, 1999; Frejka i dr., 2008; Sobotka i Toulemon, 2008). Ta demografska kategorija rezultat je velikoga broja vrlo složenih i međusobno isprepletenih čimbenika i izravna posljedica rastućega broja kohabitacija, učestalijega samohranog roditeljstva te pojave novih oblika partnerskih odnosa poput odvojenoga zajedničkog života uzrokovanih, između ostaloga, slabljenjem kolektivnih vrijednosti i jačanjem individualizma te motivacije za rađanje koje sve više ide u smjeru samoostvarenja pojedinaca (Frejka i dr., 2008). Ne čudi stoga činjenica da se rast rađanja izvan braka često, opravdano ili ne, tumači u okvirima teorije druge demografske tranzicije. Problematicnost korištenja postulata teorije druge demografske tranzicije u tumačenju rasta izvanbračnih rađanja dolazi do izražaja analizirajući prostorni raspored ove pojave. Naime, za razliku od drugih demografskih i inih fenomena, za trend rasta rađanja izvan braka ne možemo reći da se poput nekih drugih demografskih procesa „prelijevao” iz svoga bogatijega prosvijećenog izvorišta i dalje radikalno ili u koncentričnim krugovima širio Europom. Brojna istraživanja potvrđuju da je ova društvena pojava, suprotno nekim ustaljenim vjerovanjima, od ranijih faza društvenoga razvoja vrlo često vezana uz stanovništvo slabijega socioekonomskog statusa, posebno u postsocijalističkim europskim državama (Seltzer, 2000; Kiernan, 2001; Pavić, 2014). S druge strane, u analizi općega trenda i njegova prostornoga rasporeda (osobito u Europi) u obzir treba uzeti i neke lokalne specifičnosti koje, u smislu uzroka ove pojave, mogu odstupati od obaju navedenih prevladavajućih teorijskih okvira (Perelli Harris i Gerber, 2011). U tom smislu prostor krajnjega istoka Republike Hrvatske zbog svoje složene društvene, ekonomske i kulturološke, a osobito etničke strukture i, u hrvatskim okvirima, značajne demografski specifične romske zajednice potencijalno predstavlja primjer takva izdvojenoga prostora vrijedna pozornosti. Posredno gledano, pomnije analize ovakvih specifičnih prostora te prostorne distribucije na

## Introduction

The growth of out-of-wedlock birth rates in the last few decades is one of the most dynamic demographic processes of the second half of the 20<sup>th</sup> and the beginning of the 21<sup>st</sup> century and is considered one of the fundamental social phenomena in demographic post-transition societies (Wertheimer-Baletić, 1999; Frejka et al., 2008; Sobotka and Toulemon, 2008). This demographic category is the result of a multitude of very complex and interwoven factors and a direct consequence of the increasing number of cohabiting couples, more frequent single parent families and the emergence of new forms of partner relationships such as separate cohabitation, caused, among other things, by the weakening of collective values and the strengthening of individualism and the motivation to give birth, which is increasingly moving towards the self-realisation of the individual (Frejka et al., 2008). It is therefore not surprising that the increase in out-of-wedlock births is often interpreted in the context of the theory of the second demographic transition, justified or not. The problem of applying the postulates of the theory of the second demographic transition to the interpretation of the increase in out-of-wedlock births comes to the fore when the spatial distribution of this phenomenon is analysed. Indeed, unlike other demographic phenomena, we cannot say that the trend towards out-of-wedlock births, like some other demographic processes, “overflowed” from its richer, more enlightened source and spread further across Europe radially or in concentric circles. Numerous studies confirm that, contrary to some common assumptions, this social phenomenon is often associated with populations of a weaker socio-economic status, especially in post-socialist European countries and in earlier phases of social development (Seltzer, 2000; Kiernan, 2001; Pavić, 2014). On the other hand, when analysing the general trend and its spatial distribution (especially in Europe), some local peculiarities should also be considered, which may differ from the two aforementioned prevailing theoretical frameworks in terms of the causes of this phenomenon (Perelli Harris and Gerber, 2011). In this sense, the eastern part of the Republic of Croatia, due to its complex social, economic, cultural and specifically ethnic structure within the Croatian framework, with significant demographically specific Roma communities, is potentially an example of such a separate space that deserves attention. Indirectly, more detailed analyses of such specific areas and the spatial distribution at the local level can contrib-

lokalnoj razini mogu doprinijeti produbljenju spoznaja u već opaženim općim pravilima i zakonitosti promatrane pojave. Dinamičnost ovoga procesa rezultirala je u međunarodnim okvirima i velikim brojem objavljenih znanstvenih i stručnih radova na ovu temu, ali u Hrvatskoj o ovoj problematici znamo vrlo malo. Demografskim i geografskim aspektom ove teme bave se samo tri znanstvena rada, a detaljnijom analizom ove pojave u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji ni jedan. Fokus ovoga rada prvotno je usmjeren na analizu prostornih razlika ove pojave u dvjema promatranim županijama, i to na prostornim razinama naselja te upravnih gradova i općina, a potom i na utvrđivanje relevantnih korelativnih veza odabranih društveno-gospodarskih obilježja promatranih prostornih jedinica te utvrđenih stopa rađanja izvan braka. Na taj je način naglašena geografska komponenta koja je u većini radova ove tematike zanemarena. Iako je prostorni raspored geografska kategorija, on može jasno upućivati i na druge aspekte promatranja pojave izvanbračnih rađanja. Primjer toga vidimo i u kulturološkim, ekonomskim i sociološkim pogledima na ovu pojavu, a u kontekstu ovoga rada osobito na poveznicu etničke strukture prostornih jedinica i učestalosti rađanja izvan braka. U radu se analizira trend ove pojave na istraživanom području u razdoblju od 1995. do 2020. godine, prostorni raspored učestalosti rađanja izvan braka te relevantni korelativni odnosi nekih društvenih obilježja prostora i promatrane demografske pojave.

## Dosadašnja istraživanja

Detaljnijih znanstvenih uvida u promatranu problematiku na krajnjem istoku Republike Hrvatske u trenutku pisanja ovoga rada nema niti u nacionalnom korpusu objavljenih demografskih radova postoje oni koji ovu demografsku pojavu analiziraju na mikrorazini, tj. na razini naselja kao najmanje popisne jedinice za koju su javno dostupni podatci. Činjenica da ova tema u Hrvatskoj nije bila u fokusu znanstvene javnosti zrcali se i broju objavljenih radova. Naime, svega se nekoliko radova bavi ovom problematikom u Hrvatskoj. Evolucijom rađanja izvan braka u Hrvatskoj od 1950. do 1994. godine te usporedbom s nekoliko odabranih europskih

ute to deepening the knowledge of the observed general rules and laws of the observed phenomenon. The dynamics of this process have led to a large number of scientific and professional publications on this topic in the international contexts, but in Croatia we know very little about it. Only three scientific papers dealing with the demographic and geographical aspect of this issue have been published in Croatia, and none of them deal with a more detailed analysis of this phenomenon in Osijek-Baranja and Vukovar-Sirmium counties. The focus of this study was first on analysing the spatial differences of the phenomenon in the two observed counties, both at the level of settlements and at the level of administrative towns and municipalities, and then on identifying relevant correlative relationships between selected socioeconomic characteristics of the observed spatial units and the observed out-of-wedlock birth rates. In this way, the geographical component is emphasized, which is neglected in most publications on this topic. Although spatial arrangement is a geographical category, it can clearly refer to other aspects of the observation of the occurrence of out-of-wedlock births. One example of this is the cultural, economic and sociological considerations of this phenomenon and, in the context of this paper, in particular the connection between the ethnic structure of the spatial units and the frequency of out-of-wedlock births. The paper analyses the evolution of this phenomenon in the studied area in the period from 1995 to 2020, the spatial distribution of the frequency of out-of-wedlock births and relevant correlative relationships between some social characteristics of the area and the observed demographic phenomena.

## Previous research

There are no scientific studies that deal in depth with the observed phenomenon in the eastern part of the Republic of Croatia, and there are no papers in the national corpus of published demographic scientific papers that analyse this demographic phenomenon at the level of settlements, as the smallest census unit for which data are publicly available. The fact that this topic is not in the focus of the scientific public in Croatia is shown by the low number of published scientific papers. As was mentioned, there are only a few papers in Croatia that deal with this topic. Snježana Mrđen (1997) and Mirošević and Mrđen (2020) dealt with the development of out-of-wedlock births in Croatia from 1950 to 1994 and a

država, a nešto kasnije i lokalnim posebnostima ove pojave bavile su se Snježana Mrđen (1997) te Mirošević i Mrđen (2020). Mrđen se u radu iz 1997. godine bavi i korelacijom između rađanja izvan braka i nupcijaliteta te prosječne starosti žena pri stupanju u prvi brak, a upućuje i na regionalne različitosti ove pojave te razlike u stopama rađanja izvan braka među etničkim Srbima i Hrvatima. Navedeni je rad jedini u našoj literaturi koji se detaljnije bavi geografijom rađanja izvan braka. Sociolog Dario Pavić (2014) autor je rada koji se bavi trendom i čimbenicima ove pojave u razdoblju od 1998. do 2012. godine na nacionalnoj razini. Graovac Matassi i Talan (2021) usporedno su analizirale trend ove pojave u Hrvatskoj i Sloveniji od 1985. do 2017. te utvrdile značajne razlike u stopama izvanbračnoga fertiliteta u dvjema susjednim i kulturološki bliskim državama.

I u međunarodnoj literaturi uočava se dominacija sociološkoga i kulturološkoga pristupa istraživanju ove pojave. Naglasak je većine istraživanja na objašnjenju društvenih uzroka i posljedica ove pojave, dok je geografska komponenta često samo popratni element. Naime, ova je tema došla u fokus demografske znanosti nakon nagloga rasta stopa rađanja izvan braka u Sjevernoj i Zapadnoj Europi te na sjevernoameričkom kontinentu sedamdesetih godina prošloga stoljeća (Kiernan, 2001). Prostornom distribucijom promatrane pojave u svojim se radovima dotiče Kathleen Kiernan (2001; 2004). Ona se u svojim dvama radovima detaljnije bavi kohabitacijom i s njom povezanim izvanbračnim rađanjima na razini tadašnjih država članica Europske unije. Osim trendovima i geografskom rasprostranjenosti, bavi se i potencijalnim uzrocima rasta trenda kohabitacije i rađanja izvan braka u odabranim državama. Naglašava važnost kulturnih čimbenika za učestalost ove pojave. Društvenim i kulturnim aspektima rađanja izvan braka posredno se bavio i Patrick Festy (1980) govoreći o novom društvenom kontekstu europske obitelji. Na sjevernoameričkom kontinentu rađanjima izvan braka bavili su se Akerlof, Yellen i Katz (1996). U svom radu analiziraju ovu pojavu u Sjedinjenim Američkim Državama, gdje porast rađanja izvan braka dovode u vezu s istovremenim smanjenjem broja brakova sklopljenih usljed neplanirane trudnoće žena. Rađanja izvan braka dotiču se i Céline Le Bourdais te Évelyne

comparison with certain European countries and later with local characteristics of this phenomenon in Croatia. In her 1997 paper, Mrđen deals with the correlation between out-of-wedlock births and marriages and the average age of women at the time of their first marriage, and also gives an insight into the regional diversity of this phenomenon in Croatia and the differences in rates of out-of-wedlock births between ethnic Serbs and Croats. This paper is the only one in the Croatian scientific literature corpus that deals in detail with the geography of out-of-wedlock births. Sociologist Dario Pavić (2014) wrote a scientific paper that deals with the trend and factors of this phenomenon from 1998 to 2012 at the national level. Graovac Matassi and Talan (2021) analysed and compared the development of this phenomenon in Croatia and Slovenia from 1985 to 2017 and found significant differences in out-of-wedlock birth rates in two neighbouring and culturally similar countries.

