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**FERTILITY AND RELIGIOUS BELIEF:
OLD AND NEW RELATIONSHIPS IN SLOVAKIA**

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Abstract: Religiosity has long been considered one of the most important and most consistent determining factors in fertility schedules. The general view is that religious women tend to have larger families, are less likely to remain childless and that they are more likely to choose a reproductive strategy with an above-average number of children. The aim of this paper is to analyse the relationship between women's religious beliefs and their fertility in practice based on census results for Slovakia. It aims to show not only how religiosity has influenced and continues to influence the level and character of fertility but also how the relationship has developed over time. It also aims to determine whether the example of Slovakia conforms to the well-known tendency for Catholic women to have higher fertility than Protestant women and, if so, whether the difference has widened or narrowed over time.

Key words: fertility, religiosity, reproductive behaviour, the Population Census 1930 and 2011, secularisation in Europe, Slovakia.

1. Religious belief and fertility – theoretical introduction, aims of the work and main hypotheses

Slovakia has one of the lowest levels of secularisation in Europe. The church and faith have long played a very important role in daily life in Slovak society. One area in which there has been relatively little research is the relationship between religiosity and reproductive behaviour and how this develops over time. At the same time, religiosity is considered one of the traditional explanatory factors for differences in the level and character of reproductive behaviour.

Religiosity has long been considered one of the strongest and most consistent determining factors in fertility schedules (Andorka 1982). On the other hand, European demographers rarely study religion as a determinant of contemporary demographic behaviour. As Philipov and Berghammer (2007) noted, one reason could be the secularisation observed in European countries, implying that the effect of religiosity has been diminishing. This would be confirmed by the recent demographic development include particularly in Central and Eastern Europe a dramatic decline in fertility, while on the other hand there is the increase of non-marital births, number of single persons in reproductive span, the rise of cohabitation and the diversity of cohabiting unions, the rising of divorce rates, the use of modern contraceptives, later timing of parenthood etc. (e.g. Frejka 2008; Frejka and Sobotka 2008; Sobotka and Toulemon 2008). According to Philipov and Berghammer (2007) it might seem, that rise of these trends implies that religion may have lost its impact on demographic behaviour. It would be confirmed by the assumption of Lesthaeghe and Surkyn (1988) which considers secularisation and individualisation as the two most important signs of the ideational shifts in European societies in last few decades. Secularisation was a necessary condition for the rise in individualisation as it brought about a release of the norms and restrictions that originated in rules and rites set by the churches (Philipov and Berghammer 2007: 272).

Although the secularization paradigm assumes that the influence of religion on individual behaviour will diminish over time, many research (e.g. Adsera 2006; Peri-Rotem 2006; Philipov and Berghammer 2007; Sobotka and Adigüzel 2002, Zhang 2008) found that religious affiliation and practice continue to be important determinants of fertility and family formation patterns. According to Peri-Rotem (2006) in Western Europe religious differences in completed fertility and the transition to first birth are explored across cohorts of women. In addition, a longitudinal analysis is employed to examine the influence of religion on subsequent childbearing. It has been studied not only the influence of religion on fertility, but also differences in fertility between religions.

Earlier work (e.g. Freedman et al. 1959; Ryder and Westoff 1971; Andorka 1982; Whelpton et al. 1966) suggested that the highest fertility

was and is found amongst women who belonged to Roman Catholicism or other churches in the Catholic Communion. A lower average number of children was found in Protestant denominations and the lowest fertility in Judaism (except for Orthodox movements). More recent studies have found that the differences in fertility between Catholics and other faiths were shrinking and that the fertility of Protestants could even have overtaken it (Frejka and Westoff 2008). It is thought that these differences are closely related to the fact that the (Roman) Catholic Church officially condemns the use of any form of birth control (except for the rhythm method and sexual abstinence) and has a positive attitude to large families with numerous offspring (Andorka 1982).

Higher fertility among Catholics was attributed also to education and income differences between Catholics and Protestants, and to the prominent place of churches and Catholic schools in Catholic communities (Sherkat and Ellison 1999; Westoff and Bumpass 1973; Westoff and Jones 1979).

On the other hand the Protestant churches do not see anything immoral in the use of birth control and leave it up to parents how many children they want to have. It is even considered inadvisable for parents to have more children than they can properly care for (Lenski 1961). Judaism has not special teachings on contraception or the number of offspring. Besides the type of belief, research has also studied the degree or depth of belief and it is clearly the case that “the stronger the faith” the higher the fertility, especially in the case of Roman Catholics (Heineck 2006; Hacker 1999; Adsera 2006). It should be noted that stronger faith in a religion often means stricter conformity with its main principles and commandments and firmer identification with its framework of values and standards, including teachings particularly relating to reproduction (Andorka 1982). Religions, more than other social institutions, are strongly associated with moral codes aimed at influencing the behaviour of individuals and several are especially concerned with issues related to sexuality, male and female roles and the place of the family in society (McQuillan 2004).

