

LATE AGE-SPECIFIC FERTILITY PATTERNS IN SELECTED EUROPEAN UNION MEMBER AND CANDIDATE COUNTRIES

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Abstract

Age-specific fertility patterns had changed tremendously during the process of demographic transition in Europe. However, human fertility is still mainly concentrated in the female group of the 20 – 34 years of age. Women and couples tend to limit fertility in marginal age groups of female's reproductive period. In this paper the author addresses late age-specific fertility patterns in selected European Union member and candidate countries. Age – specific fertility rates are relatively low after the age of 35 in the countries with modern demographic regime. These rates show very low fertility in the age group 40 – 44 years and only exceptional childbearing in the age group 45 – 49 years. In contrast, the age group 35 – 39 years is not only dynamic but also still important for the procreation. In general, total late fertility was higher in 1960 than in 2007 in majority of European countries. More specifically, late age – specific fertility considerably decreased in the period 1960 – 1985 in most of the countries analysed in the paper. However, toward the end of that period in some countries discontinuities and turnarounds in the prevalent tendency became evident. It seems that postponement of childbearing has been the most prominent feature of these changes in more advanced countries in recent decades. The other countervailing process was the slimming of the late age – specific fertility rates as a consequence of the higher birth order parities decline. For-runner countries with considerable recent increase of the late age – specific fertility in Europe are still not many. However, further increase in total late fertility in most of Europe is likely, Eastern Europe and EU candidate countries included. But in general, late age – specific fertility will very likely retain more or less marginal share of total fertility in the countries with modern demographic regime.

1. Introduction

It is well known that Europe was a cradle of industrial revolution and modern economic development. General public around the world is much less aware that European continent has been for-runner in demographic development for several centuries as well. The most advanced European countries were pioneers during the process of the demographic transition. The main result of this process in Europe as well as in other developed countries around the

world has been a modern demographic regime (MDR). Demographers differ in views about the detailed characteristics of the MDR and about the timing of its appearance. However, there is general agreement that low fertility and low mortality levels are the most prominent features of the post-transitional demographic regime.

Broadly speaking, it is possible to state that the MDR in the most developed European countries emerged in the middle of the twentieth century. In the periphery of Europe and in non-European developed countries the MDR had developed somewhat later. At present, it is about sixty years old. Six decades is hardly enough for the development of all facets of the new way of population development and generational replacement. We need much longer period if we want to competently compare modern regime with the traditional or pre-transitional regime of the population development.

It is also premature to expect that demographers would have reached general consensus on the theory of the MDR. The demographers simply need much more evidence, longer period and more countries and national populations with finished demographic transitions to be able to study modern demographic processes in different environments. From this point of view the so called theory of the second demographic transition is more confusing than illuminating. According to the author's opinion, it is not wise to speak about the second demographic transition before we really know whether bellow replacement fertility is one of the main characteristics of the MDR or not. If the answer is yes, then we do not have any additional transition to the basic one at all.

In spite of the theoretical and practical dilemmas it is very important for demographers to study many different characteristics of the MDR in Europe and elsewhere. The author of this paper will focus on late age-specific fertility patterns in selected European Union (EU) countries and some EU candidate countries. Generally, age-specific fertility patterns had changed tremendously during the period of the demographic transition. A well known distribution of age-specific fertility rates with single modus considerably slimmed as a consequence of the fertility decline in younger and older ages of the female reproductive period.

Age-specific fertility in advanced countries with the MDR is broadly concentrated in the female age group 20 – 34 years and more and more tend to narrow to the age group 25 – 33 or even to the 27 – 32 group. Women and couples in advanced countries tend to limit fertility in marginal age groups of female's reproductive period. Adolescent fertility is not only unwanted but more and more unacceptable for an individual and the society. Main reasons are prolonged schooling, investment in human capital of young boys and girls and late economic emancipation of young people. The transition from school to work has been postponed not only in the early twenties but more and more in the late twenties of the life-cycle.

Late age-specific fertility is much more in the domain of an individual couple or a woman and her family in spite of the fact that physicians advise avoiding a childbearing after the woman's age of 35 years. Widespread employment of women, low reproductive norms and modern life styles in advanced countries do not support the childbearing in the period 35 – 49 years of age. Age-specific fertility rates in this period show more or less completed procreation, efficient family planning and the use of modern contraceptives.

In this paper late age-specific fertility is defined by the age group 35-49 years of the females in spite of the fact that people from the health sector tend to label having a child at a mother's age of 30 or above as late especially in the case of the first child (Beets, 2008, p. 22). The author will follow the late age-specific fertility patterns in selected European Union countries and some of the EU candidate countries in the period from the year 1960 to the year 2007 or to the most recent years with the available statistical data. He will also try to answer the question how much have late age-specific fertility changed as a consequence of fertility decline in some EU candidate countries, a very low level of fertility in all EU member states

and of the postponement of childbearing among younger generations. The author will devote much attention to the question whether any breakthrough can be anticipated in the late age-specific fertility in the selected and analysed countries in the future or should we further maintain the position that childbearing after a woman's age of 35 will remain marginal for still very obvious reasons.

