

**Privatization's Unequal Toll: Explaining Cross-Country
Variation in Mortality and Health Outcomes After Transition
From Communism**

Introduction

The collapse of communism in Central and Eastern Europe as well as in the former Soviet Union in the late 1980s and early 1990s marked a significant turning point in global political and economic history. The complexity of carrying out political, territorial, and economic reforms simultaneously is often termed the "dilemma of synchronicity" [1]. This concept underscores the immense challenge faced by these nations in attempting to democratize political systems, redefine state borders or identities, and restructure economies concurrently, rather than sequentially. A cornerstone of this economic paradigm shift was privatization, which entailed the replacement of planned economies with free-market principles [2]. This process targeted a diverse range of state-owned assets, including both enterprises established as public property and those that had been previously private before being nationalized [1]. Furthermore, the execution of privatization varied significantly across the region; while some countries adopted rapid "shock therapy" or mass voucher schemes, others pursued a more gradualist approach favoring direct sales or restitution [3, 4]. That process was expected to lead to increased efficiency, economic growth, and improved living standards [5]. However, the outcomes of this transition have been far from uniform across countries, with some nations experiencing significant improvements in health and mortality rates, while others have faced deteriorating conditions [6].

This paper draws on ...

Relevant Literature

Transition Types

The widespread institutional collapse across Central and Eastern Europe and the Former Soviet Union in the late 1980s led to an imperative for simultaneous political, territorial, and economic restructuring. Within the academic field of transitology, literature seeks to define

and categorize these complex processes in various ways [7]. Probably the most commonly referenced typology of transformation processes [7] of Samuel Huntington divides countries into three categories based on the nature of their reforms [8]:

- "transformation" (e.g. Soviet Union, Bulgaria, Hungary) - when reformators group is originated in government elites,
- "transplacement" (e.g. Czechoslovakia, Poland) - when the reforms are imposed by both government elites and opposition forces, as it happened during the round table talks,
- "replacement" (e.g. East Germany, Romania) - when opposition has a significant role in reforms.

These categories reflect the degree of domestic consensus and external pressure influencing the reform processes. It is also worth mentioning that both power camp and opposition are divided, government into reformators and "hard-headed", opposition into moderates and radicals. In case of other classifications, they mostly match the above-mentioned typology, sometimes however some differences in countries grouping can be observed. Sometimes, a separate category is being created for countries created from multi-national states, like Czechoslovakia or Yugoslavia, due to merged effect of divisions on the level of top leadership and the nationalistic pressure from below [9]. Worth to mention is also the division proposed by Herbert Kitschelt due to underlining group of countries where preemptive reforms were the idea. Examples are Soviet Union Gorbachev's initial innovations, as well as the regime changes in Bulgaria, Romania etc. [10]. The variation in the transition yields the opportunity to examine its elements' impact on the outcomes, specifically mortality.

Economic Transformation and the Privatization Debate

Privatization was universally deemed a central component of the economic transformation, necessary to replace the inefficient command economy with market principles [11, 12].

The public debate regarding the pace and method of implementation was dominated by a dichotomy between two camps. The first camp consisted of neoliberal advisors who championed "shock therapy" advocating for the rapid and simultaneous implementation of price and trade liberalization, stabilization, and mass privatization [13]. This approach was intended to create an irreversible shift to the market. In opposition to them stood critics, often described as gradualist economists or neo-institutionalists, who argued that hasty reform damaged the state and favored a slower process to allow sufficient time for essential governing institutions (e.g. corporate law, capital markets) to develop [14, 4].

The specific privatization methods chosen across Central and Eastern Europe and the Former Soviet Union yielded varied results and attracted distinct academic critiques. Regarding mass (voucher) privatization, while econometric results suggest that it generally had a significant positive effect on growth following the initial recession (after 1995) [2], its implementation faced scrutiny. Particularly in the Czech Republic, this method was criticized for leading to "budgetary crises and unleashing inflation at the macroeconomic level" [15]. Conversely, insider privatization models that favored management and employees, such as those in the Russian Federation and Ukraine, resulted in "insider dominance" and were generally less effective at restructuring than market methods [2, 16]. This approach was associated with political continuity and was mostly restricted in the Czech Republic and Hungary, and to a lesser extent in Poland, where a hard political transition had weakened the positions of former communist managers [3].

Beyond specific methodologies, the literature confirms that the transition created new incentives for corruption due to the massive transfer of property coupled with weak states and underdeveloped civil societies [17, 18, 19]. Research indicates that privatization's general growth effect hinges on the quality of the institutional setting, often proxied by the level of corruption [20]. Furthermore, the implementation of mass privatization programs has been empirically demonstrated to create a massive fiscal shock for post-communist governments, which undermined state capacity and the protection of property rights, thereby exacerbating

the recession [13]. Ultimately, the general dissatisfaction with the privatization process stemmed from the realization of the process and its outcomes rather than opposition to private property itself [21]. Consequently, the popular demand for revising privatization was strongly correlated with individuals who experienced hardships during the transition, such as wage cuts, unemployment, or poor self-rated health.