Furthermore, in the international literature, we can see the dominance of the sociological and cultural research approach to this phenomenon. The focus of most research is on explaining the social causes and consequences of this phenomenon, while the geographical component is often only an accompanying element. This topic became the focus of demographic science after the sudden increase in out-of-wedlock birth rates in Northern and Western Europe and on the North American continent in the 1970s (Kiernan, 2001). In her studies, Kathleen Kiernan (2001; 2004) deals with the spatial distribution of the observed phenomenon. In two of her papers, she deals in detail with cohabitation and the associated out-of-wedlock births at the level of member states of the European Union. In addition to trends and geographical distribution, she also looks at the possible causes of the increasing trend towards cohabitation and out-of-wedlock births in selected countries; and emphasises the importance of cultural factors for frequency of this phenomenon. Patrick Festy (1980) dealt indirectly with the social and cultural aspects of out-of-wedlock births and spoke about the new social context of the European family. On the North American continent, Akerlof, Yellen and Katz (1996) dealt with out-of-wedlock births. In their study, they analyse this phenomenon in the United States of America, where the rise in out-of-wedlock births is associated with the decline in "shotgun" marriages as a result of unplanned pregnancies. Céline Le Bourdais and Évelyne Lapierre-Adamcyk (2004) also refer to out-of-

Lapierre-Adamcyk (2004) u svojoj analizi kohabitacijskih zajednica u Kanadi. Autorice poseban naglasak stavljaju na razlike u učestalosti kohabitacije i rađanja izvan braka između frankofonog Quebeca i ostalih kanadskih saveznih provincija. Društvenim aspektima bave se u svojim radovima i Upchurch, Lillard i Panis (2002) govoreći o utjecaju obrazovanja na promatranu pojavu, Pamela J. Smock i Wendy D. Manning (2004) koje se bave pravnim aspektima kohabitacije i rađanja izvan braka, Judith A. Seltzer (2000) koja govori o odnosu pojmova izvanbračnih zajednica i obitelji. Robert Kaestner (1998) dovodi u korelaciju obilježja obiteljske strukture s trendom izvanbračnih rađanja, a Robert D. Plotnick (1990) govori o odnosu blagostanja i rađanja izvan braka. Prostorna komponenta dominantna je tek u radu Klüsenera, Perelli-Harris i Sánchez Gassen (2012). Spomenuti se autori bave prostornim razlikama izvanbračnih rađanja u Europi u 20. i 21. stoljeću. Rad kartografski vrlo zorno pokazuje prostorne razlike te izdvaja nekoliko regija na temelju obrazaca po kojima se razvija trend rađanja izvan braka. Osim navedenog, daje i moguće smjernice razvoja ovoga trenda u budućnosti. U analizu su bile uključene sve europske države, ali i europski dio Ruske Federacije te tri kavkaske republike bivšega SSSR-a – Armenija, Gruzija i Azerbajdžan. Regionalnim posebnostima i uzrocima ove pojave u promijenjenom kontekstu suvremene obitelji u Grčkoj bavili su se recentno Gavalas i Raftakis (2024) zaključivši da je praksa rađanja izvan braka u Grčkoj značajnije vezana za nedomicilno stanovništvo te da pojava životnoga partnerstva i promijenjenoga obiteljskog konteksta značajnije utječe na ovaj trend u državi s jednom od najnižih stopa izvanbračnoga rađanja u Europi.

Gotovo sva relevantna istraživanja ovu društvenu pojavu tumače kroz dvije različite teorijske perspektive – teoriju druge demografske tranzicije te njezinu kritiku. Teorija druge demografske tranzicije javlja se u trenutku kad su demografski trendovi u zapadnoeuropskim državama ranije demografske tranzicije pokazali tijekom bitno drugačiji od ranije predviđenoga. Naime, umjesto stabilnih stopa ukupnoga fertiliteta na razini oko dva te braka kao dominantnoga konteksta rađanja događao se, između ostaloga, razmjeno snažan pad stopa nupcijaliteta, a u brojnim je zapadnoeuropskim državama fertilitet pao značajno ispod vrijednosti dva

wedlock births in their analysis of cohabiting couples in Canada. The authors pay particular attention to the differences in frequency of cohabitation and out-of-wedlock births between francophone Quebec and other Canadian provinces. Several authors address the social aspects of the phenomenon in their studies. Upchurch, Lillard and Panis (2002) write about the influence of education on the phenomenon in question; Pamela J. Smock and Wendy D. Manning (2004) look at legal aspects of cohabitation and out-of-wedlock births; and Judith A. Seltzer (2000) focuses on the relationship between the concepts of cohabitation and family. Robert Kaestner (1998) correlates the characteristics of family structure with the trend in out-of-wedlock births, and Robert D. Plotnick (1990) talks about the relationship between welfare and out-of-wedlock births. The spatial component is only dominant in the study by Klüsener, Perelli-Harris and Sánchez Gassen (2012), who deal with the spatial differences in out-of-wedlock births in Europe in the 20<sup>th</sup> and 21<sup>st</sup> centuries. In the paper, the spatial differences are very clearly mapped and several regions are singled out on the basis of patterns, according to which the trend in out-of-wedlock births is developing. In also identifies possible directions for the future development of this trend. The analysis covered all European countries, but also the European part of the Russian Federation and the three Caucasian republics of the former USSR: Armenia, Georgia and Azerbaijan. The recent study by Gavalas and Raftakis (2024) on regional characteristics and causes of this phenomenon in the changing context of the contemporary family in Greece concluded that out-of-wedlock births are significantly related to the non-domiciled population and that the occurrence of cohabitation and the changing family context significantly influence this trend in a country with one of the lowest out-of-wedlock birth rates in Europe.

Almost all relevant studies interpret this social phenomenon from two different theoretical perspectives – the theory of the second demographic transition and the critique of it. The theory of the second demographic transition emerged at a time when the demographic trends of the previous demographic transition in Western European countries were taking a significantly different direction than predicted. A stable total fertility rate of around 2 and marriage as the dominant fertility (birth) context were replaced. Among other things, there was a sharp decline in marriage rates, and in many Western

(Lesthaeghe, 2010). Demografi su ove neočekivane pojave nastojali objasniti znatno širim opaženim društvenim promjenama poput emancipacije i potrebe samoostvarenja u trenutku kad su osnovne životne potrebe u najvećoj mjeri osigurane te postupnim smanjenjem važnosti kolektivnih vrijednosti, a koje značajno utječu i na reproduktivne obrasce. Te društvene pojave koje se zrcale kroz procese pada stopa fertiliteta i nupcijaliteta, visoke stope razvoda brakova te rast broja kohabitacija svode se na zajednički nazivnik druge demografske tranzicije (van de Kaa, 1987; Lesthaeghe, 2010). Kasnija istraživanja sporila su da se ovako složena društvena pojava može objasniti samo unutar teorije druge demografske tranzicije, tj. samo kroz prizmu ranije navedenih društvenih promjena pa ovu pojavu promatraju u kontekstu gospodarski generiranih društvenih razlika i smatraju je tzv. *obrascem (gospodarske, društvene) nejednakosti (pattern of disadvantage)*, upućujući na činjenicu da je ova pojava znatno učestalija u nižim društvenim slojevima i gospodarski depriviranim prostorima (Perelli-Harris i dr., 2010; prema Gavalas i Raftakis, 2024). Ove postavke kritike druge demografske tranzicije u tumačenju rađanja izvan braka osobito su došle do izražaja u istraživanjima ove pojave u postsocijalističkim državama Europe, gdje je postojala značajna veza između gospodarske stagnacije i pada te rasta stopa rađanja izvan braka.

### Rađanja izvan braka u Europi

Navedene dvojbe o mogućnostima promatranja rasta stopa rađanja izvan braka samo kroz prizmu društvenih promjena u okviru druge demografske tranzicije, osobito promatramo li bivše socijalističke republike, najbolje su vidljive u njezinim geografskim razlikama. Budući da su nositelji opisanih društvenih promjena temeljenih na sekularnom individualizmu društva (Frejka i dr., 2008) na višoj razini društveno-gospodarskoga razvoja, za očekivati je gotovo pravilno, radijalno širenje ovoga trenda od sjeverozapadne jezgre europskoga gospodarskog i društvenog razvoja prema njezinoj južnoj i istočnoj periferiji. Međutim, istraživanja pokazuju kako se čak i među susjednim, kulturološki sličnim, državama javljaju razmjerno velike razlike (Mrđen,

European countries fertility fell well below the level of 2 (Lesthaeghe, 2010). Demographers tried to explain these unexpected phenomena with generally observable social changes, such as emancipation and the need for self-fulfilment at a time when the basic needs of life are largely met, as well as the gradual decline in the importance of collective values, which also affect reproduction patterns. These social phenomena, which are reflected in the processes of declining fertility (birth) and marriage rates, high divorce rates and the increase in cohabitation, can be reduced to the common denominator of the second demographic transition (van de Kaa, 1987; Lesthaeghe, 2010). Later studies have showed that this complex social phenomenon can only be explained within the framework of the theory of the second demographic transition, i.e. only through the prism of the aforementioned social changes, so that this phenomenon is observed in the context of economically determined social differences, and they consider it a so-called pattern of disadvantages, which refers to the fact that it occurs much more frequently in lower social classes and in economically disadvantaged areas (Perelli-Harris et al., 2010; according Gavalas and Raftakis, 2024). These attitudes of criticism of the second demographic transition in the interpretation of out-of-wedlock births came to the fore mainly in research into this phenomenon in post-socialist European countries, where there was a significant correlation between economic stagnation and a decline in out-of-wedlock births.

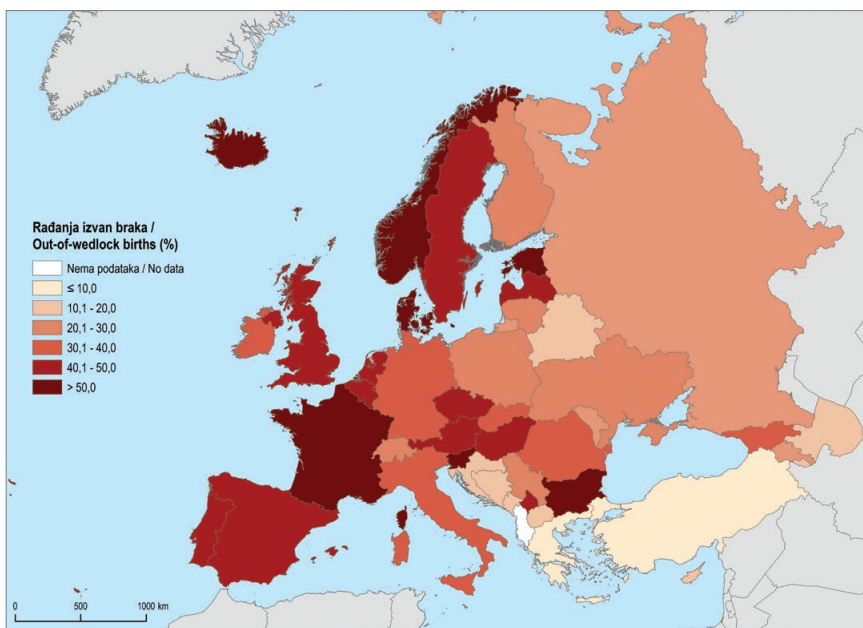
### Out-of-wedlock births in Europe

The aforementioned doubts regarding the usefulness of observing the increase in out-of-wedlock births solely through the prism of social changes in the context of the second demographic transition, especially if we consider the former socialist republics, should be observed in terms of their geographical differences. Considering the fact that the carriers of the described social changes, which are based on the secular individualism of society (Frejka et al., 2008), are at the higher level of socio-economic development; therefore, an almost regular, radial expansion of this trend from the north-western core of Europe's economic and social development towards its southern and eastern periphery is to be expected. However, studies show that there are considerable differences even between neighbouring, culturally similar

Sl. 1. Stopa rađanja izvan braka u europskim državama te Armeniji, Gruziji, Azerbajdžanu i Turskoj 2015. godine

Fig. 1 Out-of-wedlock birth rates in European countries and Armenia, Georgia, Azerbaijan and Turkey in 2015

Izvor: EUROSTAT  
Source: EUROSTAT



1997) te kako se, analizirajući ovu pojavu na kartografskom prikazu (sl. 1) ne može govoriti o radijalnom širenju već o *uzorku šahovske ploče* (Klüsener i dr., 2012). I dok su najviše stope rađanja izvan braka očekivano zabilježene u skandinavskim i nekim zapadnoeuropskim državama koje su izvoriste ove demografske pojave, iznimno visoke stope u nekim bivšim socijalističkim državama znatno niže razine gospodarskoga i društvenoga razvoja poput Bugarske, Estonije ili Slovenije te razmjerno visoke stope u Latviji, Mađarskoj, Češkoj i sl. nisu se mogle sasvim objasniti postavkama druge demografske tranzicije (Kostova, 2007). U razmatranju ovih kao i drugih značajnih pojava i procesa u analizama fertiliteta i nupcijaliteta te oblika obiteljskih zajednica kao relevantni su se čimbenici uzimali značajne društvene i gospodarske promjene te time uzrokovana gospodarska i socijalna deprivacija (*pattern of disadvantage*) (Frejka i dr., 2008; Perelli Harris i Gerber, 2011). Pokazuju to i rezultati istraživanja iz Ruske Federacije kao tipškoga primjera tranzicijskoga društva u kojemu je niža razina obrazovanosti žena pozitivno povezana s pojavom izvanbračnoga rađanja, ali je istodobno istaknut trend povećanja kohabitacija, pri čemu treba uzeti u obzir razlike u obrascima obiteljskih veza žena u kohabitaciji i onih izvan zajednice (Perelli Harris i Gerber, 2011).

countries (Mrden, 1997) and that when analysing this phenomenon on the map (Fig. 1), we do not find radial expansion, rather a “chequerboard pattern” (Klüsener et al., 2012). While the highest out-of-wedlock birth rates are, as expected, in Scandinavian and (some) Western European countries, which are the source of this demographic phenomenon, the significantly high rates in some former socialist countries that are at much lower level of economic and social development, such as Bulgaria, Estonia or Slovenia, and the relatively high rates in Latvia, Hungary, Czechia etc., cannot be explained by the framework conditions of the second demographic transition (Kostova, 2007). Considering these and other significant phenomena and processes in the analysis of fertility, marriage and forms of family communities, significant social and economic changes and the resulting economic and social disadvantage (*patterns of disadvantage*) were considered as relevant factors (Frejka et al., 2008; Perelli Harris and Gerber, 2011). This is also shown by research findings from the Russian Federation as a typical example of a transitional society, in which the lower educational level of women is positively associated with the occurrence of out-of-wedlock births, but at the same time a significant trend towards increasing cohabitation can be observed, with differences in the patterns of family ties between cohabitating women and those outside the community (Perelli Harris and Gerber, 2011).