Hayford and Morgan (2008) showed that women who reported that religion is “very important” in their everyday life have both higher fertility, higher intended fertility and have more traditional gender and family attitudes than those saying religion is “somewhat important” or “not important.” Similarly, Philipov and Berghammer (2007) find that all measures of religiosity are in general related to a higher ideal number of children, higher odds to intend another child and higher expected and actual number of children. Berghammer (2012) showing that church attendance is a strong predictor of future childbearing.

On the other hand, Růžicková a Hamplová (2016) warn that the relationship between religious belief and fertility has not been completely clearly defined because the generally accepted premise that religion

promotes a higher birth rate does not always hold. Several studies have pointed to a weakening influence of religiosity on fertility (e.g. Sobotka and Adiguzel 2002) and shrinking differences in the fertility schedule of different religions (e.g. Mosher and Hendershor 1984; Westoff and Jones 1979; Zhang 2008).

In the foreign literature, a total of four basic explanatory principles have been developed for the relationship between religiosity and fertility (McQuillan 2004). The foundations were laid in a classic analysis by Calvin Goldscheider (1971) and works following it (e.g. Goldscheider and Mosher 1991). The *particularized theology hypothesis* views differences fertility as the result of differences in specific doctrines between religions. In this approach, women who follow a religion whose doctrines are opposed to contraception and abortion and favour large families should have higher fertility. On the other hand, women who follow religions without such doctrines should have lower fertility. The second hypothesis is the *characteristics hypothesis*, concerning the characteristics of the members of a particular religion. This argues that the differences in fertility schedules between religious groups are not the result of differences in religious doctrine but reflect the different demographic and socioeconomic structures of each religion's membership, which are also reflected in differences in reproductive behaviour. The rule is that if these structural variables are controlled for, the differences in fertility schedules between religious groups should disappear or be minimal. The third hypothesis is the *minority group status hypothesis*. This assumes that the prevailing uncertainty of members of religious minorities reduces their fertility below the average of the majority. The conditions for the application of this hypothesis include acculturation, socioeconomic mobility and the non-existence of natalist ideologies and norms (Goldscheider 1971). Minority religious groups face obstacles to their full social and economic integration with majority society and one of the ways to limit this effect is to reduce their fertility (McQuillan 1971). The final hypothesis is the *interaction hypothesis*, which highlights the role of social interaction in shaping reproductive behaviour. It hypothesises that religious institutions are the main source of social interaction through which members of the religious group receive the group's doctrines and members' reproductive behaviour is influenced. From this point of view, it is evident that this approach is consistent with the theory of social networks (Kohler 2001; Kohler and Bühler 2001) and the diffusion of innovations theory (Rogers 2003), which emphasise the role of interaction in the formation of reproductive behaviour and the diffusion effect in the spread of family planning.

The paper aims to analyse differences in women's fertility in Slovakia based on religion. It also analyses the number and timing of women's childbirths to identify the main causes of any differences. A no less important aim is to answer the question of whether identified differences

persist over time or whether increasing secularisation since the Second World War has given rise to a convergence trend not only between religious and non-religious women but also between the different religions.

The theoretical framework gives reason to expect that there has long been a close relationship between religious belief and fertility in Slovakia. It is hypothesised that religious women had a higher total fertility than women with no religion. At the same time, it is hypothesised that these differences were larger in older generations and that in younger generations they have grown smaller. It is further hypothesised that the general observation will be upheld that Catholic women have higher fertility than Protestant women, but that there will also be convergence trend in this case.

2. Data and methodology

Population change in Slovakia has not been adequately mapped for the larger part of the nineteenth century and first two decades of twentieth century. There are problems with both the character and potential use of the existing sources and with the state of research in Slovak historical demography. The very important source of data for our aims is the interwar Czechoslovak census in 1930, which reported the number of children born to married women in their last marriage with combination of religiosity. This data could be applied to analyse the fertility of women from a longitudinal perspective. It has been for a long time the last census that allows us such differential analysis because after the Communist Party took power religious belief was not included in the official demographic data. After the collapse of the Communist bloc, religiosity once again got among the data surveyed in population censuses. In order to analyze the current relationship between religiosity and fertility, as well as the differences in fertility between religions, we used the data from the latest population census 2011.

We used the data obtained in censuses 1930 and 2011 to conduct a detailed cohort analysis of fertility changes focusing on the development of cohort completed fertility (the average number of children born to women belonging to the same *cohort*), as well as intergenerational changes in the structure of women by number of children (parity). We used modified version of Hajnal methodology (1953) applied by Booth (2001) to compute *mean age at first birth* (MAFB). In our case, the method is based on the childless woman / woman with at least one childbirth dichotomy derived from census data. As Booth (2001) noted, MAFB is a valuable application, especially where birth history data are lacking. This is also our case, therefore we calculated mean age at first birth from proportions nulliparous.