Mortality and Health Outcomes

The political and economic upheaval led to a severe post-socialist mortality crisis between 1989 and 1995, resulting in an estimated 10 million excess deaths between 1990 and 2000 [22]. However, different countries experienced divergent trajectories in health outcomes:

- **Severe Crisis:** FSU states, including Russian Federation, Ukraine, and Belarus, experienced dramatic and prolonged mortality reversals [23]. Russian Federation male life expectancy, for example, dropped by 6.6 years between 1989 and 1994, reaching a level three years below that of India, which was then a poor agrarian economy [5]. The death toll in post-Soviet states reached an estimated 7 million premature deaths, with 4 million in Russian Federation alone [24].
- **Rapid Recovery:** Central European countries, such as the Czech Republic and Poland, were the first former Communist countries to see a "rapid and sustained increase in life expectancy" after 1991 [25].

To understand what drove these demographic shifts, it is necessary to analyze the direct causes of death. According to literature, the immediate cause during the crisis was primarily "violent mortality" including ischemic cardiovascular diseases, circulatory problems, external causes (accidents, suicide), and alcohol poisoning, particularly among working-age men [22, 24].

This surge was especially pronounced among 20–39 year olds, who were affected mostly by external causes of death, and 40–59 year olds, who were mainly hit by a rise in cardiovas-

cular deaths [5]. In Russian Federation, specifically, the fastest relative upswing in mortality was recorded for the 20–39 age group, while the fastest absolute rise occurred among 40–59 year olds. The fact that almost four fifths of the Russian rise in age-standardized death rates between 1980 and 2006 is due to increases in injury and cardiovascular disease mortality underscores the urgency of identifying the upstream factors [23].

However, the "causes of causes" are causing double voice. The literature is fundamentally divided on the extent to which mass privatization was the decisive upstream factor driving these outcomes:

- **Argument for Correlation (Privatization as a Crucial Factor):** A large body of cross-national and quasi-experimental research supports the hypothesis that rapid and extensive privatization (often referred to as mass privatization) was a "crucial determinant" of the adverse mortality trends [14, 26, 24, 27]. The primary mechanism linking this policy to premature death is identified as acute psychosocial stress caused by rapid economic dislocation. For example, one quasi-experimental retrospective cohort study in post-Soviet Russian Federation found that fast-privatized towns experienced 13% higher mortality among working-age men than slow-privatized towns [24]. These findings provided compelling evidence that rapid privatization contributed to raised working-age male mortality. In case of female related research, the one was made among women in Hungary [28]. Results indicated that prolonged state ownership was associated with protection of life chances during the post-socialist transformation for women. Another research reexamined the argument that alcohol policies were the key behind the mortality crisis in Russian Federation, and they found it as non robust. At the same time, they confirmed the robust link between rapid privatization and increased mortality [27]. This link is further supported by evidence that privatization, and the associated increase in unemployment, was strongly associated with mortality in former Soviet Union countries [14].
- **Argument Against Robust Correlation (Methodological Skepticism):** Conversely, other

prominent studies challenge the conclusion that mass privatization was the primary cause of the crisis, citing methodological weaknesses and a lack of empirical robustness [29, 30, 31] [32]. Critics argue that the claim that mass privatization adversely affected male mortality trends "does not stand up to closer examination" and is contradicted by other knowledge about health trends in the region. Some analyses found that the correlation between rapid privatization and mortality fails to hold across countries. Specifically, a study focusing on Russian Federation regions found no robust evidence supporting the hypotheses that the mortality spike was caused primarily by the rebound effect (from the Gorbachev anti-alcohol campaign) or the affordability of alcohol. Instead, they concluded that the privatization-mortality link is robust to controlling for alcohol policy [33]. Other reviews, however, found that while four out of five studies showed rapid privatization to be significantly and positively related to mortality [34], with the only exception of Christopher J. Gerry [35]. Gerry critiques the Stuckler et al. article for committing an ecological fallacy. He argues that their broad, country-level analysis fails to prove that mass privatization was directly responsible for causing death at the individual level.

The overall scientific knowledge on the effects of politico-economic transitions on health outcomes remains "inconclusive" and there definitely is an area to make further examination, which the rest of the paper will be devoted to.