2. Fertility level in the European Union, selected EU candidate countries and in Europe in general

At present fertility level in countries with the MDR in general and in almost all of Europe in particular is very low indeed. In Europe, all national period total fertility rates in the year 2006 were below 2.0 if we exclude Iceland with 2.08, Kosovo with 3.0 and Turkey with 2.18. Particular rates covered wide range between 1.11 in San Marino and 1.98 in France (EPDS, 2008). Sporadically and regionally the indicator can be even lower. In former German Democratic Republic it was only 0.84 in 1995 (RDDE, 1999, p. 70). Intrinsic rates of increase of model populations with such fertility levels are negative. If we take for example Slovenian total fertility level of 1.2 in the year 2003, it is possible to calculate the intrinsic rate of - 1.9 which means that model population with such a rate would diminish to a half of its original number in only about 37 years.

European fertility decline is also evident in cohort total fertility rates. Completed fertility rates of female birth cohort born in 1967 were predominantly under 2.0 with the exception of Albania, Armenia, Azerbaijan, Cyprus, Iceland, Ireland (1966), Norway, Serbia and Montenegro and Macedonia (RDDE, 2005, p. 89). Mainland Europe is well below 2.0. Its range was between 1.46 in Germany and 1.99 in France and Slovak Republic in 1967. Below replacement fertility is evidently a predominant characteristic of Europe at the beginning of the 21st century.

Low fertility level and increasingly old population in Europe are main causes for growing number of countries with negative natural increase. In 1980, only Austria and Federal Republic of Germany had negative natural increase of the population. Ten years later, number of births was lower than number of deaths in three countries (Bulgaria, Germany and Hungary). At the turn of the century, in 2002, the number was 17 for the countries with available data (RDDE, 2003, p. 40). Later, in 2006, it declined to 13 (EPDS, 2008) and it will very likely grow again in the future.

Mean age of women at first birth has been increasing in recent decades in Europe. In spite of some minor problems with missing data it is possible to see clear and prevailing trend and considerable increase in the number of countries with the mean age of women at first birth of 25 years and more in the period 1970 – 2000. In the years 1970, 1980, 1990 and 2000 there were 4, 8, 16 and 23 such countries respectively in Europe. In 2002, 6 countries out of 33 countries with published data had the mean age of women at first birth of more than 28 years. There were no such countries in 1990 (RDDE, 2005, p. 81). Four years later, in 2006, the number of countries was 9 according to the data collected by the Vienna Institute of Demography (EPDS, 2008).

Trends of the mean age of women at childbearing in Europe in the period 1960 – 2003 are more complex. They have been influenced by the decline of number of births of the higher parity birth orders, which have generally occurred at the higher age of the mother and by the increase of the mean age of women at birth of lower parity birth orders. These two forces have worked in opposite directions. Real trends in the period considered show quite similar pattern in majority of European countries. There was decline in the mean age of women at childbearing till the 1970s or early 1980s. Thereafter, the trend has changed the direction. The mean age of women at childbearing has started to increase. In 2003, there were 27

countries out of 42 with the published data where the mean age of women at childbearing was more than 28 years. In 10 countries the indicator was higher than 30 years. These countries were Andorra, Denmark, Ireland, Italy, Liechtenstein, the Netherlands, San Marino, Spain, Sweden and Switzerland (RDDE, 2005, p. 88).

Some decades ago G. Calot and Ch. Blayo wrote about considerable homogenization of fertility in Western Europe (Calot and Blayo, 1982, p. 353). In recent decades the process has spread over the entire continent. However, it is far from universality. In 2006, the difference between the highest (Iceland) and the lowest (San Marino) total period fertility rate in Europe, Albania and Turkey excluded, was still practically one child per woman (EDDS, 2008). Therefore, it is possible to conclude that below replacement fertility level is more important characteristic of European fertility than the homogenization.

3. Late age – specific fertility in selected European Union member countries and in selected EU candidate countries

Abundant demographic statistical data for advanced countries show us later start with childbearing in the lifecycle of an individual woman than ever before. However, the later start does not mean that fertility would have automatically increased in the age group of female population 35 – 49. Therefore, permanent demographic research and analysis is necessary for following and understanding of the evolution of late fertility patterns and trends in countries with the MDR. In fact, late motherhood and postponement of childbearing in Europe has been frequent research topics in recent years. Some examples from this field of studies are Van Nimwegen et al, 2002, Sobotka, 2004, Ni Bhrolchain and Toulemon, 2005 and Billari, 2005. The topic has also been frequently discussed at the scientific conferences and analysed in the special sections of demographic scientific journals. Two recent examples are Vienna Yearbook of Population Research 2006 (VID, 2006) and the last paper edition of Italian population journal *Genus* (*Genus*, 2008/3-4).

The meanings of the terms late motherhood and postponement of childbearing are different in the literature as well as in the above mentioned studies. The Dutch authors use the term late motherhood in the meaning of postponement of the childbearing (Van Nimwegen et al, 2002, p. 10 – 16). Many other authors use the term postponement of childbearing in two different meanings. The first meaning stresses the possibility of compensation of the fertility decline at younger ages with (at least partial) fertility rise at later ages. The second meaning most often simply refers to an increase in the mean age of first birth or in the mean age at childbearing (Ni Bhrolchain and Toulemon, 2005, p. 86). However, in almost all of these studies very little is said about late age – specific fertility in the last 15 years of female reproductive period.

Late motherhood or late fertility can be understood and studied also from the viewpoint of the late age – specific fertility. The author of this paper studied late age – specific fertility in Europe in the period 1961 – 1985 (Malacic, 1994) and late fertility trends in Europe in selected European countries (Malacic, 2008). Late age – specific fertility considerably decreased in the period 1961 – 1985 in Europe. However, toward the end of the period in certain European countries some discontinuities and turnabouts in the prevalent tendency became evident. In spite of that, the author of the paper forecasted in the first of the cited papers that the late age – specific fertility would retain a marginal share in total fertility in Europe in decades to come. The forecast has been confirmed so far by more recent evidence (Malacic, 2008, p. 130).