## Metodologija istraživanja

Analiza u ovome radu usmjerena je na naselja Osječko-baranjske i Vukovarsko-srijemske županije, dviju najistočnijih jedinica regionalne samouprave u Republici Hrvatskoj. Granice promatranoga područja utvrđene su Zakonom o područjima županija, gradova i općina u Republici Hrvatskoj (NN, br. 86/06.). U analizi su korišteni podatci za dvadesetšestogodišnje razdoblje od 1995. do 2020. godine. Analizirani su podatci za ukupno 348 naselja raspoređenih u 12 upravnih gradova i 61 općinu.

Metodologija istraživanja temelji se na analizi postojeće literature o široj temi rada te prikupljanju, obradi i analizi statističkih podataka. Analizirani su podatci vitalne statistike Državnoga zavoda za statistiku o ukupnom broju živorođenih te broju živorođenih u braku i izvan braka. Osim podataka vitalne statistike, korišteni su i podatci popisa stanovništva 2011. te onoga posljednjeg provedenoga 2021. godine. Podatci popisa stanovništva 2011. i 2021. godine korišteni su kao izvor podataka o etničkoj strukturi upravnih gradova i općina u ovim dvjema promatranim županijama, a bili su nužni za utvrđivanje veze između stopa izvanbračnih rađanja te odabranih odrednica. Korišteni su podatci o udjelu nacionalnih manjina u ukupnom stanovništvu općina i upravnih gradova, pojedinačnom udjelu srpske, mađarske, romske, bošnjačke i slovačke manjine, udjelu najrelevantnijih vjerskih skupina (katolici, pravoslavci, muslimani i protestanti), udjelu agnostika i ateista te indeks razvijenosti jedinica lokalne i regionalne uprave i samouprave kao službeni pokazatelj razvijenosti na prostornoj razini općina i upravnih gradova. Korelativni odnosi odabranih odrednica i stope rađanja izvan braka propitani su korištenjem Pearsonove korelacije zbog prirode skupa podataka i njegove distribucije.

Temelj analize čine izračunate stope rađanja izvan braka na razini naselja promatranoga područja. Stopa rađanja izvan braka računa se prema formuli:

$$ni = \frac{Ni}{N} * 100$$

gdje je **ni** stopa rađanja izvan braka, **Ni** broj živorođenih izvan braka u promatranjoj godini, a **N**

## Research methodology

The analysis in this paper focuses on the settlements of Osijek-Baranja and Vukovar-Sirmium counties, the two easternmost units of regional self-government in the Republic of Croatia. The boundaries of the analysed area are defined by the *Act on the Territories of Counties, Towns and Municipalities in the Republic of Croatia* (Official Gazette, No. 86/06). Data for the 26-year period from 1995 to 2020 were used for the analysis. The data was analysed for a total of 348 settlements spread over 12 administrative towns and 61 municipalities.

The research methodology is based on the analysis of existing literature on the broader topic of the paper as well as on the collection, processing and analysis of statistical data. Data from the Central Bureau of Statistics on the total number of live births and the number of live births in and out-of-wedlock were analysed. In addition to the vital statistics data, data from the 2011 and 2021 censuses were also used. The 2011 and 2021 census data served as a data source for the ethnic structure of the administrative towns and municipalities in the two observed counties and were necessary to determine the relationship between the rates of out-of-wedlock births and selected variables. Data were also used on the share of national minorities in the total population of administrative towns and municipalities, the individual share of the Serbian, Hungarian, Roma, Bosnian and Slovak minorities, the share of the main religious groups (Catholics, Orthodox Christians, Muslims and Protestants), the share of agnostics and atheists, and the development index as an official indicator of the development of local and regional government and self-government units at the level of administrative towns and municipalities. Correlative relationships between selected variables and out-of-wedlock birth rates were examined using Pearson's correlation coefficient due to the nature of the data set and its distribution.

The analysis is based on the calculated out-of-wedlock birth rates at the settlement level of the observation area. The out-of-wedlock birth rates are calculated according to the following formula:

$$ni = \frac{Ni}{N} * 100$$

where **ni** is out-of-wedlock birth rate, **Ni** is the number of out-of-wedlock live births in the ob-



ukupan broj živorođenih promatrane godine. Stopa rađanja izvan braka može se promatrati i kao udio živorođenih izvan braka u ukupnom broju živorođenih neke populacije tijekom određenoga razdoblja.

Radi veće zornosti i lakšega uočavanja prostornih i vremenskih obilježja te jednostavnijega shvaćanja pojava i procesa rezultati su vizualizirani pomoću alata računalnog programa Microsoft Excel te softvera ArcGIS 10.7 Desktop i njegove aplikacije ArcMap. Microsoft Excel koristio se za proces obrade podataka i izradu dijagrama, a ArcGIS 10.7 Desktop i aplikacija ArcMap za vizualizaciju prostornih podataka, odnosno izradu tematskih karata.

Za potpuno i ispravno shvaćanje i tumačenje dobivenih rezultata valja napomenuti i neke specifičnosti. U analizi je promatrano dvadesetšestogodišnje razdoblje od 1995. do 2020. godine kako bi se dobio logičan i relevantan vremenski odjeljak. U promatranom razdoblju došlo je 1998. godine do promjene načina prijavljivanja vitalnih događaja prema načelu prisutnoga stanovništva. Naime, zaključno s 1997. godinom u ukupan broj živorođenih te broj živorođenih u braku i izvan braka ubrajani su i živorođeni u inozemstvu od roditelja na tzv. privremenom radu. Da bi se zadržalo logično dvadesetšestogodišnje razdoblje, a istovremeno omogućila usporedivost podataka, podatci za 1995., 1996. i 1997. iznivelirani su s podacima za ostale istraživane godine. Naime, za navedene tri godine od broja ukupno živorođenih, živorođenih u braku i izvan braka oduzet je broj ukupno živorođenih, živorođenih u braku i izvan braka u inozemstvu. Osim toga, valja imati na umu da je tek 1998. godine, mirnom reintegracijom Hrvatskoga Podunavlja, velik dio promatranoga područja ušao u teritorijalno-politički ustroj Republike Hrvatske. Treba napomenuti i da su se granice pojedinih upravnih gradova i općina u promatranom razdoblju mijenjale iako to nema značajnoga utjecaja na rezultate ove analize.

served year, and  $N$  is the total number of live births in the observed year. The out-of-wedlock birth rate can also be seen as the proportion of out-of-wedlock live births in the total number of live births in a population during a given period.

For better visibility and easier observation of the spatial and temporal features and for an easier understanding of the phenomena and processes, the results were visualized using the computer program Microsoft Excel and the software ArcGIS 10.7 Desktop and its ArcMap application. Microsoft Excel was used for data processing and the creation of diagram, while ArcGIS 10.7 Desktop and the ArcMap application were used for the visualization of spatial data, i.e. the creation of thematic maps.

For a complete and correct understanding and interpretation of the results obtained, some particularities must be considered. In the analysis, the period from 1995 to 2020 was considered in order to obtain a logical and relevant time period. In the period under consideration, there was a change in the methodology of reporting vital events in 1998 according to the current population principle. Namely, from 1997 onwards, the total number of live births and the number of live births in and out-of-wedlock also included live births abroad by parents in the context of so-called temporary labour. In order to maintain a logical 26-year period and at the same time enable comparability of the data, the data for 1995, 1996 and 1997 were adjusted to the data for the other years examined. This means that for the three years mentioned, the total number of live births, live births in marriage and out-of-wedlock live births abroad was subtracted from the number of live births, live births in marriage and out-of-wedlock live births. In addition, it should be considered that a large part of the observed area was only (re)incorporated into the territorial and political structure of the Republic of Croatia in 1998 with the peaceful reintegration of the Croatian Danube region. It should also be noted that the boundaries of individual administrative towns and municipalities changed during the observation period, although this has no significant influence on the research results.

## Rezultati

### Trend rađanja izvan braka u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji

U razdoblju od 1995. do 2020. godine u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji rodilo se 124 891 dijete. U relativnim odnosima, djece rođene izvan braka bilo je nešto više od 10 %. Ako usporedimo te brojeve s brojevima na nacionalnoj razini, možemo utvrditi da su rađanja izvan braka na promatranom području dviju županija manje česta nego na razini Republike Hrvatske. Naime, u razdoblju na kojemu se provodila analiza u Hrvatskoj je rođeno 1 080 836 djece, a od toga njih 139 250 izvan braka. To znači da je 12,88 % živorođenih u Hrvatskoj, od 1995. do 2020. godine, rođeno izvan braka. Dakle, stopa rađanja izvan braka za više od 2 postotna poena manja je u promatranim županijama u odnosu na Republiku Hrvatsku u cjelini. Ako se spustimo na razinu svake županije, možemo vidjeti da je učestalost rađanja izvan braka u promatranom razdoblju veća u Osječko-baranjskoj županiji. Primjerice, u zadnjem petogodišnjem razdoblju, od 2016. do 2020. godine, u Osječko-baranjskoj županiji rođeno je 11 866 djece, od kojih 2091 izvan braka. U istom razdoblju u Vukovarsko-srijemskoj županiji rođeno je 6845 djece, od čega 863 izvan braka. U relativnim odnosima u navedenom je razdoblju u Osječko-baranjskoj županiji 17,62 % djece rođeno izvan braka, dok taj udio u Vukovarsko-srijemskoj županiji iznosi 12,61 %. Također, vidljivo je da su stope na razini obiju županija niže od nacionalnoga prosjeka tijekom cijeloga razdoblja od 1995. do 2020. godine. Najmanji broj rođenih izvan braka u dvjema promatranim županijama zabilježen je 1996. godine, dok je na nacionalnoj razini zabilježen 1995. godine, kad je bio na razini 3459 živorođena djeteta. Očekivano, naselja s najvećim apsolutnim brojem rođenih izvan braka bila su naselja s najvećim apsolutnim brojem stanovnika. Tako je najveći broj rođenih izvan braka u Osječko-baranjskoj županiji od 1995. do 2020. godine zabilježio Osijek, a u Vukovarsko-srijemskoj Vinkovci. Najmanji apsolutni broj rođenih izvan braka u Vukovarsko-srijemskoj županiji imalo je naselje Čelije u općini Trpinja. Tamo se u dvadeset

## Results

### Trends of out-of-wedlock births in Osijek-Baranja and Vukovar-Sirmium counties

In the period from 1995 to 2020, 124,891 children were born in the counties of Osijek-Baranja and Vukovar-Sirmium. In relative terms, the number of children born out-of-wedlock was just over 10%. If these figures are compared with the figures at national level, it can be seen that out-of-wedlock births are less frequent in the observation area than at the level of the Republic of Croatia. In the period during which the analysis was conducted, 1,080,836 children were born in Croatia, of which 139,250 were born out of wedlock. This means that 12.88% of live births in Croatia between 1995 and 2020 were born out of wedlock. This means that the rate of out-of-wedlock births in the observed counties is more than 2 percentage points lower than in the Republic of Croatia as a whole. If we go down to the level of individual counties, we can see that the frequency of out-of-wedlock births in the observed period is higher in Osijek-Baranja County. In the last five-year period from 2016 to 2020, 11,866 children were born in Osijek-Baranja County, of which 2,091 were born out of wedlock. In the same period, 6,845 children were born in Vukovar-Sirmium County, 863 of whom were born out of wedlock. In relative terms, 17.62% of children were born out of wedlock in Osijek-Baranja County during the same period, compared to 12.61 in Vukovar-Sirmium County. It is also evident that the rates at the level of both counties are below the national average throughout the period from 1995 to 2020. The lowest number of out-of-wedlock births was recorded in the two counties in 1996, while at the national level it was 3,459 live births in 1995. As expected, the settlements with the highest absolute number of out-of-wedlock births were also the settlements with the highest absolute number of inhabitants. The city of Osijek recorded the highest number of out-of-wedlock births from 1995 to 2020 in Osijek-Baranja County, while in Vukovar-Sirmium County the highest number was recorded in the city of Vinkovci. The settlement of Čelije in the municipality of Trpinja had the lowest absolute number of out-of-wedlock births in Vukovar-Sirmium County.

i pet godina tek dvoje djece rodilo izvan braka. U Osječko-baranjskoj županiji 12 naselja nije zabilježilo pojavu izvanbračnih rađanja u dvadesetšestogodišnjem razdoblju, i to: Sokolovac (općina Kneževi Vinogradi), Ovčara i Paučje (Levanjska Varoš), Malinovac (Magadenovac), Brezovica i Marjanski Ivanovci (Marjanci), Kelešinka i Ostrošinci (Podgorač), Gezinci (Podravska Moslavina), Svetoblažje (Trnava), Blanje (Viljevo) te Hrastovac u općini Vuka. Navedeno se, naravno, odnosi na naselja koja su zabilježila bar jednoga živorođenog u promatranom razdoblju.