3. The structure of religion in Slovakia and some characteristics of religious groups

The population structure of Slovakia based on religion is the result of long historical developments. The first historical data on differences in fertility based on religion date from the period between the wars (1930) and show a predominance of Roman Catholics making up more than 70% of the population with another four significant minority groups. The largest of these was the Evangelical Church of the Augsburg Confession (Lutherans) with 12% of the population followed by the Greek Catholics with around 7% and Jews and the Reformed Church (Calvinists) each having over 4%. The number of persons reporting no religion at that time was small, just over 17,000, and represented 0.5% of the population. From the end of the Second World War until the end of the 1980s religious belief was included in the census only in 1950 but the published results were not combined with the number of children born and so it was not possible to use them to analyse differences. After the Communist Party took power, one of its priorities was to eliminate the influence of the churches and gradually exclude them from society. Active engagement in religious life could have very negative consequences for individuals' personal lives. Despite these efforts to intensify the secularisation process, Slovakia remained one of the European countries where the population had a high level of religiosity (Greeley 2002).

The results of the most recent census in 2011 showed that the religious makeup of Slovakia had undergone some degree of change. The Second World War and developments since meant that the Jewish minority had almost completely disappeared. Secularisation may not have reached the levels of some other European countries but even so the number of people with no religion had increased. In the most recent census in 2011, around 725,000 people classified themselves as such, making up just over 13% of Slovakia's total population. Another important aspect was the relatively large number and proportion of respondents who gave no answer to the question of religious belief. In the 2011 census more than 571,000 respondents chose not to answer, which was nearly 11% of the population. The dominant religion remained the Roman Catholic Church, with 3.3 million declared members or 62% of the population. In second place was the Evangelical Church of the Augsburg Confession with over 316,000 members (nearly 6%) followed by Greek Catholics (nearly 207,000 members, 3.8%). Other religious groups had less than 100,000 members: the Reformed Church (just under 99,000, nearly 2%) and the Orthodox Church (over 49,000 members, just fewer than 1%). The results of the last census in 2011 thus show a relatively high level of

religiosity in the Slovak population because more than three quarters of the population declared membership of a religious group.

The census also provided information relevant to the characteristics hypothesis in the form of data on believers' and non-believers' places of residence and other demographic data (age, family status, education, nationality and economic activity). The link to place of residence shows that members of the Orthodox and Greek Catholic churches are more likely than members of the other mentioned religions to live in small communities. A high representation in smaller communities in Slovakia is also the case of Reformed Protestants. In the other studied religions, there was an approximately equal balance between urban and rural communities. Women of Slovak nationality were predominant in nearly all religions. The main exception is the Reformed Church, whose members are mostly of Hungarian nationality. Members of the Orthodox Church were more likely to declare Ukrainian or Ruthenian nationality (Janto, 2016, 2017). The oldest membership is in the two Protestant churches. The youngest population by a clear margin is in the group of persons with no religion. The differences in age structure are also reflected in the structures for family status, education, economic activity and economic status. In terms of family status, all the studied religious groups were predominantly made up of people living in marriage. The proportion was lowest among women with no religion, where single people and divorcees also made up significant groups. People were more likely to be widowed in the religions with older age structures (the Protestant churches). In terms of education structure, persons with no religion had an above average number of graduates of higher and secondary education. The members of the Evangelical Church of the Augsburg Confession also had a higher education profile. On the other hand, women belonging to the Reformed church tended to have a less favourable structure for level of education achieved. The largest share of working persons and the lowest share of unemployed and retired persons was found among persons with no religion. The lowest proportions of working persons were in the Orthodox and Greek Catholic churches.

This clearly shows that Slovakia has long had a relatively heterogeneous religious structure in its population, in which a high level of religiosity has survived through significant historical changes. At the same time it must be noted that there are clear differences between the religious groups in certain important demographic factors and these could have a significant effect on the final level and character of cohort fertility in accordance with the characteristics hypothesis.

4. Religiosity and women's fertility

As we mentioned above, we expected in long term period that religious women had a higher total fertility than women with no religion in Slovakia. On the other side we assume that these differences were larger in older generations.

One of the fundamental changes in the reproductive behaviour of the population of Slovakia at the end of the nineteenth century and first half of the twentieth century was the start and gradual advance of the demographic transition (e.g. Fialová et al. 1990, Šprocha and Tišliar 2017). It took place significantly later than in most countries in western and northern Europe. Therefore, according to the population census 1930 the cohort fertility rate of women at the end of their reproductive span still regularly reached levels of 5 and above and women with 5 or more children constituted over one half of the Slovak female population.