This paper will proceed on and upgrade the author's previous studies. Late age – specific fertility will be analysed on the basis of age – specific fertility rates in the age groups 35 – 39, 40 – 44 and 45 – 49 years and late total fertility rate in the age group 35 – 49 years which is

defined as the sum of five years age – specific fertility rates in the 15 years age range multiplied by five. Late total fertility rate can be interpreted as the number of childbirths to the hypothetical cohort of women in the age group 35 – 49 years under the condition that registered five years age – specific fertility rates in the age group 35 – 49 years refer to the given cohort of females. Late total fertility rate does not depend on the age structure of a population.

Age – specific fertility is relatively low after the age of 35 for different reasons. They work practically over the whole reproductive age span and can be grouped as follows: 1. intrauterine mortality, postpartum amenorrhea, ovulation without conception; 2. early sterility and possibly higher intrauterine mortality for older women; 3. extension of birth intervals by abstinence or prolonged breast-feeding; 4. birth control by contraception or abortion (Lutz, 1989, p. 7). The groups 1 and 2 are more important for natural fertility regime which can be illustrated by Hutterite fertility. The Hutterite fertility rates for age groups 35 – 39, 40 – 44 and 45 – 49 are 0.406, 0.222 and 0.061 respectively (Malacic, 2006, p. 55). Contraception and abortion are predominant causes of low levels of late age – specific rates in modern fertility regime of present day Europe and other developed countries. They are the consequence of more or less conscious decisions of an individual (female or male) or a couple.

Late fertility has also numerous demographic and other economic and social consequences. If we mention only the most important demographic consequences it is necessary to refer to higher infant mortality and more congenital abnormalities compared to the fertility in the age group 20-34. From the viewpoint of postponement behaviour the late fertility also lead to smaller family sizes, contributes to the decline of fertility at levels well below replacement, to additional population ageing and to earlier and stronger natural and overall population decline (Beets, 2008, p. 22).

Nine European Union member countries and two EU candidate countries will be analysed in this paper over the period from the year 1960 to the most recent years with the available data. The countries will be divided in four groups. In the first group (for-runners) are Denmark, Sweden and United Kingdom. Their basic characteristic is higher fertility rate in the age group 35 – 39 in 2006 or later than in 1960. The second group (mainland Europe) includes France, Germany and Italy. Their size is the main reason for the selection from the pool of North – Western, South and Central European countries with typical U shaped f_{35-39} in the studied period. The third group (Eastern Europe) includes Bulgaria, Romania and Poland. These countries represent new EU member states from the last two EU enlargements in the years 2004 and 2007 and to some extent Eastern Europe as a whole. The fourth group (EU candidate countries) represents Turkey and Croatia as a selection from the EU candidate countries. The selection is arbitrary because of the changeable list of the EU candidate countries as well as for the different status of the candidates in the negotiation process with the EU. The selected group of the candidates is the most heterogeneous between the four groups. Croatia is demographically similar to its neighbouring EU members and other Eastern European countries while Turkey is a special case because of unfinished demographic transition. At present Turkey has been finishing the process of demographic transition and as a consequence it does not have any experience with the MDR yet. Late age – specific fertility has had more specific paths in the third and the fourth groups practically over the whole period covered in the analysis. The most interesting examples in these two groups are Romania and Turkey. The trend has been declining in Turkey as well as in Poland and U shaped in other countries in the two groups. Very unique in Europe is an example of Romania where strict population policy measures were introduced in the middle of the 1960s. The turnaround in the late fertility rates in the countries from the third and the fourth groups has started later than in the first and the second groups of countries. Of course, there has not been any turnaround in Turkey yet.

Late age – specific fertility rates for the age groups 35 – 39, 40 – 44 and 45 – 49 and indexes 2007/1983 and 2007/1960 for the countries included in the analyses and for the years 1960, 1983, 1993, 2003 and 2007 respectively are shown in tables 1 and 2. Statistical sources do not cover all data demanded in the title of both tables. Therefore, some minor data substitutions were necessary for particular years and countries and some differences also appears in the most recent year with available data. It should be outlined also that Germany and Croatia have not been independent countries in today's state borders since the 1960s. Fortunately, statistical data for these two states in their present size are available for the whole period studied and can be analysed here. Additionally, figures 1 – 4 are included in the paper to show graphical illustration of the late age – specific fertility trends for the rates f_{35-39} and f_{40-44} for the period 1960 – 2007 or in some cases to some other most recent year with the available data. The trends for the four groups of countries are shown separately.