U navedenom razdoblju rađanja izvan braka u ovim dvjema županijama iznosila su 9,44 % od ukupnoga broja rođenih izvan braka u Republici Hrvatskoj. Za usporedbu, prema popisu 2021. godine u ovim dvjema županijama živjelo je 10,41 % ukupnoga stanovništva Hrvatske. U Osječko-baranjskoj županiji živjelo je 6,68 % hrvatske populacije, a u Vukovarsko-srijemskoj 3,73 % (Popis stanovništva, kućanstava i stanova 2021.). Vidljivo je da je zastupljenost ovoga područja u rađanjima izvan braka približna udjelu u ukupnom stanovništvu. Isto vrijedi i za Osječko-baranjsku županiju, dok je kod Vukovarsko-srijemske zastupljenost u rađanjima izvan braka, tijekom većega dijela promatranog razdoblja, manja od zastupljenosti u ukupnom stanovništvu. Najveća zastupljenost ovoga područja u rađanjima izvan braka na nacionalnoj razini bila je 1998. godine, kad se 12,80 % rođenih izvan braka u Republici Hrvatskoj odnosilo na teritorij ovih dviju županija. Udio promatranoga područja u rađanjima izvan braka na nacionalnoj se razini smanjuje, vjerojatno zbog smanjivanja udjela u ukupnom stanovništvu te je 2020. godine iznosio 7,32 % (tab. 1).

U dvadesetšestogodišnjem razdoblju, 1995. – 2020., stopa izvanbračnih rađanja na promatranom je području porasla za 7,25 postotnih poena, tj. sa 6,56 % 1995. na 16,96 % 2020. godine. Bazni indeks za 2020. godinu (1995. = 100) iznosi 161,58, što znači da je završna vrijednost rasla za više od polovice početne vrijednosti u 1995. godini. U Osječko-baranjskoj županiji stopa je rasla za 11,58 postotnih poena, sa 6,76 % 1995. na 18,34 % 2020. godine, dok je u Vukovarsko-srijemskoj županiji rasla je za 8,09 postotna poena, sa 6,23 % 1995. na 14,32 % 2020. godine.

Only two children were born out of wedlock there over a 26-year period. In Osijek-Baranja County, no out-of-wedlock births were recorded in 12 settlements in the observed period, namely: Sokolovac (Kneževi Vinogradi), Ovčara and Paučje (Levanjska Varoš), Malinovac (Magadenovac), Brezovica and Marjanski Ivanovci (Marjanci), Kelešinka and Ostrošinci (Podgorač), Gezinci (Podravska Moslavina), Svetoblažje (Trnava), Blanje (Viljevo) and Hrastovac in the municipality of Vuka. The above data naturally refer to the settlements where at least one live birth was recorded during the observation period.

During this period, out-of-wedlock births in these two counties accounted for 9.44% of the total number of out-of-wedlock births in the Republic of Croatia. By comparison, according to the 2021 census, 10.41% of the total population of Croatia lived in these two counties. 6.68% of the Croatian population lived in Osijek-Baranja County and 3.73% in Vukovar-Sirmium County (Population, Households and Dwellings Census data 2021). It can be seen that the share of out-of-wedlock births in this region roughly corresponds to the share in the total population. The same applies to Osijek-Baranja County, while in Vukovar-Sirmium the share of out-of-wedlock births is lower than the share in the total population for most of the observed period. The highest share of this area in out-of-wedlock births at the national level was reached in 1998, when 12.80% of out-of-wedlock births in the Republic of Croatia occurred in these two counties. The share of the observed area in out-of-wedlock births at the national level is decreasing, which is probably due to the decrease in the share in the total population, and amounted to 7.32% in 2020 (Tab. 1).

In the 26-year period (1995–2020), the rate of out-of-wedlock births in the observation area increased by 10.4 percentage points, i.e. from 6.56% in 1995 to 16.96% in 2020. The base index for 2020 (1995=100) is 161.58, which means that the final value has increased by more than half of the initial value of 1995. In Osijek-Baranja County, the rate rose by 11.58% (from 6.76% in 1995 to 18.34% in 2020), while in Vukovar-Sirmium County it rose by 8.09% (from 6.23% in 1995 to 14.32% in 2020).

Tab. 1. Rođeni izvan braka u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji u ukupnom broju rođenih izvan braka u Republici Hrvatskoj od 1995. do 2020. godine

Tab. 1 Out-of-wedlock births in Osijek-Baranja and Vukovar-Sirmium counties in the total number of out-of-wedlock births in Republic of Croatia from 1995 to 2020

Godina /Year	Osječko-baranjska i Vukovarsko-srijemska županija / Osijek-Baranja and Vukovar-Sirmium counties	Republika Hrvatska / Republic of Croatia	Udio (%) / Share (%)
1995.	355	3495	10,16
1996.	343	3654	9,39
1997.	390	3773	10,34
1998.	489	3820	12,80
1999.	414	3714	11,15
2000.	459	3927	11,69
2001.	462	3845	12,02
2002.	430	3856	11,15
2003.	448	4026	11,13
2004.	468	4183	11,19
2005.	506	4464	11,34
2006.	505	4562	11,07
2007.	490	4823	10,16
2008.	477	5260	9,07
2009.	549	5768	9,52
2010.	515	5752	8,95
2011.	510	5768	8,84
2012.	598	6444	9,28
2013.	619	6442	9,61
2014.	610	6889	8,85
2015.	551	6802	8,10
2016.	584	7110	8,21
2017.	639	7274	8,78
2018.	595	7647	7,78
2019.	537	7776	6,91
2020.	599	8176	7,32

Izvor: V DZS (2021)

Source: CBS (2021)

Općenito, možemo reći da je stopa rađanja izvan braka u objema županijama rasla u promatranom razdoblju, ali se kretanje toga trenda kroz godine razlikuje. Cijelo promatrano područje ne bilježi kontinuirani rast stopa u čitavom razdoblju. Naime, 1996., 1999., 2002., 2008., 2014., 2015., 2017. i 2019. godine zabilježen je pad stope u odnosu na prethodnu godinu. Najveći pad u odnosu na prethodnu godinu zabilježen je 2008. godine, kad je stopa rađanja izvan braka pala s 10,17 % na 8,17 %,

In general, it can be said that the rate of out-of-wedlock births has increased in both counties during the observation period, but the trend fluctuates over the observed period. In the entire analysed area, there is no continuous increase in rates over the studied period. In 1996, 1999, 2002, 2008, 2014, 2015, 2017 and 2019, a decrease in the rate compared to the previous year was recorded. The sharpest year-on-year decline was recorded in 2008, when the rate of out-of-wedlock births fell from

najnižu razinu na kojoj je bila još od 1999. godine. Trend se nije nastavio sljedeće 2009. godine, štoviše, vratio se na do tada najvišu razinu u promatranom razdoblju od 10,84 %. Nakon 2008. nije bilo toli-ko snažnih oscilacija, a zamjetan je trend oscilacije vrijednosti između 15 % i 16 % u posljednjem pe-togodišnjem razdoblju (sl. 2). Najznačajniji rast uo-čen je s već spomenute 2008. na 2009. godinu kad stopa raste s 8,17 % na 10,84 %, a lančani indeks za 2009. godinu iznosi 132,73. Razmjerno snaž-niji rast dogodio se i s 1997. na 1998. godinu te s 1999. na 2000. godinu. Verižni indeks 1998. godine iznosio je 125,41, a 2000. godine 117,73. Najdulje kontinuirano razdoblje rasta, u trajanju od pet uza-stopnih godina, zabilježeno je između 2009. i 2013. godine. Samo u dva navrata zabilježen je pad stopa izvanbračnih rađanja dvije godine uzastopno. To vrijedi za razdoblje 2007.–2008. te 2014.–2015. godine (sl. 2).

Da bi nam kretanje stopa rađanja izvan braka bilo što jasnije, valja promotriti i odnos rađanja izvan braka s ukupnim brojem rađanja na promatranom području u navedenom razdoblju. Analizirajući taj odnos može se primijetiti da postoji korelacija ove tih dviju kategorija. Naime, uočava se da se stopa rađanja izvan braka prema ukupnom broju rađa-nja odnosi gotovo obrnuto proporcionalno (sl. 2). Tako u razdobljima rasta ukupnoga broja rađanja

10.17% to 8.17%, the lowest level since 1999. This trend did not continue in the following year 2009, but instead reached the highest level in the analysed period at 10.84%. After 2008, there were no major fluctuations, and in the last five-year period a clear trend towards a fluctuation in value of between 15% and 16% was observed (Fig. 2). The strongest growth was observed from 2008 to 2009, when the rate rose from 8.17% to 10.84% and the chain index for 2009 was 132.73. Relatively strong growth was recorded from 1997 to 1998 and from 1999 to 2000. The chain index was 125.41 in 1998 and 117.73 in 2000. The longest uninterrupted period of growth, lasting five years in a row, was recorded between 2009 and 2013. There were only two consecutive years in which the rate of out-of-wedlock births fell. This applies to the periods of 2007–2008 and 2014–2015 (Fig. 2).

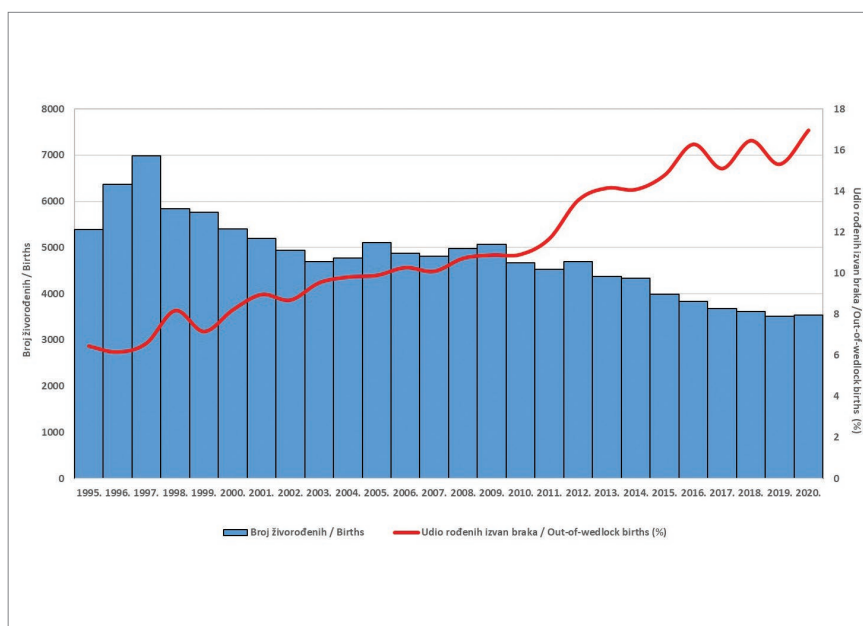
In order to clarify the development of out-of-wedlock birth rates, the ratio between out-of-wedlock births and the total number of births in the obser-vation area in the specified period should also be considered. The analysis of this ratio shows that there is a correlation between these two categories. In fact, it can be seen that the rate of out-of-wedlock births is almost inversely proportional to the total number of births (Fig. 2). Thus, in periods when the total number of births increases, a de-

Sl. 2. Ukupan broj živorođenih i stopa rađanja izvan braka u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji od 1995. do 2020. godine

Fig. 2 Total number and rates of out-of-wedlock births in Osijek-Baranja and Vukovar-Sirmium counties from 1995 to 2020

Izvor: DZS (2021)

Source: CBS (2021)



možemo primijetiti pad stopa izvanbračnih rađanja i obrnuto, uz iznimku nekoliko pojedinačnih godina poput 1997., 2017. i 2019. Tih godina dolazi do usporednoga rasta/pada broja živorođenih i stope rađanja izvan braka.