At the start of the 1930s, the number of persons in Slovakia with no religion was very small and made up a tiny fraction of the population. In a heavily Catholic environment, they made up a specific group of women, as was reflected in their fertility schedule. Overall, women with no religion had significantly fewer children on average than religious believers in every age group except the youngest (under 25 years). The difference also increased with age. For example at age 30–39 years, there were approximately 1.6–1.7 children per woman without religion and 3.0–3.6 children per religious woman (Fig. 1). The significant differences in cohort fertility between religious and non-religious women was mainly the result of large numbers of religious women with four or more children (Fig. 2.) These were clearly predominant in the 35–39 years age group and at the end of reproductive age. Religious women with four or more children made up more than half of the whole cohort. In the case of non-religious women such women were the largest group only at age 45 years and over. Overall, women with no religion were more likely to remain childless and tended to choose a family model with one or two children, which was a non-typical reproductive strategy in the Slovak population of that period. In addition to showing higher fertility of religious women and their tendency to have children at a younger age, the census data also shows that they commenced reproduction earlier. For example, while more than a quarter of women with no religion remained childless at age 25–29 years, the percentage for religious women was less than 14%. This is also confirmed by the mean age at first birth. The MAFB value among religious women reached about 19 years and for non-religious women it was almost 22.5 year.

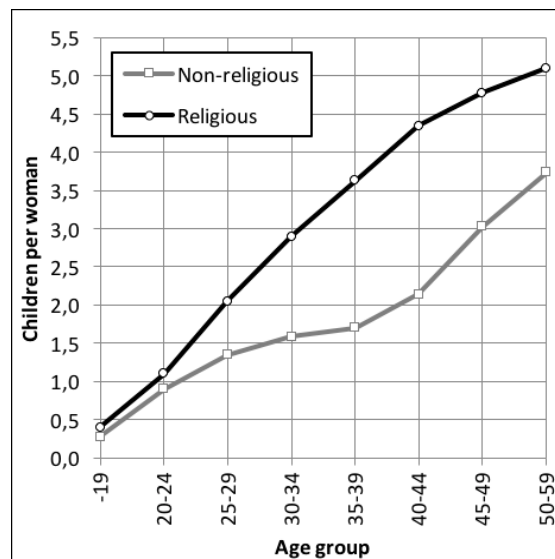


Fig. 1: Mean number of children ever born to religious and non-religious women in Slovakia, The Population Census 1930

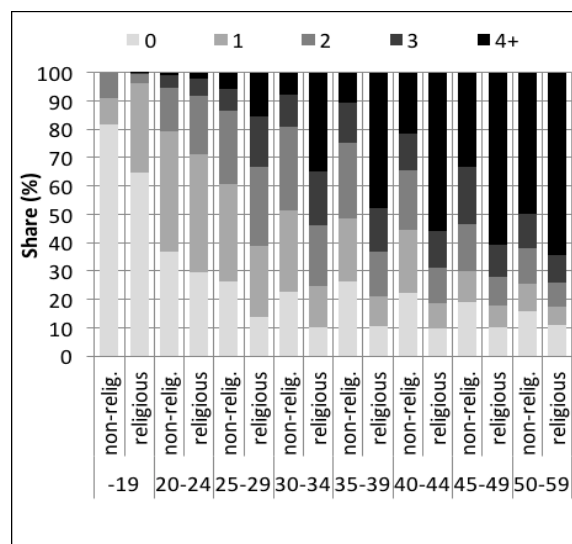


Fig. 2: Religious and non-religious women by age and number of children ever born in Slovakia, The Population Census 1930
Source of data: Population Census 1930, authors' calculations

The second important hypothesis was that Catholic-Protestant fertility differential is universally observable in Slovak society and there can be identify the convergence trend in time.

A comparison of the differences between religions shows that the highest fertility was clearly in the Greek and Armenian Catholic churches (Fig. 3). At the end of the reproductive age there were approximately 5.5

children per woman. Completed fertility was only slightly lower amongst women belonging to the Roman Catholic church. The mean number of children ever born to the Roman Catholic women at age 45–49 years reached five children. The completed fertility of Protestant and Jewish women was significantly below Slovakia's national and Catholic's average. These women had on average less than 4.5 children at the end of their reproductive life.

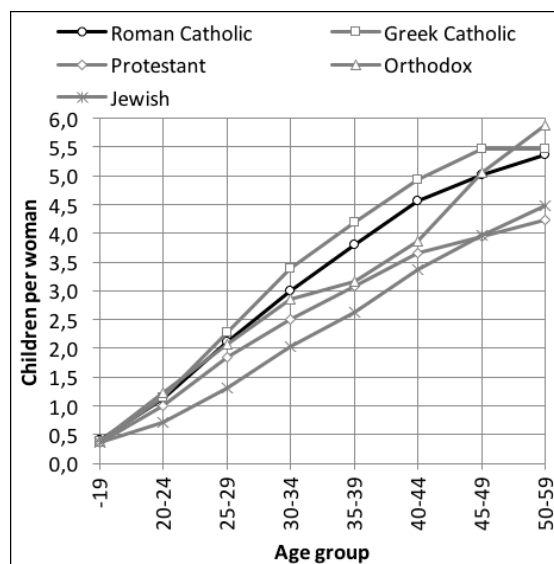


Fig. 3: Mean number of children ever born to women by religiosity and age group in Slovakia, *The Population Census 1930*
Source of data: Population Census 1930, authors' calculations