Table 1: Late age – specific fertility rates (in ‰) and indexes 2007/1983 and 2007/1960 for for-runners and mainland Europe groups countries, years 1960, 1983, 1993, 2003 and 2007

		For-runners			Mainland Europe		
		Denmark	Sweden	UK ¹	France	Germany	Italy ²
$f_{(35-39)}$	1960	39.2	39.6	44.1	50.6	44.2	61.2
	1983	15.0	26.0	23.0	22.0	16.0	24.8
	1993	33.4	43.4	33.4	32.2	21.6	30.4
	2003	46.6	51.0	46.0	47.4	30.2	50.2
	2007	55.3	62.6	56.6	61.0	41.8	53.8
	$I_{2007/1983}$	368.7	240.8	246.1	277.3	261.2	216.9
	$I_{2007/1960}$	141.1	158.1	128.3	120.5	94.6	87.9
$f_{(40-44)}$	1960	11.2	12.0	12.3	15.6	11.8	22.2
	1983	2.4	4.6	4.4	4.4	2.6	5.2
	1993	5.0	7.6	5.8	6.2	3.4	5.6
	2003	7.6	9.6	9.4	9.6	4.8	9.8
	2007	9.0	12.0	11.2	6.0	7.4	11.0
	$I_{2007/1983}$	375.0	260.9	254.5	136.4	284.6	211.5
	$I_{2007/1960}$	80.3	100.0	91.1	38.5	62.7	49.5
$f_{(45-49)}$	1960	0.8	0.8	0.8	1.0	0.8	1.8
	1983	0.2	0.2	0.4	0.2	0.2	0.4
	1993	0.2	0.2	0.2	0.2	0.2	0.2
	2003	0.2	0.4	0.6	0.4	0.2	0.4
	2007	0.3	0.6	0.7	1.0	0.3	0.5
	$I_{2007/1983}$	150.0	300.0	175.0	20.0	150.0	125.0
	$I_{2007/1960}$	37.5	75.0	87.5	100.0	37.5	27.8

Notes: ¹ 1959 instead of 1960; ² 2006 instead of 2007.

Source: Recent demographic developments in Europe 2005, Council of Europe, Strasbourg 2006; Demographic Yearbook. Special issue: Historical supplement, United Nations, New York 1979; Home pages of Eurostat and of the national statistical offices (July and August, 2009).

Late age – specific fertility rates in selected European Union member and candidate countries show very low fertility in the age groups 40 – 44 and 45 – 49 years. The only exception is Turkey because of the demographic transition delay in this country. Childbearing in the age group 45 – 49 years is really exceptional not only in the EU but in modern Europe in general. In contrast, the age group 35 – 39 years is not only dynamic but also still important for the procreation.

The data in table 1 and 2 show that our four groups of countries behave differently concerning late childbearing. The difference is smaller between for-runners and mainland Europe groups than between these two groups and the Eastern European and EU candidate

countries groups. In the for-runners and mainland Europe groups we have only four European countries where f_{35-39} was higher in 2007 than in 1960 (Denmark, Sweden, UK and France). For-runners and mainland groups are quite similar. In all six countries three late age-specific fertility rates declined between 1960 and 1983. Thereafter, two of them, f_{35-39} and f_{40-44} , have increased considerably as indexes 2007/1983 show. The third rate, f_{45-49} , remains more or less at very low level.

Table 2: Late age – specific fertility rates (in %) and indexes 2007/1983 and 2007/1960 for Eastern European and EU candidate groups of countries, years 1960, 1983, 1993, 2003 and 2007

		Eastern European countries			EU candidate countries	
		Bulgaria	Romania	Poland	Croatia	Turkey ¹
$f_{(35-39)}$	1960	19.6	34.8	58.4	34.8	175.8
	1983	9.4	17.0	30.2	16.4	89.2
	1993	8.2	11.4	25.4	17.6	54.8
	2003	11.2	15.0	21.0	23.0	44.0
	2007	18.4	19.8	25.6	30.1	...
	$I_{2007/1983}$	195.7	116.5	84.8	183.5	49.3
	$I_{2007/1960}$	93.9	56.9	43.8	86.5	25.0
$f_{(40-44)}$	1960	6.6	14.8	21.5	11.4	68.2
	1983	2.0	4.6	7.4	3.4	34.6
	1993	1.8	3.2	6.2	3.4	23.4
	2003	1.8	3.2	4.8	4.2	16.4
	2007	2.8	3.6	5.4	5.4	...
	$I_{2007/1983}$	140.0	78.3	73.0	158.8	47.4
	$I_{2007/1960}$	42.4	24.3	25.1	47.4	24.0
$f_{(45-49)}$	1960	1.0	5.4	2.3	2.2	12.4
	1983	0.2	0.4	0.4	0.2	5.6
	1993	0.2	0.2	0.4	0.2	8.2
	2003	0.0	0.2	0.2	0.2	6.6
	2007	0.1	0.2	0.2	0.2	...
	$I_{2007/1983}$	50.0	50.0	50.0	100.0	117.9
	$I_{2007/1960}$	10.0	3.7	8.7	9.1	53.2

Notes: ¹ Indexes for Turkey are 2003/1983 and 2003/1960;

Source: Recent demographic developments in Europe 2005, Council of Europe, Strasbourg 2006; Demographic Yearbook. Special issue: Historical supplement, United Nations, New York 1979; Home pages of Eurostat and of the national statistical offices (July and August, 2009).

The dynamics in Eastern European and EU candidate countries groups were very complex in the period considered. All three age-specific fertility rates declined in Poland and Turkey. However, the levels for the two countries were different. In Turkey the levels were approximately three times higher than in Poland. In certain respect Poland and Turkey are late-comers. The level of late fertility in other three countries, Bulgaria, Romania and Croatia, is also important characteristic shown in table 2. It is surprisingly low, especially in Bulgaria. The cause should be very likely sought not only in the use of contraception but also in the prevalence of abortion in these ex-socialist countries. In Bulgaria, Croatia and partly Romania some signs of turnarounds in the trends in the last two decades were already visible in f_{35-39} and f_{40-44} .

