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FROM EARLY TO LATE FERTILITY: COMPARATIVE EVIDENCE FROM ROMANIA AND MOLDOVA

**Raluca POPESCU, Professor, PhD in Sociology,
University of Bucharest, Romania**

<https://orcid.org/0000-0002-2510-4506>

raluca.popescu@sas.unibuc.ro

**Ecaterina GRIGORAȘ, PhD, Coordinate Researcher,
Center for Demographic Research, NIER, AESM**

<https://orcid.org/0000-0002-5607-5322>

grigoras.ecaterina@ase.md

Dan VÎRDOL

National Institute of Statistics, Romania

daniel.virdol@insse.ro

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Abstract. *This study examines fertility dynamics in Romania and the Republic of Moldova, two Eastern European countries with common cultural roots but divergent political, social, and economic trajectories after the 1990s. Using vital statistics for 1971–2023, the analysis finds that the total fertility rate (TFR) in 2023 was 1.5 in Romania and 1.6 in Moldova, marginally above the levels recorded in many other European countries. Applying the postponement–recuperation model proposed by T. Frejka, we investigate shifts in both the tempo and quantum of fertility. Romania experienced an earlier onset of fertility postponement, around 1994, with the mean age at first birth rising from 22.6 years in the early 1990s to 27.2 years in 2023. By contrast, Moldova underwent a later and slower transition, beginning around 1997, with the mean age at first birth increasing only to 24.4 years by 2023. The postponement index rose steadily in both countries, surpassing 0.70 in Romania but stabilizing around 0.65 in Moldova. These results emphasize the divergent pace of adaptation to late fertility regimes and highlight the influence of social, economic, and cultural conditions on reproductive behavior.*

Keywords: *fertility transition, fertility postponement and recuperation, Frejka model, Romania, Moldova*

Introduction. Romania and the Republic of Moldova, although sharing common historical and cultural roots, have followed different socio-demographic trajectories shaped by their distinct status during the socialist period and by the specific developments of the post-communist transition. The evolution of fertility dynamics in both countries was strongly influenced by these differentiated social and economic contexts established before 1990. Demographic policies, economic conditions, and family norms shaped both the timing and intensity of childbearing, leading to divergent demographic trajectories in the two countries.

Literature review. The literature on fertility decline highlights the central role of fertility postponement and the challenges associated with the recuperation of delayed fertility, particularly in Central and Eastern Europe (Sobotka, 2017), (Frejka, T., Gietel-Basten, S., 2016). Profound socio-economic transformations during the post-socialist period have shaped reproductive behaviors, leading to a decline in cohort fertility and a rationalization of family size (Lesthaeghe, R., Zeman, K., 2024), (Beaujouan, É., Zeman, K., & Nathan, M., 2023). Research points to factors such as rising female educational attainment, increased labor market participation, and economic insecurity, which contribute to delays in family formation and the onset of parenthood (Neels, K., Murphy, M., Ní Bhrolcháin, M., & Beaujouan, É., 2017), (Zeman K., Beaujouan, É., Brzozowska Z., Sobotka T., 2018), (Berrington, A., Ellison, J., Kuang, B., Vasireddy, S., & Kulu, H., 2022). In Moldova, recent studies show a slower fertility transition than in other former Soviet republics. The country displays an intermediate model, combining traditional and modern reproductive behaviors, with delayed adoption of postponement norms and persistent traditional patterns, especially in rural areas (Gagauz, O., & Grigoraș, E., 2018), (Grigoraș, E., Gagauz, O., 2022). At the same time, the literature underlines the need for a more detailed parity-specific analysis and careful selection of reference cohorts to avoid misleading interpretations in international fertility comparisons.

Research methodology. The study draws on vital statistics provided by the National Bureau of Statistics of the Republic of Moldova and the National Institute of Statistics of Romania for the period 1970–2023, covering the number of births and their distribution by the mother’s age and year of birth. To ensure international comparability, the analysis uses the de facto population, which excludes long-term emigrants (Penina O., Jdanov, D.A., Grigoriev, P., 2015). For Romania, the analysis is based on data series detailing the distribution of births by the mother’s age and birth order; starting from 2002, it employs the usual resident population, aligned with international definitions, to ensure the consistency and accuracy of fertility indicators.

Main results. The transition from traditional to delayed fertility marks a major demographic shift, as postponed motherhood reshapes birth timing and drives fertility decline and changes reproductive behaviors. Romania and Moldova fall into the group of low-fertility countries, though not in the category of very low fertility, recording in 2023 a total fertility rate (TFR) of around 1.5 children per woman of reproductive age in Romania and 1.6 in the Republic of Moldova. These levels place them above the average of several European countries, such as Poland (1.3), Spain (1.2), and Italy (1.2), but below the levels observed in France (1.8) and Denmark (1.7). In the regional context, both Romania and Moldova occupy an intermediate position, reflecting a fertility transition process similar to that of other Central and Eastern European countries, marked by fertility postponement, rising socio-economic uncertainty, and reduced realization of reproductive intentions.