The structure of women by number of children shows that Catholic's women (especially Greek and Armenian Catholic) also had a clear tendency towards more numerous offspring (see Fig. 4). On the other hand Protestants and Jewish women were more likely to prefer a two-child model and also had higher proportions of women without children and women with just one child (compare the columns Fig. 4). Fig. 4 also confirmed the differences in the beginning of reproduction among religious groups. The lowest mean age at first birth had Catholic's women. For Greek and Armenian Catholic it was only 18.7 years and for Roman Catholic only a little bit higher 18.8 years. On the other side, Jewish women postpone their motherhood until they were almost 22 years old.

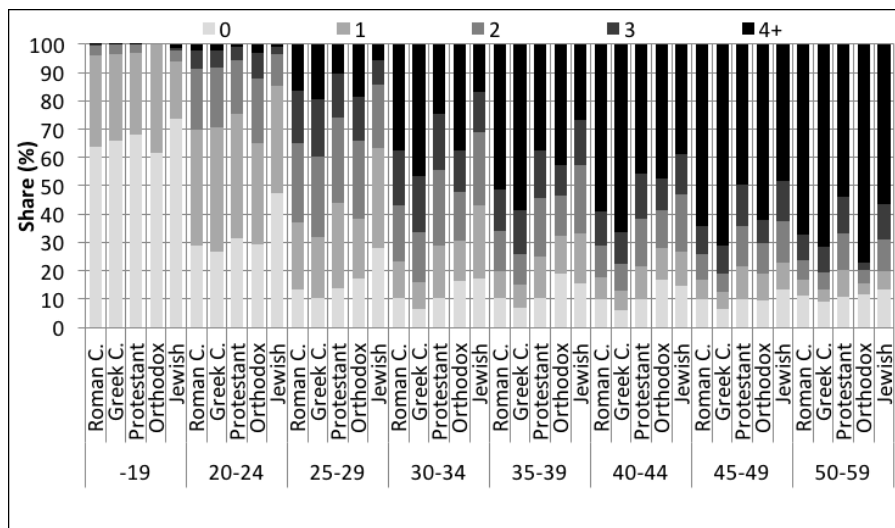


Fig. 4: Women by religiosity, age and number of children
ever born in Slovakia, The Population Census 1930

Source of data: Population Census 1930, authors' calculations

The results from the last census in 2011 confirm that religious women in Slovakia are continuing to be more fertile than women with no religion. While the average number of children born to one religious woman aged 45–60 years was 2.4–2.8, the average for women with no religion was already less than 2 children per woman (Fig. 5). These findings confirm the hypothesis that religious women continue to have higher fertility and the hypothesis of gradual convergence in fertility between religious and non-religious women. In both groups it is possible to observe an intergenerational decrease in cohort fertility and this trend is faster on the side of religious women.

Figures 7 and 8 show that religious believers in Slovakia continue to have, on the whole, larger families and lower rates of childlessness or one-child families than women without religion, who show an evident preference for the two-child family model. At the same time there is an evident decrease from generation to generation in the proportion of women with a larger number of children, which was one of the main reasons for the overall decrease in fertility and the narrowing of the gap in fertility between the religious and non-religious. On the other hand the population and housing census 2011 pointed to the still-prevailing early motherhood of religious women. However, the significant changes in fertility timing after 1989 caused that the mean age at first birth already reached almost 27,8 years. For non-religious women the MAFB was almost 30 years.

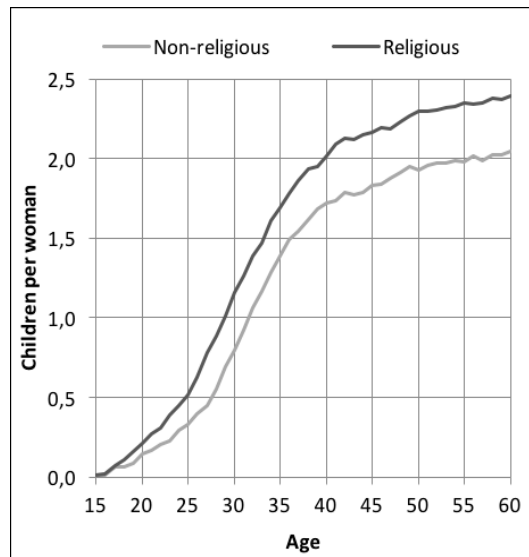


Fig. 5: Mean number of children ever born to religious and non-religious women in Slovakia, The Population and Housing Census 2011