### Prostorne razlike rađanja izvan braka

Prostorna analiza stope izvanbračnih rađanja u naseljima promatranih dviju županija pokazuje iznimnu raznolikost opaženih stopa i razmjerno jasnu regionalizaciju pojave te, u skladu s prethodnim istraživanjima, sugerira razmjerno složenu društvenu genezu pojave rađanja izvan braka. Naime, na promatranom se razmjerno malom području istovremeno uočavaju stope na razini europskih država s najvećom i najmanjom učestalošću rađanja izvan braka, a granica je tih prostornih kompleksa razmjerno jasna (sl. 3 i 4).

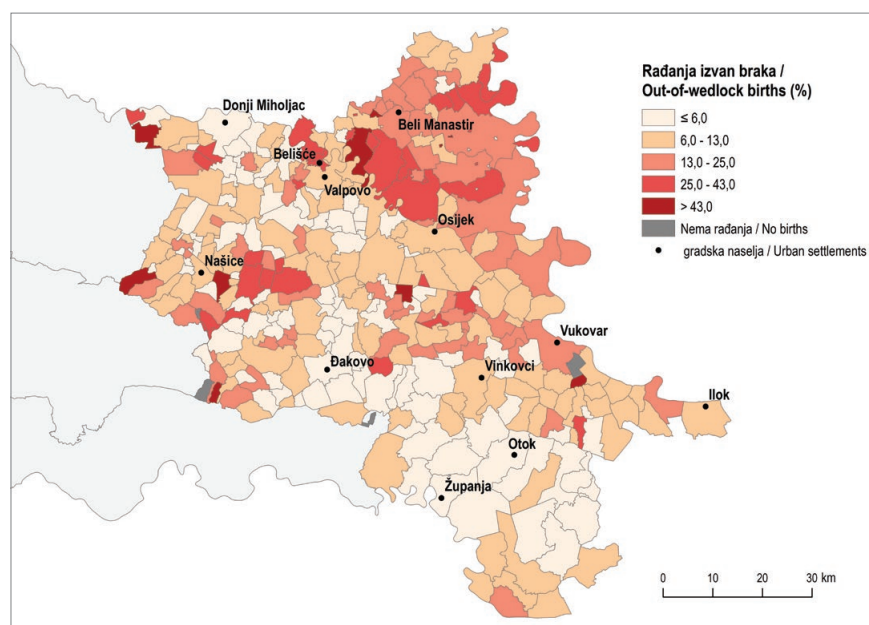
Najjasnije izdvojen prostor viših stopa rađanja izvan braka jest onaj na sjeveroistoku promatranoga područja koji se podudara s prostorom povijesne regije Baranja. Na gotovo čitavu prostoru Baranje stope rađanja izvan braka više su od 13 %, što je približno prosjeku cijeloga područja 2015. godine. Ako uzmemo u obzir dvadesetšestogodišnji prosjek područja od 9,19 %, jasno je da je pro-

crease in the rate of out-of-wedlock births can be observed and vice versa, with the exception of a few individual years such as 1997, 2017 and 2019. In these years, a comparable increase/decrease in the number of live births and out-of-wedlock birth rates can be observed.

### Spatial differences in out-of-wedlock births

The spatial analysis of out-of-wedlock birth rates in the settlements of the two studied counties shows extraordinary diversity in the observed rates and a relatively clear regionalization of the phenomenon indicating relatively complex social genesis of out-of-wedlock births, in line with previous studies. In a relatively small area, we can simultaneously see the rates at the level of the European countries with the highest and lowest frequency of out-of-wedlock births, and the boundary of these spatial complexes is relatively clear (Fig. 3 and 4).

The area with the highest out-of-wedlock birth rates is the most pronounced area in the northeast of the studied area, which coincides with the area of the historical region of Baranja. In almost the entire area of Baranja, out-of-wedlock birth rates are more than 13%, which is approximately the average for the entire area in 2015. Looking at the 26-year average for the



Sl. 3. Stopa rađanja izvan braka u naseljima Osječko-baranjske i Vukovarsko-srijemske županije od 1995. do 2015. godine

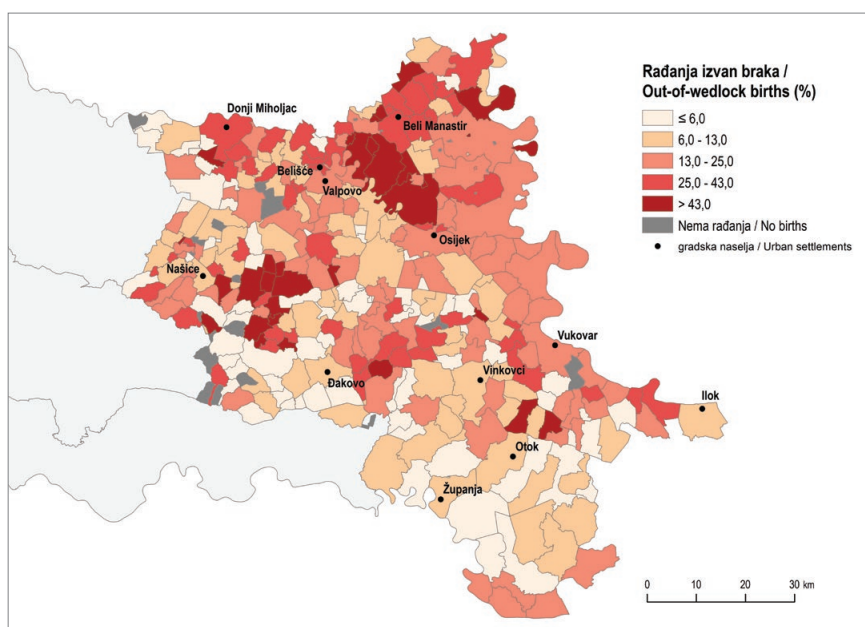
Fig. 3 Out-of-wedlock birth rates in settlements of Osječko-Baranja and Vukovar-Sirmium counties from 1995 to 2015

Izvor: DZS (2021)

Source: CBS (2021)

stor Baranje obilježen vrijednostima višim od prosjeka čitavoga promatranog područja. Za najveći broj naselja u Baranji vrijednosti su više od prosjeka za najmanje četiri postotna poena. Više od pet naselja zabilježilo je i stopu između 25,1 % i 43 %. U tu skupinu, između ostalih, ulaze naselja Darda (27,67 %), Jagodnjak (26,83 %) i Vardarac (34,56 %). Nekoliko naselja zabilježilo je i stopu iznad 43 % pa možemo reći da su se vrijednostima približila državama Sjeverne i Zapadne Europe. Iznimku od razmjerno visokih stopa izvanbračnih rađanja u Baranji predstavlja općina Draž na samom sjeveru ove povijesne i vernakularne regije. Osim naselja u općini Draž primjećuje se još nekoliko naselja s nižim stopama rađanja izvan braka, u pravilu u središnjem dijelu Baranje, po liniji sjever – jug. Osim Baranje, može se primijetiti još nekoliko prostornih kompleksa s većom učestalošću visokih stopa izvanbračnih rađanja. To je prije svega područje koje se od teritorija upravnoga grada Vukovara ljevkaasto širi prema zapadu. Taj, uvjetno rečeno, lijevak definira s južne strane Vinkovački kraj, sa zapada širi prostor Đakovštine, a na sjeveru naselja smještena južno i jugoistočno od Osijeka. Na sjeverozapadnom dijelu kompleksa nalaze se naselja općine Šodolovci, dok ga na jugozapadu definira naselje Vrbica u općini Semeljci na gravitacijskom području Đakova. Između baranjskoga

area of 9.19%, it is clear that the Baranja area is characterized by values that are above the average for the entire observed area. For most settlements in Baranja, the values are at least four percentage points above the average. More than five settlements recorded a rate between 25.1% and 43%. This group includes the settlements of Darda (27.67%), Jagodnjak (26.83%) and Vardarac (34.56%). In several settlements, the rate is above 43%, which means that the figures are close to those of northern and western European countries. An exception to the relatively high out-of-wedlock birth rates in Baranja is the municipality of Draž in the far north of this historical and vernacular region. Apart from the settlements in the Draž municipality, there are several other settlements with lower out-of-wedlock birth rates, mostly in the central part of Baranja. Apart from Baranja, several other spatial complexes with a higher frequency of out-of-wedlock high birth rates can be identified. It is an area that extends from the area of the administrative city of Vukovar in a funnel shape to the west. This funnel includes the Vinkovci area in the south, the Đakovo region in the west and the settlements south and southeast of Osijek in the north. In the north-western part of the complex are the settlements of the municipality of Šodolovci, while in the southwest it is bordered by the settlement of Vrbica in the municipality of Semeljci in the Đakovo gravitational area. Between



Sl. 4. Stopa rađanja izvan braka u naseljima Osječko-baranjske i Vukovarsko-srijemske županije od 2016. do 2020. godine

Fig. 4 Out-of-wedlock birth rates in settlements of Osijek-Baranja and Vukovar-Sirmium counties from 2016 to 2020

Izvor: DZS (2021)  
Source: CBS (2021)

i navedenoga prostornog kompleksa, uz granicu s Republikom Srbijom, visokim stopama rađanja izvan braka ističu se i naselja općina istočno od Osijeka – Erduta i Dalja. Treba reći da navedene prostorne cjeline obilježava puno manja homogenost u usporedbi s prostorom Baranje. Više stope rađanja izvan braka bilježe se i u prostoru južno i istočno od Našica te u nekim naseljima krajnjega zapadnog dijela Đakovštine. Riječ je o naseljima koja su se smjestila u prigrorskim krajevima Dilja i Krndije, a koji u demografskom smislu pokazuju vrlo slabu dinamiku. Od triju spomenutih kompleksa razmjerno viših stopa rađanja izvan braka ovaj koji vezujemo uz šire područje Našica te obronke Dilja i Krndije najmanje je homogen. Ujednačenost prekida područje grada Našica, prostor sjeverno i sjeverozapadno od Našica te diskontinuitet prema naseljima zapadnoga dijela Đakovštine.

S druge strane, mogu se izdvojiti i jasne prostorne cjeline razmjerno niskih stopa rađanja izvan braka. Radi lakše orijentacije vezani su za gradska naselja oko kojih se nalaze. Na taj su način izdvojena četiri prostorna kompleksa koji u promatranom razdoblju predstavljaju razmjerno homogena područja niskih stopa rađanja izvan braka (< 13 %). Najmanji je od njih kompleks oko grada Donjeg Miholjca, zatim prostorni kompleks oko grada Đakova koji se u većini promatranoga razdoblja nastavlja na naselja jugozapadno od Osijeka, a u pojedinim godinama obuhvaća i grad Osijek. Osim toga, s ovim je prostorom povezan i prostor naselja južno od Valpova. Na jugoistoku promatranoga područja izdvajaju se kompleksi oko Županje i Otoka u koje možemo ubrojiti i područje grada Vinkovaca. Šira područja Osijeka i Vinkovaca ne možemo izdvojiti u zasebne cjeline jer predstavljaju granična područja prema onima s relativno velikom vjerojatnošću rađanja izvan braka. To je u slučaju Osijeka prostor Baranje, a u slučaju Vinkovaca naselja sjeverno od samoga grada. Ovakvom analizom možemo ustvrditi da su Donji Miholjac, Đakovo, Županja i Otok svojevrsna žarišta niskih stopa izvanbračnih rađanja u ovom dijelu Republike Hrvatske. U svim tim gradskim naseljima, ali i širim područjima koja ih okružuju stopa oscilira oko 5 %, gotovo na razini europskih država s najnižim stopama rađanja izvan braka. Navedeni

Baranja and the aforementioned spatial complex, along the border with the Republic of Serbia, the settlements of the municipalities east of Osijek – Erdut and Dalj stand out with high rates of out-of-wedlock births. It must be said that the aforementioned spatial units are characterised by far less homogeneity compared to the Baranja region. Higher rates of out-of-wedlock births are also recorded in the areas south and east of Našice and in some settlements in the westernmost part of Đakovo. These are settlements in the Prigorje regions of Dilj and Krndija, which have very weak demographic dynamics. Of the three mentioned complexes with relatively high out-of-wedlock birth rates, the one that we associate with the wider area of Našice and the slopes of Dilj and Krndija is the least homogeneous. The uniformity is interrupted by the area of the city of Našice, the areas north and northwest of Našice and the discontinuity towards the settlements in the western part of Đakovo.