Figure 1: Sum, by five-year age groups, of late age-specific fertility rates f_{35-39} and f_{40-44} for Denmark, Sweden and UK for the period 1960 – 2007. Source: RDDE 2005, Council of Europe, Strasbourg 2006; Home pages of Eurostat and of the national statistical offices (July and August, 2009).

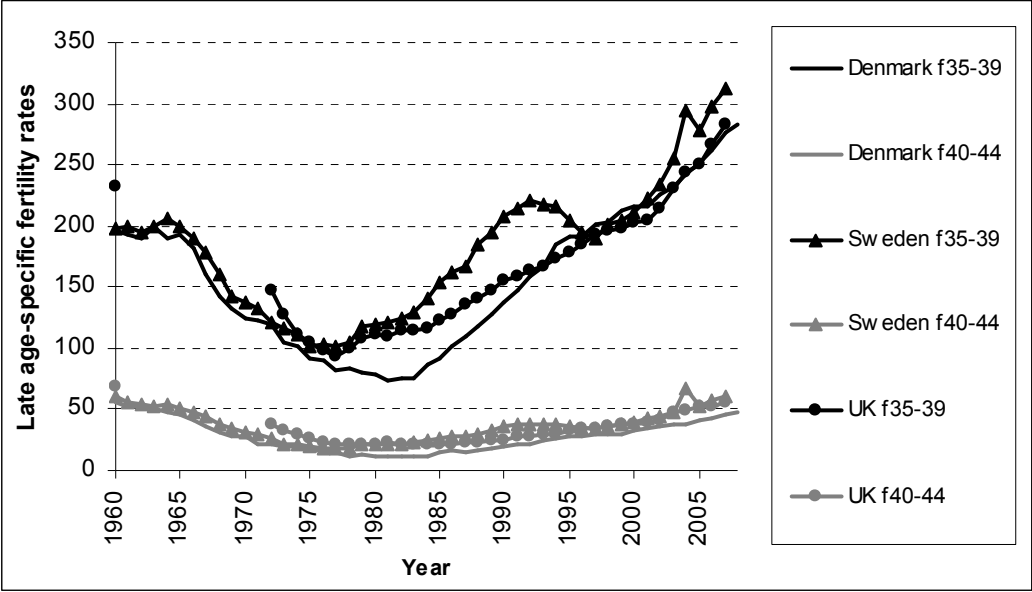


Figure 2: Sum, by five-year age groups, of late age-specific fertility rates f_{35-39} and f_{40-44} for France, Germany and Italy for the period 1960 – 2007. Source: RDDE 2005, Council of Europe, Strasbourg 2006; Home pages of Eurostat and of the national statistical offices (July and August, 2009).

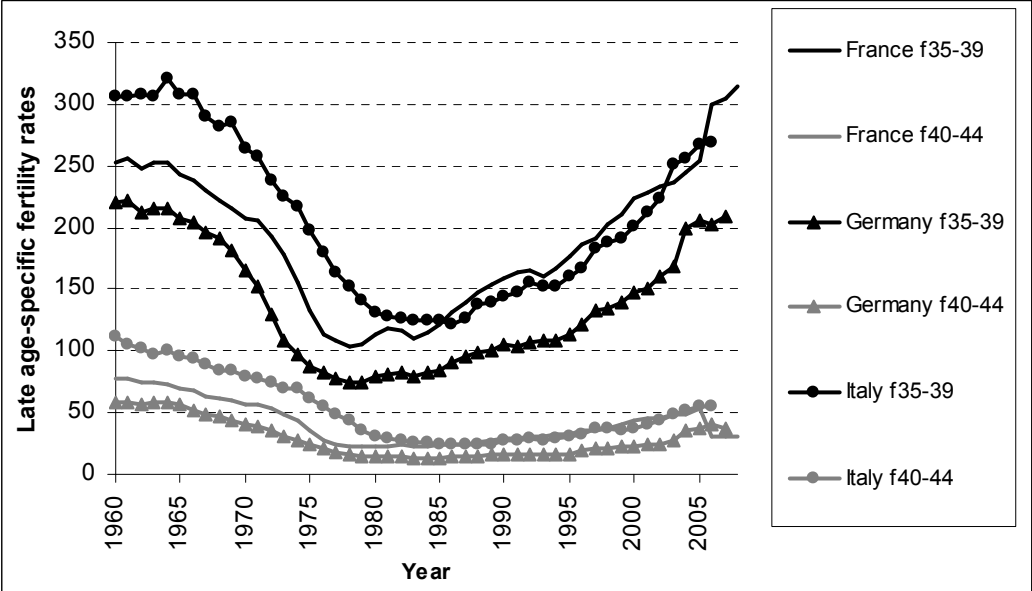


Figure 3: Sum, by five-year age groups, of late age-specific fertility rates f_{35-39} and f_{40-44} for Bulgaria, Romania and Poland for the period 1960 – 2007. Source: RDDE 2005, Council of Europe, Strasbourg 2006; Home pages of Eurostat and of the national statistical offices (July and August, 2009).