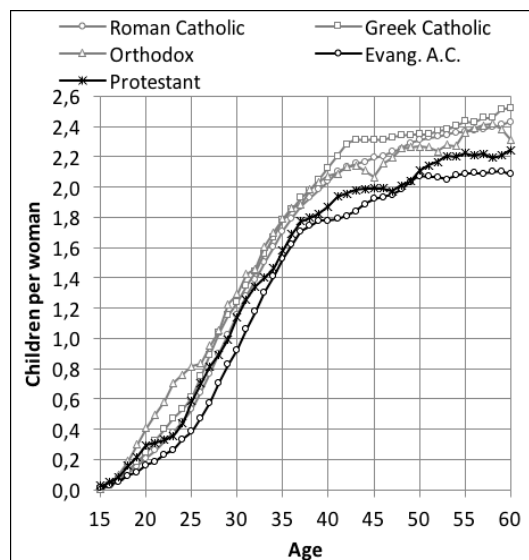


Fig 6: Mean number of children ever born to women by religiosity and age group in Slovakia, The Population and Housing Census 2011

Source of data: Population Census 2011, authors' calculations

The results of the 2011 census also confirmed the continuation of certain differences in fertility between the studied religious groups. With some degree of generalisation, it can be said that in the 21st century Protestant and women belonging to the Evangelical A.C. continue to have a smaller number of children on average than Roman Catholics and women declaring membership of the Orthodox or Greek Catholic churches

(see Fig. 6). At the same time there continued to be a convergence trend in cohort fertility between the religions, which confirmed the preliminary hypothesis of shrinking differences in the average number of children between women of different religions. The main cause of this development is the decrease in the proportion of women with large numbers of children in the Catholic religions and the gradual transition to a two-child family model in all denominations (see Fig. 9). On the other hand, despite the significant increase in the mean age at first birth, there remained relatively large differences in the timing of maternal starts. The lowest value of the MAFB (26.2 years) reached Orthodox women and the longest postponement of motherhood was identified in Evangelical A.C. women (28.9 years). In general, it was also true that Catholic women had their first children earlier than Protestant.

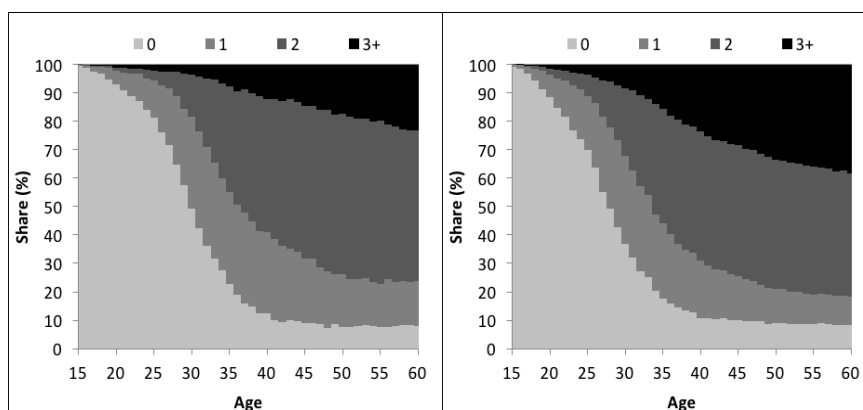


Fig. 7 and 8: Religious and non-religious women by age and number of children ever born in Slovakia, The Population and Housing Census 2011

Source of data: Population Census 2011, authors' calculations

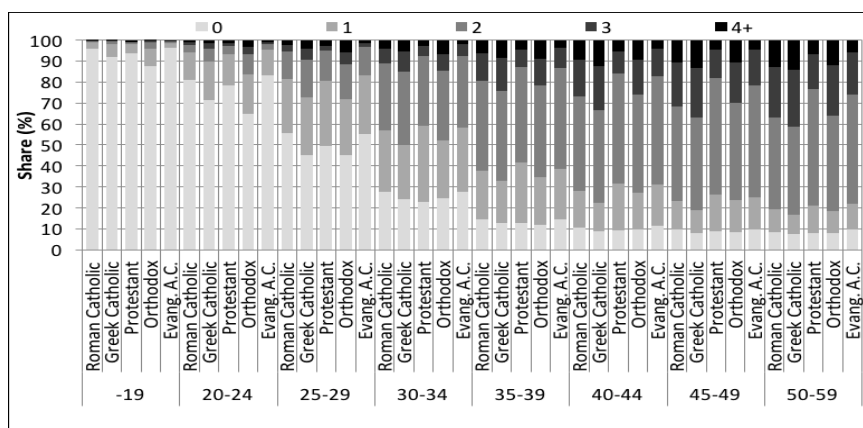


Fig. 9: Women by religiosity, age and number of children ever born in Slovakia, The Population and Housing Census 2011

Source of data: Population Census 2011, authors' calculations

5. Conclusion

A detailed analysis of total fertility and the number and timing of women's childbirths as related to religion confirmed the existence of a positive relationship. It was found that in Slovakia women without religion had and have smaller families, lower fertility and a greater probability of a childless or one-child family. At the same time, the study confirmed the hypothesis of narrowing differences in fertility between the religious and non-religious. The main cause is the gradual, intergenerational shift towards two-child families, which has become the dominant reproductive model regardless of religiosity. Despite this convergence trend, there continue to be differences in cohort fertility between religions.