On the other hand, clear spatial units with relatively low out-of-wedlock birth rates can also be distinguished. For easier orientation, they are linked to adjacent urban areas. In this way, four spatial complexes were filtered out, which represent relatively homogeneous areas with low out-of-wedlock birth rates (less than 13%) in the observed period. The smallest of the four observed complexes is the one around the city of Donji Miholjac, followed by the spatial complex around the city of Đakovo, which, in most years of the observation period, continues to the settlements southwest of Osijek and in some years also includes the city of Osijek. This area is also connected to settlement areas south of Valpovo. In the southeast of the observation area, the complexes around Županja and Otok stand out, including the area of the city of Vinkovci. The larger areas of Osijek and Vinkovci cannot be divided into separate units, as they are border areas with a relatively high probability of out-of-wedlock births. In the case of Osijek, this is the area of Baranja, and in the case of Vinkovci, the settlements north of the city itself. With this type of analysis, we can conclude that Donji Miholjac, Đakovo, Županja and Otok are a kind of hotspot for low rates of out-of-wedlock births in this part of the Republic of Croatia. In all these urban settlements, and also in the wider area, the rate fluctuates around 5%. The aforementioned spatial complexes, which differ in



prostorni kompleksi koji se razlikuju po učestalosti rađanja izvan braka unutar svojih populacija vidljivi su i na kartama s podjelom na upravne gradove i općine (sl. 5 i 6). Usporedbom prostornoga rasporeda stopa rađanja izvan braka u razdoblju 2016. – 2020. godine vidljiv je opći trend rasta te smanjivanje naglašenih razlika između jedinica lokalne uprave i samouprave.

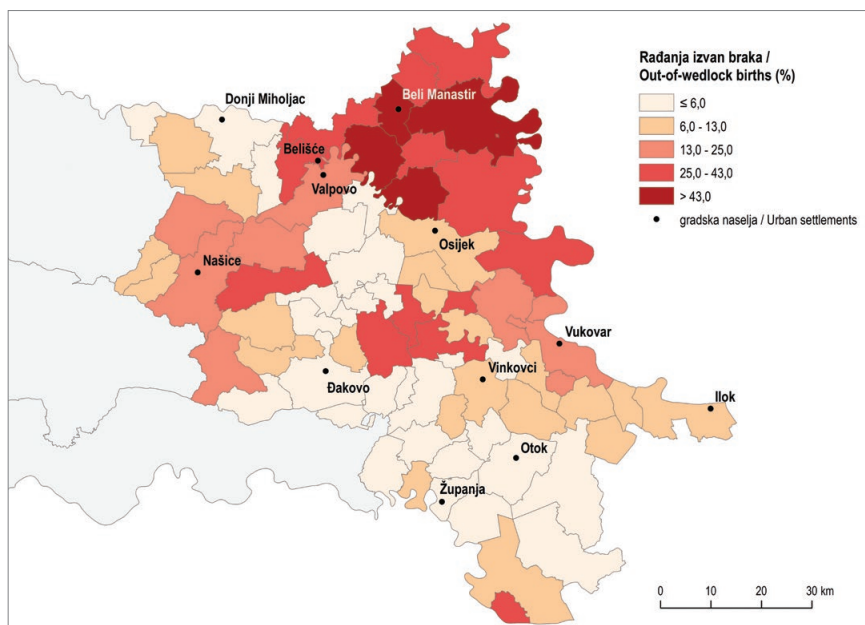
the frequency of out-of-wedlock births within their population, are also visible on the map with the division into administrative towns and municipalities (Fig. 5 and 6). Comparing the spatial distribution of out-of-wedlock birth rates in the 2016–2020 period, a general trend of growth and decline of pronounced differences between local government and self-government units can be observed.

Sl. 5. Rađanja izvan braka u upravnim gradovima i općinama Osječko-baranjske i Vukovarsko-srijemske županije od 1995. do 2015. godine

Fig. 5 Out-of-wedlock births in administrative towns and municipalities in Osijek-Baranja and Vukovar-Sirmium counties from 1995 to 2015

Izvor: DZS (2021)

Source: VCBS (2021)

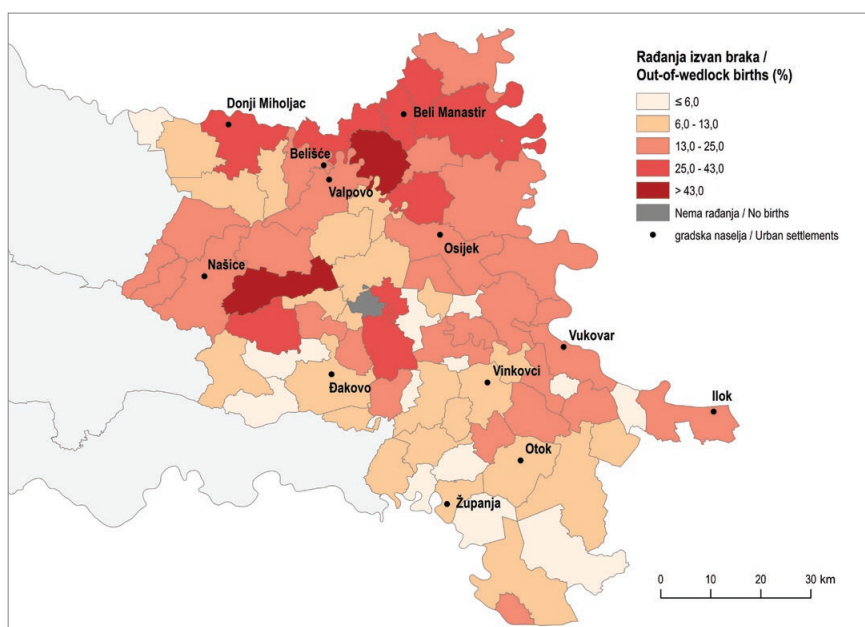


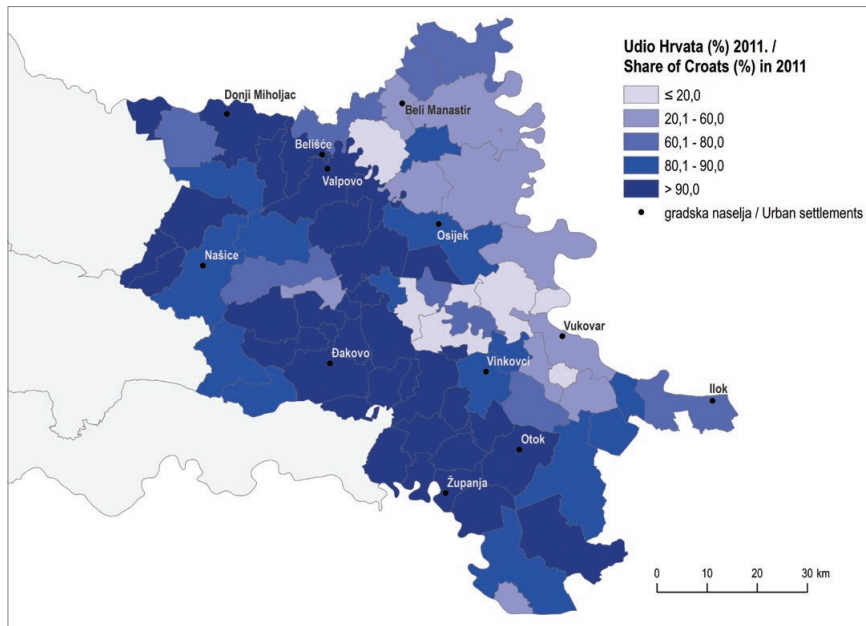
Sl. 6. Rađanja izvan braka u upravnim gradovima i općinama Osječko-baranjske i Vukovarsko-srijemske županije od 2016. do 2020. godine

Fig. 6 Out-of-wedlock births in administrative towns and municipalities in Osijek-Baranja and Vukovar-Sirmium counties from 2016 to 2020

Izvor: DZS (2021)

Source: CBS (2021)





Sl. 7. Udio Hrvata u upravnim gradovima i općinama Osječko-baranjske i Vukovarsko-srijemske županije 2011. godine

Fig. 7 Proportion of Ethnic Croats in administrative towns and municipalities in Osijek-Baranja and Vukovar-Sirium counties in 2011

Izvor: DZS (2013)

Source: CBS (2013)

S obzirom na ranije spoznaje o utjecaju etničke strukture na prostornu raspodjelu stopa izvanbračnih rađanja (Mrđen, 1997) napravljena je, na temelju podataka Popisa stanovništva 2011. godine, analiza etničke strukture na razini upravnih gradova i općina. Dovodeći u vezu etničku strukturu i stopu rađanja izvan braka, može se primijetiti da su stope izvanbračnih rađanja razmjerno više u područjima s manjim relativnim udjelom Hrvata (sl. 7). To je osobito vidljivo usporednom analizom tematskih karata.

Considering previous findings on the influence of ethnic structure on the spatial distribution of out-of-wedlock births (Mrđen, 1997), an analysis of ethnic structure at the level of administrative towns and municipalities was carried out on the basis of the 2011 census data. The link between the ethnic structure and the rate of out-of-wedlock births shows that out-of-wedlock birth rates are relatively higher in areas with a lower relative proportion of ethnic Croats (Fig. 7). This becomes particularly clear through the comparative analysis of thematic choropleth maps.

#### Odabrane odrednice rađanja izvan braka

S obzirom na ranije spomenutu složenost geneze ove društvene pojave te suprotstavljenost dviju dominantnih teorija u njezinim tumačenjima analizirana je i međusobna povezanost relevantnih odrednica izvanbračnih rađanja te stopa rađanja izvan braka na razini upravnih gradova i općina u posljednjem promatranom razdoblju od 2016. do 2020. godine. Za analizu su se koristili podatci Popisa stanovništva 2021. godine, najbližih promatranom razdoblju. Budući da prostorna analiza sugerira izvjesnu određenost prostornoga rasporeda ove pojave etničkom strukturom, u obzir su uzeti podatci o udjelu manjinskoga stanovništva, udje-

#### Selected variables of out-of-wedlock births

Given the aforementioned complexity of the emergence of this social phenomenon and the contradiction between the two prevailing theories in its interpretation, the correlation between the relevant determinants of out-of-wedlock births and out-of-wedlock birth rates was analysed at the level of administrative towns and municipalities in the last observation period: from 2016 to 2020. The 2021 census data closest to the observation period, were used for the analysis. Since the spatial analysis suggests a certain determination of the spatial distribution of this phenomenon by ethnic structure, data on the share of the minority population, the shares of the most represented national minorities (Serbs, Hun-

lima najzastupljenijih nacionalnih manjina (Srbi, Mađari, Romi, Bošnjaci i Slovaci) te broju etničkih skupina čiji je udio u ukupnom stanovništvu veći od 2,5 %.

Povezanost razine gospodarskoga i društvenoga razvoja te stopa rađanja izvan braka u općinama i upravnim gradovima promatranoga područja analizirana je s pomoću indeksa razvijenosti jedinica lokalne i regionalne uprave i samouprave, službenoga pokazatelja razvijenosti Ministarstva regionalnoga razvoja i fondova Europske unije Republike Hrvatske. U kontekstu procesa koje vezemo uz teoriju druge demografske tranzicije poput snažnije emancipacije, slabljenja kolektivnih vrijednosti i s tim povezanoga utjecaja religije u obzir su uzeti i udjeli najznačajnijih vjerskih skupina (katolici, pravoslavci, muslimani i protestanti) te udjeli agnostika i ateista koji su promatrani u zajedničkoj skupini *nereligiozni*. Za analizu međusobne povezanosti nezavisnih i zavisne varijable korištena je Pearsonova korelacija. Analiziran je odnos odrednica i stope rađanja izvan braka u promatranom razdoblju u ukupno 73 općine i upravna grada. Iako razmjerno niski koeficijenti međusobne povezanosti upućuju na vrlo složenu prirodu ove pojave na koju utječe velik broj različitih čimbenika, etničke su razlike stanovništva potvrđene kao međusobno povezane s pojavom izvanbračnih rađanja na promatranom području (tab. 2). Pri tome se ističe udio romske manjine koji je u skupu podataka najsnažnije sta-

garians, Roma, Bosnians and Slovaks) and the number of ethnic groups whose share in the total population is more than 2.5% were considered.