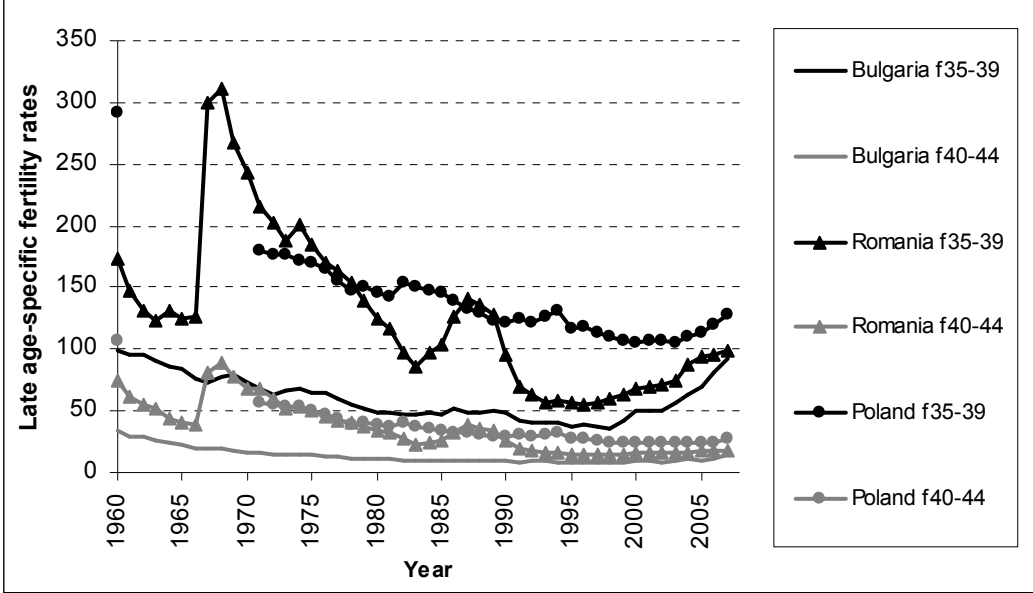
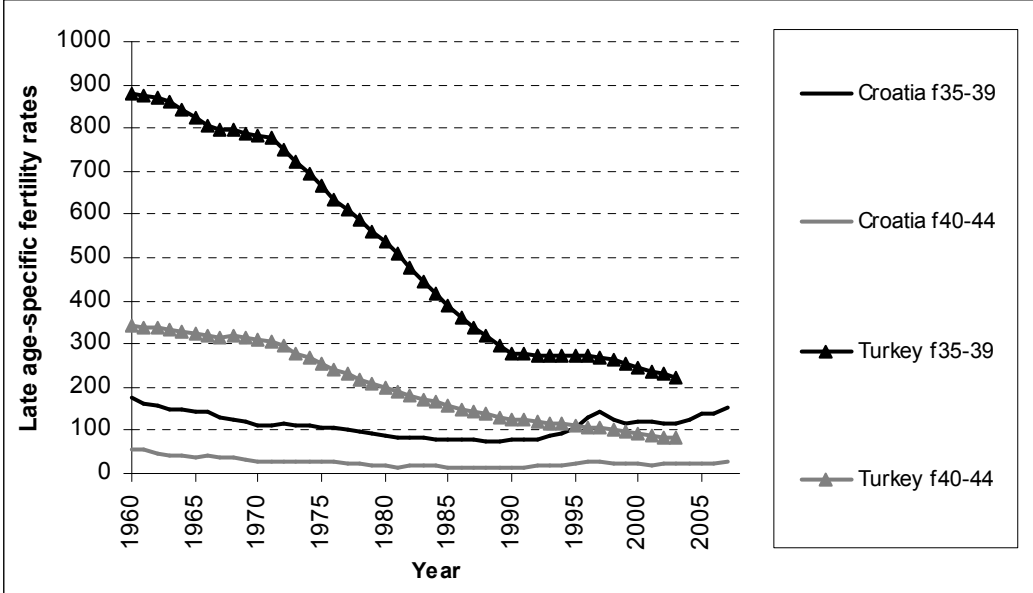


Figure 4: Sum, by five-year age groups, of late age-specific fertility rates f_{35-39} and f_{40-44} for Croatia and Turkey for the period 1960 – 2007. Source: RDDE 2005, Council of Europe, Strasbourg 2006; Home pages of Eurostat and of the national statistical offices (July and August, 2009).



The four figures presented in the paper will not be elaborated in detail here. Late age-specific fertility patterns in four groups of countries are self-evident for the rates f_{35-39} and f_{40-44} . However, there is important difference between the figure 4 and other three figures in the

scale of y axis. The difference is the consequence of high level of the rate f_{35-39} for the period 1960 – 1990 in Turkey.

For more complete elaboration of late age-specific fertility it is necessary to compare late fertility and total fertility. Therefore, we have selected some indicators of late and total fertility for the four groups of countries for the years 1960, 1983, 1993, 2003 and 2007. The indicators are shown in the tables 3 and 4. These indicators are total late fertility rate ($T_{f,35+}$), $T_{f,35+}$ as a percent of T_f , percent change of the $T_{f,35+}$ in the period 1983 – 2007 and percent change of the T_f in the period 1983 – 2007.

The data for for-runners and mainland groups in table 3 show similar trends in selected late age-specific fertility indicators in the period 1960 – 2007. Total late fertility rate which is un-comparably lower in modern Europe than in the case of Hutterite fertility declined between 1960 and 1983 and has increased thereafter. Similar dynamics characterised total late fertility as the percentage of the total fertility in six countries of the for-runners and mainland groups. In 2007, however, the total late fertility had higher percentage of the total fertility than in the year 1960. In Italy, 24.1 % or almost a quarter of period total fertility occurred in the age group 35 – 49 in the year 2006.