The present research has shown that there is greater fertility amongst women belonging to the Orthodox, Greek Catholic and to some extent also the Roman Catholic churches. At the other end of the scale, the lowest average number of children per woman are found in the Protestant churches. The cause of this state of affairs can be found primarily in the structure of women's childbirths. While the first three religions mentioned above include more women with three or more children, the Protestant churches are already dominated by the two-child family model with an above average number of one-child families. The differences in rates of childlessness were negligible and reflect the strong expectation of maternity that dominates the whole of Slovak society regardless of women's religious belief. The development of total fertility and the structure of women's childbirths also confirmed the hypothesis of the narrowing of differences in total fertility between religious groups.

The differences observed in total fertility and the structure of the number of women's childbirths between religious believers and women without religion, and also between religions are probably caused by a combination of factors in Slovakia. An in-depth analysis has shown that there are only negligible differences between religious believers and people without religion in the important differentiating demographic factors such as education, family status, economic activity and place of residence that are generally considered important factors determining the intensity and character of reproduction. At the same time, religious groups in Slovakia are relatively strongly segregated by geography and to some extent by ethnicity and they preserve specific standards and values associated with reproductive behaviour. The social networks created by individual believers are a strong mechanism of social interaction through which members are "controlled" and receive their fundamental outlook on family and reproductive life. The results reported in this paper show that the effect of these factors on fertility in Slovakia is weakening and

that there is a pronounced convergence between religious groups in terms of the number of children born and the structure of women's childbirths. Moreover, religiosity appears to be losing its strength as a strong differentiating factor in reproductive behaviour.

References:

- Adsera, Alícia. "Marital Fertility and Religion: Recent Changes in Spain, 1985 and 1989." *Population Studies*, 60, no. 2 (2006): 205–221.
- Anderson, Barbara. A. "Regional and Cultural Factors in the Decline of Marital Fertility in Europe." In: A. J. Coale – S.C.Watkins (eds.) *The Decline of Fertility in Europe*. Princeton: Princeton University Press, (1986): 293–313.
- Andorka, Rudolf. "La prévention des naissances en Hongrie dans la région Ormánság depuis la fin du XVIIIe siècle." *Population*, 25, no. 1, (1971): 63–78
- Andorka, Rudolf and Sandor Balazs-Kovács. "The Social Demography of Hungarian Villages in the Eighteenth and Nineteenth Centuries (With Special Attention To Sárpilis, 1792–1804)." *Journal of Family History*, 11, no. 2 (1986): 169–192.
- Berghammer, Caroline. "Church attendance and childbearing: Evidence from a Dutch panel study, 1987–2005." *Population Studies*, 66, 2, (2012): 197–212.
- Booth, Helen. "Trends in mean age at first marriage and first birth intervals in the Pacific Islands." *Genus*, LVII, 3–4, (2001): 165–190.
- Fialová, Ludmila, Pavlík, Zdeněk, Vereš, Pavel. "Fertility Decline in Czechoslovakia During the Last Two Centuries." *Population Studies*, 44, no. 1, (1990): 89–106.
- Frejka, Tomas and Charles, F. Westoff. "Religiousness and Fertility in the US and in Europe." *European Journal of Population*, 24, (2008): 5–31.
- Frejka, Tomas. "Birth regulation in Europe: Completing the contraceptive revolution." In: T. Frejka, T. Sobotka, J.M. Hoem, L. Toulemon (eds.) *Childbearing Trends and Policies in Europe. An Overview. Demographic Research*, 19, (2008): 73–84.
- Frejka, Tomas, Sobotka, Tomas. "Fertility in Europe: Diverse, delayed and below replacement." In: T. Frejka, T. Sobotka, J.M. Hoem, L. Toulemon (eds.) *Childbearing Trends and Policies in Europe. An Overview. Demographic Research*, 19, (2008): 15–46.
- Goldscheider, Calvin. *Population, Modernization, and Social Structure*. Boston: Little, Brown and Company, (1971).
- Goldscheider, Calvin and William D. Mosher. "Patterns of contraceptive use in the United States: The importance of religious beliefs." *Studies in Family Planning*, 22 (1991): 102–115.
- Greele, Andreew. M. *Religion in Europe at the end of the second millenium: A sociological profile*. Transaction Publishers, (2002).