The relationship between the level of economic and social development and out-of-wedlock birth rates in the municipalities and administrative towns of the observation area was analyzed using the development index of local and regional government and self-government units, the official development indicator of the Ministry of Regional Development and European Union Funds of the Republic of Croatia. In connection with processes that we associate with the theory of the second demographic transition, such as greater emancipation, weakening of collective values and the associated influence of religion, the shares of main religious groups (Catholics, Orthodox Christians, Muslims and Protestants) and the shares of agnostics and atheists in common group of the non-religious were observed. The Pearson correlation was used to analyze the relationship between independent and dependent variables. The relationship between the determinants and out-of-wedlock birth rates during the observed period in a total of 73 municipalities and administrative towns was analyzed. Although the relatively low correlation coefficients indicate the very complex nature of this phenomenon, which is influenced by a large number of different factors, it was confirmed that ethnic differences in the population are related to the occurrence of out-of-wedlock births in the observed area (Tab. 2). The proportion of the Roma minority is emphasized, which is most strongly statistically significantly

Tab. 2. Statistički značajni koeficijenti međusobne povezanosti stope rađanja izvan braka (2016. – 2020.) i odabranih nezavisnih varijabli u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji

Tab. 2 Statistically significant correlation coefficients of out-of-wedlock births (2016–2020) and selected independent variables in Osijek-Baranja and Vukovar-Sirmium counties

	Nacionalne manjine / National minorities	Etnička heterogenost / Ethnic heterogeneity	Hrvati / Croats	Romi / Roma	Mađari / Hungarians	Katolici / Catholics	Nereligiozni / Non-religious	Indeks razvijenosti / Index of development
<b>Radanja izvan braka</b> / <b>Out-of-wedlock births</b>	,287* ,014	,520** ,000	-,296* ,011	,614** ,000	,258* ,028	-,260* ,026	,286* ,014	-,233* ,047

Izvor: DZS (2021)  
Source: CBS (2021)

tistički značajno povezan s pojavom (.614). Osim u slučaju Roma, slabija je pozitivna međusobna povezanost pronađena i između udjela mađarske nacionalne manjine te udjela rođenih izvan braka (.258). Za druge promatrane etničke manjinske skupine nije pronađena statistički značajna povezanost. Općenito uzevši, udio nacionalnih manjina u ukupnom stanovništvu općine ili upravna grada pozitivno je povezan s učestalošću rađanja izvan braka (.287), a negativna je povezanost utvrđena između udjela Hrvata u ukupnom stanovništvu i promatrane pojave (-.296).

Međutim, izdvojeni primjeri općina u kojima je izrazito visok udio samo jedne nacionalne manjine i u kojoj se, *de facto*, radi o etničkoj homogenosti, a imaju razmjerno niske stope rađanja izvan braka (npr. općina Negoslavci), uputile su na potrebu izdvajanja pokazatelja etničke heterogenosti. U tom je smislu izdvojen broj etničkih skupina unutar svake općine ili upravna grada čiji udio prelazi vrijednost od 2,5 %, tj. onih koje su društveno prisutne i vidljive. Unutar promatrana 73 slučaja ova se vrijednost kretala u rasponu od samo jedne etničke skupine do onih u kojima je prisutno 4 ili 5 etničkih skupina s udjelom većim od 2,5 %. Takav pokazatelj značajnije je međusobno povezan sa stopom rađanja izvan braka od udjela manjinskoga stanovništva (.520), s tim da u interpretaciji ovoga rezultata treba na umu imati činjenicu da su treća ili četvrta manjina koja prelazi utvrđenu granicu od 2,5 % ukupnoga stanovništva obično Romi ili Mađari za koje je utvrđena pozitivna međusobna povezanost sa stopama rađanja izvan braka. Udjeli nereligioznoga stanovništva (agnostika i ateista) umjereno su pozitivno povezani sa stopama rađanja izvan braka (.286), a slabije i indeks razvijenosti (.233). Zbog utvrđene povezanosti pojave s heterogenijom etničkom strukturom zasebno su analizirane one jedinice lokalne uprave i samouprave u kojima značajnu većinu čine Hrvati (više od 90 %). U takvoj je analizi obuhvaćeno 46 općina i upravnih gradova. U skupini tih jedinica lokalne uprave i samouprave nije pronađena statistički značajna veza rađanja izvan braka ni s jednom od odabranih nezavisnih varijabli.

associated with occurrence (.614) in the data set. Apart from the Roma, a weaker positive correlation was also found between the proportion of the Hungarian national minority and the proportion of out-of-wedlock births (.258). No statistically significant correlation was found for other ethnic minority groups observed. In general, the share of national minorities in the total population of a municipality or administrative town is positively correlated with the frequency of out-of-wedlock births (.287), and a negative correlation was found between the share of Croats in the total population and the observed phenomenon (-.296).

However, isolated examples of municipalities in which the proportion of a single national minority is extremely high and which are *de facto* ethnically homogeneous, and which have an extremely low rates of out-of-wedlock births (e.g. the municipality of Negoslavci), indicated the need to record indicators of ethnic heterogeneity separately. In this sense, the number of ethnic groups in each municipality or administrative town whose share exceeds the value of 2.5%, i.e. those that are socially present and visible, was singled out. In the 73 cases observed, this value ranged from only one ethnic group to those in which 4 or 5 ethnic groups are represented with a share of more than 2.5%. Such an indicator is more significantly related to the out-of-wedlock birth rates than the proportion of the minority population (.520), although in interpreting this result it should be borne in mind that the third or fourth minority exceeding the set limit of 2.5% of the total population are usually Roma or Hungarians, for whom a positive relationship with the reciprocal relationship with out-of-wedlock births has been established. The share of the non-religious population (agnostics and atheists) is moderately positively correlated with the out-of-wedlock birth rates (.286), and the index of development is weaker (.233). Due to the observed correlation of the phenomenon with a more heterogeneous ethnic structure, the local government and self-government units, in which a clear majority are ethnic Croats (more than 90%), were analyzed separately. This analysis included 46 municipalities and administrative towns. In the group of these local government and self-government units, no statistically significant correlation was found between out-of-wedlock births and any of the selected independent variables.

## Rasprava

Analiza koja je bila u fokusu ovoga rada pokazala je uočljivu prostornu diferencijaciju fenomena izvanbračnoga rađanja na relativno malom promatranom području. Uočene su regionalne razlike u učestalosti rađanja izvan braka te izdvojeni prostorni kompleksi. S jedne strane to su područja razmjerno visokih stopa rađanja izvan braka: prostor Baranje, prostor istočno od Vukovara i sjeverno od Vinkovaca te širi prostor oko Našica. S druge strane izdvajaju se donjomiholjački, đakovački, otočki i županijski kompleks kao prostori niskih stopa izvanbračnih rađanja. Područja Osijeka i Vinkovaca pokazala su se rubnima te predstavljaju prijelazno područje iz prostora niskih u prostor visokih stopa rađanja izvan braka. To je djelomično usporedivo s rezultatima Mrđen (1997) kod koje se, po višim stopama, izdvajaju bivše općine Osijek, Vukovar i Beli Manastir. Za razliku od toga istraživanja, pojavljuje se i prostor okolnoga našičkog područja kao prostor razmjerno viših stopa rađanja izvan braka.

Osim toga potvrđene su i opće demografske specifičnosti pojedinih povijesnih regija. Tako je, primjerice, Baranja i ovom analizom potvrdila svoju demografsku specifičnost. Naime, ona je najhomogeniji prostor visokih stopa rađanja izvan braka ako vrijednosti promatramo na razini naselja ili upravnih gradova/općina. To svakako možemo pripisati spomenutom specifičnom i složenom povijesno-demografskom razvoju Baranje (Šašlin, 2005). Na drugoj je krajnosti potvrđena specifičnost Đakovštine (Jukić, 2007) koja se, uz prostor oko gradova Županje i Otoka, izdvaja gotovo najjasnijom kontinuiranošću razmjerno niskih stopa rađanja izvan braka. To se posebno odnosi i na samo naselje Đakovo. Naime, ono ima najnižu stopu rađanja izvan braka u razdoblju između 1995. i 2020. godine od svih gradskih naselja ovih dviju županija. Stopa u tom razdoblju iznosi svega 4,84 %, vrijednost koju je Republika Hrvatska imala još 1975. godine u najnižim fazama kretanja ove vrijednosti. Navedeno možemo promotriti i u kontekstu viših razina fertiliteta Đakovštine u odnosu na istočnoslavonski prostor (Jukić, 2007) i uočene povezanosti viših stopa nataliteta s nižim stopama rađanja izvan braka, čime ovaj fenomen postaje nešto jasniji.

## Discussion

The analysis, which was the focus of this paper, showed a clear spatial differentiation of the phenomenon of out-of-wedlock births in the observed area. Regional differences in the frequency of out-of-wedlock births were found and spatial complexes were identified. On the one hand, these are areas with relatively high out-of-wedlock birth rates: the area of Baranja, the area east of Vukovar and north of Vinkovci, and the wider area around Našice. On the other hand, the Donji Miholjac, Đakovo, Otok and Županja complexes stand out as areas with low out-of-wedlock birth rates. The areas of Osijek and Vinkovci are marginal and represent transition areas from those with low to high out-of-wedlock birth rates. This is partly comparable to the results of Mrđen (1997), where the former municipalities of Osijek, Vukovar and Beli Manastir are highlighted as having higher rates. In contrast to that research, the surroundings of Našice represent an area with comparatively higher rates.

In addition, the general demographic characteristics of individual historical regions were also confirmed. Baranja, for example, has confirmed its demographic peculiarity with this study. It is the most homogeneous region with high out-of-wedlock birth rates if we look at the values at the level of settlements or administrative towns/municipalities. This can certainly be attributed to the particularly complex historical and demographic development of Baranja (Šašlin, 2005). On the other hand, the specificity of Đakovo was confirmed (Jukić, 2007), which, together with the areas around the cities of Županja and Otok, is characterised by an almost unambiguous continuity of relatively low out-of-wedlock birth rates. This applies in particular to the settlement of Đakovo itself. In the period between 1995 and 2020 it had the lowest out-of-wedlock birth rates of all urban settlements in these two counties. The rate in this period is only 4.84%, a value that the Republic of Croatia recorded in 1975 in the lowest phase of the development of this value. If we consider this in the context of the higher fertility (birth) rate in Đakovo compared to eastern Slavonia (Jukić, 2007) and the observed correlation between higher birth rates and lower out-of-wedlock birth rates, this phenomenon becomes somewhat clearer.

**Rađanja izvan  
braka u Osječko-  
baranjskoj i  
Vukovarsko-  
srijemskoj županiji  
od 1995. do 2020.  
godine**

**Out-of-wedlock  
births in Osijek-  
Baranja and  
Vukovar-Sirmium  
counties from 1995  
to 2020**

I trend rasta stopa rađanja izvan braka potvrđuje već utvrđene činjenice. Kao i u razdoblju do 1996. koje istražuje Mrđen (1997), ali i od 1998. do 2012. koje je istraživao Pavić (2014) stopa rađanja izvan braka i na ovom području raste. Trend je gotovo identičan, s tim da su tijekom cijeloga razdoblja stope u ovim dvjema županijama ispod nacionalnoga prosjeka. To je u skladu s dosadašnjim istraživanjima koja pokazuju da je istočni dio Republike Hrvatske ispod nacionalnoga prosjeka, osobito onaj nacionalno homogeniji dio (jug/jugozapad/sjeverozapad). Uzroke ubrzanoga rasta stopa rađanja izvan braka na promatranom području od 1995. do 2020., kao i rast stopa na cijelom području Hrvatske i Europe, teško je jednoznačno odrediti i detektirati. Kako dosadašnja istraživanja navode, riječ je o rezultatu čitavoga niza društvenih, ekonomskih, geografskih i kulturoloških čimbenika koji modificiraju ovu pojavu, a koji su objašnjeni u okviru teorije druge demografske tranzicije, ali i u njezinoj kritici.

Povezanost etničke strukture i stopa rađanja izvan braka, koja je osobito apostrofirana kod Mrđen (1997) i Pavića (2014), jasno se uočava i u ovoj analizi. Takvi nalazi proizlaze i iz analize međusobnih odnosa nekih odabranih odrednica i rađanja izvan braka. Naime, etnička je struktura promatranih naselja te općina i upravnih gradova i na ovom području povezana sa stopama rađanja izvan braka u posljednjem razdoblju, od 2016. do 2020. godine. To odgovara i široj slici koja govori da su razine stopa rađanja izvan braka dominantno kulturološki uvjetovane (Klüsener i dr., 2012) pa ovakav nalaz prostornih razlika rađanja izvan braka u Istočnoj Slavoniji, Baranji i Srijemu ne možemo tumačiti samo u kontekstu druge demografske tranzicije niti njezine kritike, već ju jasnije objašnjavamo kulturološkim razlikama. Udjeli nacionalnih manjina u ukupnom stanovništvu jedinica lokalne uprave i samouprave pokazuju slabiju povezanost od nacionalne heterogenosti, u ovoj analizi definirane brojem etničkih skupina čiji je udio u ukupnom broju stanovnika jednak ili veći od 2,5 %. Naj snažnija je međusobna povezanost rađanja izvan braka s udjelom romske nacionalne manjine uz koju posredno vezujemo i pojavu značajnije socijalne deprivacije. S obzirom na karakteristične obrasce fertiliteta među romskim stanovništvom u Hrvatskoj i Središnjoj Europi (Šlezak, 2010; Szabó i dr., 2020), a u kontekstu ranije

And the trend of the increase in out-of-wedlock birth rates confirms the established facts. As in the period up to 1996 studied by Mrđen (1997), and also in the period from 1998 to 2012 studied by Pavić (2014), out-of-wedlock birth rates are also on the rise in this area. The trend is almost identical, with rates in these two counties remaining below the national average throughout the period. This is in line with previous research showing that the eastern part of the Republic of Croatia is below the national average, especially the more ethnically homogeneous parts (south/southwest/northwest). The causes of the accelerated growth of out-of-wedlock birth rates in the observed area from 1995 to 2015, as well as the growth of rates in the entire territory of Croatia and Europe, are difficult to clearly determine. According to previous research, it is the result of a whole range of social, economic, geographical and cultural factors that modify this phenomenon, which are explained within the framework of the theory of the second demographic transition, but also in its criticism.