Table 3: Selected indicators of late and total fertility for for-runners and mainland Europe groups of countries, years 1960, 1983, 1993, 2003 and 2007

		For-runners			Mainland Europe		
		Denmark	Sweden	UK ¹	France	Germany	Italy ²
$T_{f,35+}$	1960	256	262	286	336	284	426
	1983	88	154	139	133	94	152
	1993	193	256	197	193	126	181
	2003	272	305	280	281	176	255
	2007	323	376	323	340	247	326
$T_{f,35+}$ as a % of T_f	1960	10.0	11.9	11.7	12.3	12.0	17.7
	1983	6.4	9.6	7.8	7.5	6.6	10.1
	1993	11.0	12.9	11.2	11.6	9.8	14.2
	2003	15.5	17.8	16.4	14.9	13.0	20.4
	2007	17.5	20.0	17.6	17.2	18.0	24.1
$\Delta T_{f,35+}$ in 1983 – 2007 in %		267.0	144.2	132.4	155.6	162.8	114.5
ΔT_f in 1983 – 2007 in %		33.3	16.8	4.0	11.2	- 4.2	- 10.6

Notes: ¹ 1959 instead of 1960 and 2006 instead of 2007; ² 2006 instead of 2007.

Source: RDDE 2005, Council of Europe, Strasbourg 2006; Demographic Yearbook. Special issue: Historical supplement, United Nations, New York 1979; Home pages of the national statistical offices (July, 2009).

Total late fertility as a percent of total fertility increased considerably in the period 1983 – 2007 in all six countries. The increase was un-comparable to the change of the total fertility rates of these six countries in the same period. In the period studied, total fertility increased in Denmark, Sweden, UK and France and declined in Germany and Italy. It is more than evident that late age-specific fertility trends in the for-runners and mainland groups of European countries indicate certain degree of postponement of childbearing at least in the period 1983 – 2007.

Table 4: Selected indicators of late and total fertility for selected European countries, years 1960, 1983, 1993, 2003 and 2007

		Eastern European countries			EU candidate countries	
		Bulgaria	Romania	Poland	Croatia	Turkey ¹
T _{f, 35+}	1960	136	275	411	242	1282
	1983	58	110	190	100	647
	1993	51	74	160	106	432
	2003	65	92	130	137	335
	2007	107	118	156	178	...
T _{f, 35+} as a % of T _f	1960	5.9	11.8	13.8	11.0	20.7
	1983	2.9	5.3	7.9	5.3	16.5
	1993	3.5	5.1	8.6	7.4	15.0
	2003	5.3	7.2	10.6	10.3	13.8
	2007	7.5	9.1	11.9	12.7	...
$\Delta T_{f,35+}$ in 1983 – 2007 in %		84.5	7.3	- 17.9	78.0	- 48.2
ΔT_f in 1983 – 2007 in %		- 29.4	- 37.2	- 45.2	- 25.5	- 37.9

Notes: ¹ Δ for the period 1983 – 2003.

Source: RDDE 2005, Council of Europe, Strasbourg 2006; Demographic Yearbook. Special issue: Historical supplement, United Nations, New York 1979; Home pages of Eurostat and of the national statistical offices (July, 2009).

Eastern European group has had different development in the period studied. Total late age-specific fertility rates in this group of countries were declining in Bulgaria and Poland practically to the end of the twentieth century and have started to increase thereafter. The development in Romania is more clearly seen in the figure 3 than in the table 4. Romanian line has very specific shape with two unusual increases. The first increase has its peak in the year 1967, immediately after the introduction of strict population policy measures by the communist party, and the second increase has the peak twenty years later towards the end of the socialist period in the country. In Romania, the trend of the total fertility rate has been very similar to the shapes of the late age-specific fertility. In other two countries, the total fertility rate declined more permanently since the middle of the 1980s. However, at the end of the studied period, in 2007, the differences between total fertility rates of the countries in the third group were quite low.

Croatia and Turkey in the fourth group are demographically very different. The trends of late age-specific fertility as well as for the total fertility rates for Turkey have been very simple for the whole period covered (till 2003). Both trends have been declining and have been caused by the finishing of the demographic transition in Turkey. Croatia, on the other hand, is demographically developed European country with some similarities with other ex-socialist Eastern European countries. The country experienced the turnaround in the development of the late age-specific fertility rates in the middle of the 1980s. It was earlier than in the third group countries. Notwithstanding, recent levels of the total fertility rate are similar to the levels in the third group countries.

4. Discussion

Late age-specific fertility patterns in selected EU member and candidate countries presented in section 3 of this paper need more clear and elaborated explanation. For such a goal it would be necessary to have good theory of (human) fertility and much more detailed late age-specific fertility differentials statistical data. Rich, innovative and extensive

demographic research on the basis of micro and macro data would also be welcome. Unfortunately, demographers have troubles and deficiencies in all fields which have been mentioned.

Late age-specific fertility differentials statistical data are rare in international as well as in national data sources. The data shortage is combined with the differences in periods covered and statistical definitions used in particular countries. Therefore, very limited picture of the late age – specific fertility differentials could be constructed for the countries analysed in this paper. The author of the paper has decided to omit very partial evidence on late age – specific fertility differentials available in the data sources and to refer to general characteristics of some selected examples of the differentials without going into national specificities.

Recent trends in the late age – specific fertility in general have clear imprints in parity specific fertility in the female group of the 35 – 49 years of age. In spite of low reproductive norms in the countries with the MDR and notwithstanding very low parity – specific total late fertility more or less all birth order parities of the late fertility has increased recently. The increase has been stronger in for-runners and mainland groups and very weak in Eastern European group. In more groups the highest relative increase has happened in the case of the first parity. These developments show certain postponement of childbearing in advanced European countries.