Demographic transformations are reflected in a changing age structure of fertility between 1970 and 2023, with a continuous shift from decade to decade. The

evolution of fertility reveals several distinct stages, closely linked to changes in TFR levels and tempo shifts in reproductive behavior in both countries.

In Romania, the mean age at first birth (MAFB) increased from 22.6 years in the 1990s to 27.2 years in 2023, reaching one of the highest levels in the region, though still below the EU average of 30 years in 2022. In Moldova, although the upward trend is evident, the values remain lower: from around 22.3 years in the 1990s, the MAFB has increased to 24.2 in recent years, reaching 24.4 years in 2023 approximately three years lower than in Romania. This gap indicates that Moldova has maintained an early fertility pattern for a longer period, whereas Romania has shifted more rapidly toward the Western model of postponed childbearing. Recent studies confirm that, despite the general trend of delayed motherhood, younger mothers continue to play a significant role in Moldova’s fertility structure, reflecting the persistence of a reproductive pattern distinct from that of other Eastern European countries.

According to the definition proposed by Kohler and their colleagues (Kohler, H.-P., Billari, F. C., & Ortega, J. A., 2002) , the onset of the fertility postponement transition is identified as the first year in a sequence of three consecutive years in which the MAFB increases by more than 0.3 years. Applying this criterion, Romania exhibits an earlier and more pronounced onset of postponement, estimated to have started around 1994. In contrast, Moldova experienced a later onset, around 1997, placing it among the Central and Eastern European countries with a delayed entry into the post-transition period.

Table 1. Total fertility rate (TFR), mean age at first birth (MAFB), and onset year of fertility postponement

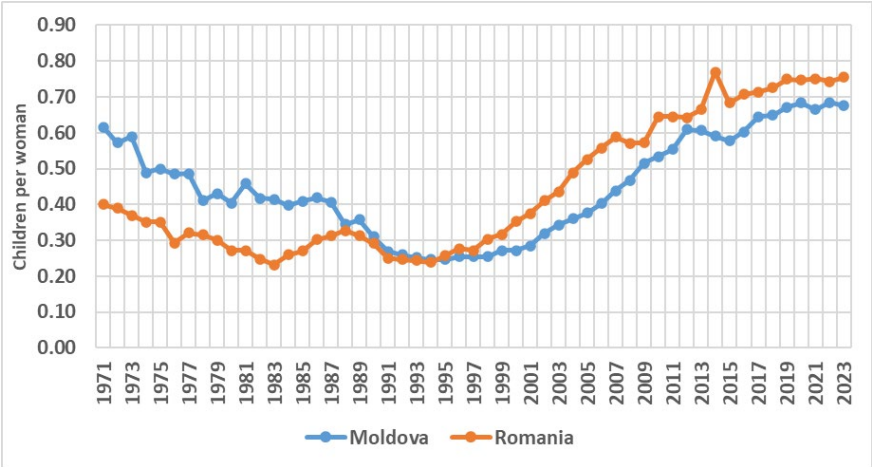
Country	Total fertility rate						Onset year of fertility postponement	Mean age at first birth					
	1990	1995	2000	2015	2020	2023		1990	1995	2000	2015	2020	2023
Romania	1,83	1,33	1,31	1,65	1,91	1,49	1995	22,6	23,0	23,7	26,4	27,2	27,1
Moldova	2,36	1,81	1,48	1,61	1,76	1,62	1997	22,3	21,9	22,6	24,2	24,3	24,4

Source: authors’ calculations based on vital statistics from the National Bureau of Statistics (Moldova) and the National Institute of Statistics (Romania)

The index of birth postponement followed an upward trend in both countries, reflecting a significant demographic shift after the 1990s. During the early years of the post-communist transition (1990–2000), values were low, reaching a minimum around 1995. In this period, the Republic of Moldova and Romania exhibited similar levels, around 0.30–0.35 children per woman, indicating a relatively limited postponement of childbearing. Starting in the 2000s, a steady increase in the index

can be observed in both countries, signaling a more pronounced trend toward delayed motherhood. Especially after 2010, Romania surpassed the Republic of Moldova, reaching levels above 0.70 children per woman between 2013 and 2023. This suggests a faster alignment with Western demographic transition patterns.

Figure 1. Indicator of birth postponement, period 1971-2023



Source: authors’ calculations

In contrast, Moldova has experienced a slower but steady increase, reaching around 0.65–0.68 children per woman in recent years, yet still below Romania’s level. Thus, although the gap between the two countries has narrowed significantly, the Republic of Moldova remains slightly behind in the pace of fertility postponement, which may reflect differences in economic, social, and cultural factors.

Discussion and conclusions. The findings highlight both commonalities and differences in the fertility transitions of Romania and the Republic of Moldova. While both countries have shifted from traditional to delayed fertility patterns, Romania experienced an earlier and faster postponement, aligning more closely with Western European trends. In contrast, Moldova followed a slower trajectory with persistent early fertility, especially in rural areas. These differences reflect distinct socio-economic, cultural, and historical contexts that have shaped reproductive behaviors over time. Overall, both countries occupy an intermediate position in the European fertility landscape, facing similar challenges of delayed fertility, low fertility, and changing family norms.

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