The connection between the ethnic structure and out-of-wedlock birth rates, which is apostrophized in particular by Mrđen (1997) and Pavić (2014), can also be clearly observed in this study as well. Such findings also emerge from the analysis of the correlations between some selected determinants and out-of-wedlock births. The ethnic structure of the observed settlements, municipalities and administrative towns in this area is also related to out-of-wedlock births in the most recent period from 2016 to 2020. This is consistent with the broader picture that levels of out-of-wedlock birth rates are predominantly culturally determined (Klüsener et al., 2012). Therefore, we cannot interpret this finding of spatial differences in out-of-wedlock births in eastern Slavonia, Baranja and Srijem only in the context of the second demographic transition or its criticism, rather we explain it more clearly with cultural differences. The share of national minorities in the total population of local government and self-government units shows a weaker correlation than national heterogeneity, which in this analysis is defined by the number of ethnic groups whose share in the total population is 2.5% or more. The strongest correlation between out-of-wedlock births and the share of the Roma national minority is indirectly linked to the occurrence of significant social disadvantage. Considering the characteristic fertility patterns of the Roma population in Croatia and Central Europe (Šlezak, 2010; Szabó et al., 2020), and in the context of the previously observed association

promotrena odnosa rađanja izvan braka i stope fertiliteta, u budućim bi analizama valjalo razmotriti jesu li opažene razmjerno visoke stope u pojedinim općinama samo posljedica pada stope fertiliteta među neromskim stanovništvom. Plastičnije predočeno, je li u uvjetima stalnoga pada stopa fertiliteta obrazac izvanbračnih rađanja među romskim stanovništvom samo postao statistički vidljiviji? Iako je u radu Mrđen (1997) srpsko stanovništvo određeno kao dominantna odrednica izvanbračnih rađanja u ukupnoj populaciji Republike Hrvatske, za promatranje se prostor u razdoblju od 2016. do 2020. godine to ne može tvrditi. Naime, međusobna povezanost udjela mađarske i romske nacionalne manjine pokazuje snažniju povezanost sa stopama rađanja izvan braka u promatranim općinama i upravnim gradovima. Jasno, utjecaj tih dviju manjina zbog njihove je manje brojnosti na nacionalnoj razini koju je Mrđen (1997) promatrala ograničen. Pavić (2014) navodi da je povezanost etničke strukture jasna, ali da njezini uzroci nisu posve jasni i dokazani. Pretpostavke idu u smjeru činjenice da pripadnici nacionalnih manjina žive u ekonomski slabijim uvjetima koji generiraju više stope promatranoga fenomena, a međusobna je negativna povezanost udjela manjinskoga stanovništva i indeksa razvijenosti pronađena i u ovoj analizi (-,433). Međutim, Pavić (2014) navodi da i u situaciji da se ekonomski čimbenik izolira nacionalne manjine i dalje imaju više stope izvanbračnoga rađanja od nacionalne većine. Zanimljivo, promatramo li odnos vjerske pripadnosti i rađanja izvan braka na promatranom prostoru, primjetna je negativna međusobna povezanost s udjelom katolika, dok međusobne povezanosti pojave s drugom najvećom kršćanskom zajednicom – pravoslavicima nema. U tom bi smislu bilo vrijedno istražiti u kojoj mjeri razlike u vjerničkim praksama i prakticiranju vjere mogu biti povezane s pojavom izvanbračnoga rađanja, osobito s obzirom na razlike vjerničkih praksi između katolika i pravoslavaca u Hrvatskoj i Srbiji (Cooperman i Sahgal, 2017). Osim kulturnoloških varijabla, utvrđena je i međusobna povezanost rađanja izvan braka u promatranim upravnim gradovima i općinama s ekonomskim varijablama (indeks razvijenosti) koje se odnose na kritiku teorije druge demografske tranzicije, ali i zanemarivo snažnije s varijablama koje joj idu u prilog (udio nereligioznoga stanovništva).

between out-of-wedlock births and fertility rates, future analyses should examine whether the relatively high rates observed in certain municipalities are the consequence of the decline in fertility rates in the non-Roma population, or has the pattern of out-of-wedlock births in the Roma population only become statistically more pronounced under conditions of constant decline in fertility rates? Although the study by Mrđen (1997) identified the Serbian population as the dominant determinant of out-of-wedlock births in the total population of the Republic of Croatia, this cannot be said for the observed area in the period from 2016 to 2020. The correlation between the share of the Hungarian and Roma national minorities shows a stronger correlation with out-of-wedlock birth rates in the observed municipalities and administrative towns. Obviously, the influence of these two minorities is limited due to their smaller numbers at the national level, as observed by Mrđen (1997). Pavić (2014) states that the correlation of ethnic structure is clear, but that its causes are not entirely clear and proven. The assumptions go in the direction that members of national minorities live in economically weaker conditions that cause higher rates of the observed phenomenon, and the negative correlation between the proportion of minority population and the development index was also found in this analysis (-0.433). However, Pavić (2014) notes that even in a situation where the economic factor is isolated, national minorities still have higher rates of out-of-wedlock births than the majority ethnic group. Interestingly, when looking at the correlation between religious affiliation and out-of-wedlock births in the observed area, there is a strikingly negative correlation with the proportion of Catholics, while there is no correlation with the second largest Christian community: Orthodox Christians. In this sense, it would be worthwhile to investigate the extent to which differences in religious practices and worship may be related to the incidence of out-of-wedlock births, especially given the differences in religious practices between Catholics and Orthodox Christians in Croatia and Serbia (Cooperman and Sahgal, 2017). In addition to cultural variables, the reciprocal relationship of out-of-wedlock births in the observed administrative towns and municipalities with economic variables (development index) is related to criticism of the theory of the second demographic transition, but also negligibly stronger with variables that support it (the proportion of non-religious population).

## Zaključak

Rađanje izvan braka u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji postaje sve učestalije, na što upućuje rast stope izvanbračnih rađanja u promatranom razdoblju od 1995. do 2020. godine. Trend rađanja izvan braka vrlo je sličan trendu na razini cijele Republike Hrvatske, ali su njegove vrijednosti u prosjeku niže. Stopa rađanja izvan braka u promatranom dvadesetšestogodišnjem razdoblju upućuje na to da su rađanja izvan braka na ovom području niža od nacionalnoga prosjeka. Štoviše, stope su usporedive sa stopama u Grčkoj, državi s najnižim stopama rađanja izvan braka u Europi. I u unutrašnjoj se strukturi promatranoga prostora uočavaju razlike. Tako, primjerice, Osječko-baranjska županija kroz gotovo čitavo promatrano razdoblje ima više stope od Vukovarsko-srijemske županije. Prostorne razlike ove pojave vrlo su naglašene. Dijelovi tih županija imaju vrijednost stopa koje su među višima u Europi, a poneka naselja i upravni gradovi/općine bilježe stope niže od najnižih europskih nacionalnih stopa. Uočena je koncentracija visokih stopa rađanja izvan braka na prostoru povijesne regije Baranje, na prostoru naselja i upravnih gradova/općina između četiriju velikih gradskih naselja – Vukovara na istoku, Vinkovaca na jugu, Đakova na zapadu te Osijeka na sjeveru. Osim u tim dvama prostornim kompleksima, više su stope zabilježene i na našičkom području. Najveća područja razmjerno niskih stopa izvanbračnih rađanja nalaze se oko grada Đakova, Otoka i Županje te na manjem području oko grada Donjeg Miholjca. Takav prostorni raspored može se povezati i s etničkom strukturom. Naime, prostori manje etničke homogenosti često su i prostori viših stopa rađanja izvan braka pri čemu je vidljiva značajnija povezanost rađanja izvan braka s etničkom heterogenošću nego s udjelom nacionalnih manjina u nekoj prostornoj jedinici. Statistički je potvrđena značajna međusobna povezanost udjela manjina i etničke heterogenosti sa stopama rađanja izvan braka, osobito u onim upravnim gradovima ili općinama s višim udjelom romske manjine koja je najznačajnije statistički povezana s promatranom pojavom. U tom se smislu dodatno treba propitati utjecaj statističke vidljivosti specifičnih obrazaca fertiliteta romske manjine uslijed općega pada fertiliteta na opći trend rasta

## Conclusion

In the counties of Osijek-Baranja and Vukovar-Sirmium, the number of out-of-wedlock births is increasing, as shown by the rise in out-of-wedlock birth rates in the observation period from 1995 to 2020. The development of out-of-wedlock births is very similar to the development at the level of the entire Republic of Croatia, but their values are lower on average. Out-of-wedlock birth rates in the observed period show that the number of out-of-wedlock births in this area is lower than the national average. Moreover, the rates are comparable to those in Greece, the country with the lowest out-of-wedlock birth rates in Europe. Differences can also be observed in the internal structure of the observed area. For example, Osijek-Baranja County had higher rates than Vukovar-Sirmium County for almost the entire observation period. The spatial differences in this phenomenon are very pronounced. Parts of these counties had rates that are among the highest in Europe, and some settlements and administrative towns/municipalities had rates below the lowest national rates in Europe. A concentration of high rates of out-of-wedlock births was observed in the area of the historical region of Baranja, in the area of settlements and administrative towns/municipalities between four large urban areas: Vukovar in the east; Vinkovci in the south; Đakovo in the west; and Osijek in the north. In addition to these two spatial complexes, higher rates were also found in the Našice area. The largest areas with relatively low out-of-wedlock birth rates are located around the cities of Đakovo, Otok and Županja, and in the immediate area of Donji Miholjac. Such a spatial arrangement can also be linked to the ethnic structure. Areas with lower ethnic homogeneity are often also areas with higher rates of out-of-wedlock births, with a more significant correlation between out-of-wedlock births and ethnic heterogeneity than with the proportion of national minorities in a spatial unit. The statistically significant correlation between the proportion of minorities and ethnic heterogeneity with out-of-wedlock birth rates is confirmed above all in those administrative towns or municipalities with a higher proportion of the Roma minority, which is statistically most strongly associated with the observed phenomenon. In this sense, the impact of the statistical visibility of specific fertility patterns of the Roma minority due to the general decline in fertility on the overall trend of the increase in out-of-wedlock births



rađanja izvan braka na promatranom istočnoslavonskom prostoru. Diferencijacija stupnja povezanosti dviju prevladavajućih kršćanskih zajednica – katolika i pravoslavaca upućuje na potrebu daljnjih analiza utjecaja vjerničkih praksi na ovu pojavu. Osim kroz kulturološku prizmu, prostorne razlike rađanja izvan braka povezane su, gotovo podjednako, s varijablama koje možemo povezati s drugom demografskom tranzicijom, ali i njezinom kritikom. S obzirom na navedeno, smjernice proizašle iz ove analize upućuju na potrebu detaljnijih uvida uzroka prostorne distribucije ove pojave, osobito u kontekstu statističke vidljivosti obrazaca fertiliteta pojedinih etničkih skupina, razvoja vrijednosti koje vezujemo uz drugu demografsku tranziciju unutar različitih etničkih i vjerskih zajednica, ali i odnosa izvanbračnih rađanja u kontekstu različitih oblika zajedništva.

in the observed area should be further investigated. The differentiation in the results between the two predominant Christian communities – Catholic and Orthodox Christian – points to the need for further analysis of the influence of religious practices on this phenomenon. Apart from the cultural prism, the spatial differences in out-of-wedlock births are almost equally related to variables that can be linked to the second demographic transition, but also to its critique. The guidelines derived from this analysis suggest that the causes of the spatial distribution of this phenomenon need to be examined more closely, especially in relation to the statistical visibility of fertility patterns of individual ethnic groups, the development of values that we associate with the second demographic transition within different ethnic and religious communities, but also the relationships between out-of-wedlock births in the context of various community forms.

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