Parity specific values of late fertility are indeed low in advanced countries with the MDR. In the case of the 4th and 5+ birth orders parity the values are almost negligible and frequently still declining. This is very important for population policy. Parity specific population policy measures should be concentrated in younger ages of females and parents and for the second and the third birth order parity.

Much less available are rural – urban and marital late fertility differentials data. Rural – urban differentials has lost much of its importance due to prevailing urban nature of modern life in Europe. Only in Eastern European countries rural late fertility is significantly higher than urban one.

More important than late marital fertility data are late abortion data. Marital status has lost much of its importance in many European countries because of considerable transformations of family structures in Europe in the last decades of the twentieth century. *De iure* marriages have lost importance in many European countries in comparison with *de facto* unions and the evidence for the later is very rare.

Late abortion is on the other hand an indicator of unwanted pregnancies and failed use of contraception. In the countries with the MDR family planning is very important part of the way of life. Different forms of male and female contraception are widespread. Women usually do not rely on contraception when they want to conceive. However, from time to time even modern contraception fails and people are forced to choose between childbirth and abortion. The frequency of legal induced abortion in different countries varies in general as well as in the later part of the reproductive period in particular.

Abortion rate in a country depends on legal status of induced abortion and political perception of the fertility level in the country. Induced abortion is legal in all selected European countries with the recent exception of Poland. However, political attitude and legal conditions for the realization of the abortion are quite different in particular countries. Notwithstanding the differences between the countries late abortion represents considerable share of total abortion in Europe (Malacic, 2008, p. 130). In spite of different political and human preferences the abortion is still important mean for achieving low level of late age – specific fertility in modern Europe.

Numerous other late age-specific fertility differentials would be needed for the identification of the factors which cause that women realize their childbearing goals in the

period of the 35 – 49 years of age. Notwithstanding the analytical weaknesses of the period indicators of fertility even in this context the statistical data will probably always be deficient.

However, demographers' difficulties and deficiencies are even greater in the field of (human) fertility theories. Our discipline is frequently criticized for the lack of unique and viable demographic theories. But in the fertility case the theories are very partial and deficient even if we consider a broad set of the theories from wider spectre of the disciplines which study the fertility phenomenon. These theories are usually disciplinary myopic and more competitive and substitutive than complementary.

Detailed discussion of the fertility theories is outside the scope of this paper. It is also obvious that a special theory of late age – specific fertility will probably never be fully developed. In principle, a good fertility theory should be able to explain human fertility and procreation behaviour over a whole span of the reproductive period. However, such a theory would be extremely helpful for understanding of the late age – specific fertility patterns.

The lack of comprehensive fertility theory is confirmed also with a propensity of demographers to use a term concept instead of the term theory in many occasions. Billari et al speak about a concept of Second Demographic Transition not of the theory (Billari et al, 2006, p. 3). Obviously, for quite some time in the future we should live with partial and deficient demographic as well as fertility theories.

Although the conclusion about the theories is rather pessimistic, the demographic literature and research work offer some useful insights into the mechanisms of modern fertility behaviour in advanced countries with the MDR. In this respect postponement of childbearing has been increasingly analysed in the literature and recent research work in Europe. The postponement is also relevant for the understanding and explanation of the late age – specific fertility patterns in EU member and some candidate countries. Of course, the concept is useful for the countries with the MDR only.

However, late age – specific fertility patterns in the countries analysed in this paper only partly reflect the postponement of childbearing behaviour in advanced European countries. This part is especially connected to the postponement of first births parity and will become very likely stronger in the near future. But it has also its natural limits and ceilings under the assumptions of present limits of female's reproductive period.

The second part of the whole story has nothing to do with this modern postponement which frequently relies on the first birth parity. This part not only that has always been with us but was much larger in the past centuries as Hutterite age – specific fertility indicators show us. Much higher late age – specific fertility rates in the traditional demographic regime as well as in the early stages of the demographic transition period were the results of higher parity birth orders. These rates have slimmed during the process of demographic transition as well as during the period with the MDR in Europe. But certain level of this second part will stay with us in the future in spite of the slimming process. Future demographic research in Europe should determine the scope and fluctuations as well as the determinants of both parts of the late age – specific fertility in the EU member and candidate countries. The research results will be useful for other advanced countries as well as for the increasingly important and necessary population policy measures.

5. Conclusion

Age – specific fertility distribution has shown considerable changes in the countries with the MDR as well as in the selected EU candidate countries where in certain cases MDR has not fully developed yet. It seems that postponement of childbearing has been the most prominent feature of these changes in more advanced countries in recent decades. The other

countervailing process was the slimming of the late age – specific fertility rates as a consequence of the higher birth order parities decline.

Total late fertility increased considerably in the for-runner and mainland Europe groups of countries analyzed in the paper. In Eastern European and EU candidate countries groups the late fertility trends have more varied in most recent decades. The decline has prevailed not only in Turkey but for most other countries in these two groups as well. Turnarounds of the trends have been late coming and mild. While for – runners in considerable total late fertility increase are still rare in Europe. Generally, total late fertility was higher in 1960 than in 2003 in majority of European countries analysed in the paper. Further increase in total late fertility in most of Europe is likely, Eastern Europe included. Even Turkey will very likely follow with certain delay. However, late age – specific fertility will very likely retain more or less marginal share of total fertility in the MDR. Family planning with the use of modern contraception and at least partly late age – specific abortion will contribute to this result.

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