- Hacker, David. C. "Child Naming, Religion and the Decline of Marital Fertility in nine-teenth Century America." *The History of the Family*, 4, no. (3) (1999): 339–365.
- Hajnal, John. "Age at marriage and proportions marrying." *Population Studies*, 7, (1953): 111–132.
- Hayford, Sarah, R., Morgan, Philip, S. "Religiosity and Fertility in the United States: The Role of Fertility Intentions." *Social Forces*, 86, no. 3, (2008): 1163–1188.
- Heineck, Guido. The relationship between religion and fertility: Evidence for Austria. Granada: University of Granada, Department of Economic Theory and Economic History (Papers on Economics of Religion 06/01) 2006.
- Janto, Juraj. "Salašný chov oviec v Detve a na Slovensku". *Muzeológia a kultúrne dedičstvo* 4 (2) (2016): 95–106.
- Janto, Juraj. "Slovenské bryndziarstvo a vegačovská výroba v Detve. K 230. výročiu vzniku prvej bryndziarne". *Muzeológia a kultúrne dedičstvo* 5 (2) (2017): 51–59.
- Kohler, Hans-Peter. *Fertility and Social Interaction. An Economic Perspective*. Oxford: Oxford University Press, (2001).
- Kohler, Hans-Peter and Christoph Bühler. Social Networks and Fertility. In: N.J. Smelser, and P.B. Baltes (eds.). *International encyclopedia of the social & behavioral sciences*. Oxford: Pergamon, (2001): 14380–14384.
- Lehrer, Evelyn, L. "Religion as a Determinant of Economic and Demographic Behavior in the United States." *Population and Development Review*, 30, (2004): 707–726.
- Lenski, Gerhard. *The Religious Factor: A Sociological Study of Religion's Impact on Politics, Economics and Family Life*. New York: Doubleday, (1961).
- Lesthaeghe, Ronald, Surkyn, Johan. "Cultural dynamics and economic theories of fertility change." *Population and Development Review* 14, 1, (1988): 1–45.
- Livi-Bacci, Massimo. *Social-Group Forerunners of Fertility Control on Europe*. In: A. J. Coale – S.C. Watkins (eds.) *The Decline of Fertility in Europe*. Princeton: Princeton University Press, (1986): 182–200.
- Mcquillan, Kevin. "When Does Religion Influence Fertility?" *Population and Development Review*, 30, no. 1, (2004): 2–56.
- Mosher, William D., Hendershot, Gerry E. "Religion and Fertility: a replication." *Demography*, 21 no. 2, (1984): 185–191.
- Peri-Rotem, Nitzan. "Religion and Fertility in Western Europe: Trends Across Cohorts in Britain, France and the Netherlands." *European Journal of Population*, 32, (2016): 231–265.
- Philipov, Dimiter, Berghammer, Caroline. "Religion and fertility ideals, intentions and behavior: A comparative study of European countries." *Vienna Yearbook of Population Research*, 5, (2007): 271–305.
- Rogers, Everett. *The Diffusion of Innovations*. New York: Free Press, (2003).

Růžičková, Markéta and Dana Hamplová. "Analýza vztahu náboženského vyznání a plodnosti ve sčítání lidu 2011 (se zařazením vlivu dalších proměnných)." [Analysis of religion and fertility in the 2011 census (including the influence of other variables)]. *Demografie*, 58, (2016): 213–229.

Ryder Norman B, Westoff Charles F. *Reproduction in the United States: 1965*. Princeton, NJ: Princeton University Press, (1971).

Sherkat, Darren E, Ellison Christopher G. "Recent Developments and Current Controversies in the Sociology of Religion." *Annual Review of Sociology*, 25, (1999): 363–394.

Sobotka, Tomáš and Feray Adigüzel. *Religiosity and Spatial Demographic Differences in the Netherlands*. Groningen: University of Groningen, (2002).

Sobotka, Tomas, Toulemon, Laurent. "Determinants of family formation and childbearing during the societal transition in Central and Eastern Europe." In: T. Frejka, T. Sobotka, J.M. Hoem, L. Toulemon (eds.) *Childbearing Trends and Policies in Europe. An Overview*. *Demographic Research*, 19, (2008): 139–170.

Šprocha, Branislav, Tišliar, Pavol. "Some Remarks on the Fertility Transition in Slovakia in the Early 20th Century." *Demografie* 59 (4) (2017): 287–302.

Westoff, Charles F, Bumpass Larry. "The revolution in birth control practices of U.S. Roman Catholics." *Science*, 179, no. 4068, (1973): 41–44.

Westoff, Charles, F., Jones, Elise F. "The end of Catholic fertility." *Demography*, 16 no. 2, (1979): 209–217.

Whelpton Pascal K, Campbell Arthur A, Patterson John E. *Fertility and Family Planning in the United States*. Princeton, NJ: Princeton University Press, (1966).

Zhang, Li. "Religious affiliation, religiosity, and male and female fertility." *Demographic Research*, 18, no. 8, (2008): 233–262.