Data and Methodology

In the Table 1 below, we can see the changes in life expectancy at birth for Central and Eastern Europe and the Former Soviet Union between 1989 and 1999. As an addition countries from Western Europe are included for comparison:

Country	Male Life Expectancy Change			Female Life Expectancy Change		
	1989-1991	1991-1995	1995-1999	1989-1991	1991-1995	1995-1999
Czech Republic	0.09	1.43	1.67	0.32	0.90	1.43
Poland	-0.59	1.68	1.08	-0.09	1.28	1.04
Hungary	-0.13	0.31	1.25	0.25	0.75	0.78
Russian Federation	-0.79	-5.29	1.75	-0.26	-2.63	0.82
Ukraine	-1.51	-3.42	1.41	-0.87	-1.82	1.11
Belarus	-1.23	-2.7	-0.61	-0.89	-1.26	-0.27
Austria	0.36	1.03	1.49	0.32	0.97	0.88
Sweden	0.17	1.23	0.89	-0.02	0.90	0.45
France	0.43	0.95	1.11	0.51	0.73	0.61

Table 1: Changes in Life Expectancy at Birth (1989-1999) [36]

It is clearly visible that countries like Russian Federation, Ukraine and Belarus experienced significant drops in especially male life expectancy during the early 1990s. Countries like Czech Republic and Poland on the other hand managed to avoid such dramatic declines and even experienced some increases in life expectancy, especially after 1991. In case of all postcommunist countries, the trends were much more negative for men than for women. In comparison, Western European countries like Austria, Sweden and France experienced similar increases in life expectancy for both men and women, and those levels were generally higher than in postcommunist countries for 1989-1991 period and then the gap started to close in case of Central Europe in the following years.

In the Table 2 below, we can see the changes in Specific Death Rate for Central and Eastern Europe and the Former Soviet Union due to Ischaemic heart disease between 1989 and 1999. As an addition countries from Western Europe are included for comparison:

Country	Ischaemic Heart Disease					
	Change of Specific Death Rate in Percents					
	Male			Female		
	1989-1991	1991-1995	1995-1999	1989-1991	1991-1995	1995-1999
Czech Republic	%	%	%	%	%	%
Poland	%	%	%	%	%	%
Hungary	%	%	%	%	%	%
Russian Federation	%	%	%	%	%	%
Ukraine	%	%	%	%	%	%
Belarus	-6.55%	26.53%	12.30%			
Austria	0.88%					
Sweden	%	%	%	%	%	%
France	%	%	%	%	%	%

Table 2: Changes in Specific Death Rate due to Ischaemic Heart Disease (1989-1999) [37]

Country	Selected Alcohol-Related Causes					
	Change of Specific Death Rate in Percents					
	Male			Female		
	1989-1991	1991-1995	1995-1999	1989-1991	1991-1995	1995-1999
Czech Republic	%	%	%	%	%	%
Poland	%	%	%	%	%	%
Hungary	%	%	%	%	%	%
Russian Federation	%	%	%	%	%	%
Ukraine	%	%	%	%	%	%
Belarus	%	%	%	%	%	%
Austria	%	%	%	%	%	%
Sweden	%	%	%	%	%	%
France	%	%	%	%	%	%

Table 3: Changes in Specific Death Rate due to Selected Alcohol-Related Causes (1989-1999) [37]

Country	Selected Suicide and Self-Inflicted Injury Causes					
	Change of Specific Death Rate in Percents					
	Male			Female		
	1989-1991	1991-1995	1995-1999	1989-1991	1991-1995	1995-1999
Czech Republic	%	%	%	%	%	%
Poland	%	%	%	%	%	%
Hungary	%	%	%	%	%	%
Russian Federation	%	%	%	%	%	%
Ukraine	%	%	%	%	%	%
Belarus	%	%	%	%	%	%
Austria	%	%	%	%	%	%
Sweden	%	%	%	%	%	%
France	%	%	%	%	%	%

Table 4: Changes in Specific Death Rate due to Selected Suicide and Self-Inflicted Injury Causes (1989-1999) [37]

Country	Selected External Causes of Injury and Poisoning					
	Change of Specific Death Rate in Percents					
	Male			Female		
	1989-1991	1991-1995	1995-1999	1989-1991	1991-1995	1995-1999
Czech Republic	%	%	%	%	%	%
Poland	%	%	%	%	%	%
Hungary	%	%	%	%	%	%
Russian Federation	%	%	%	%	%	%
Ukraine	%	%	%	%	%	%
Belarus	%	%	%	%	%	%
Austria	%	%	%	%	%	%
Sweden	%	%	%	%	%	%
France	%	%	%	%	%	%

Table 5: Changes in Specific Death Rate due to Selected External Causes of Injury and Poisoning (1989-1999) [37]

	Selected Diseases of Circulatory System					
	Change of Specific Death Rate in Percents					
	Male			Female		
	1989-1991	1991-1995	1995-1999	1989-1991	1991-1995	1995-1999
Country						
Czech Republic	%	%	%	%	%	%
Poland	%	%	%	%	%	%
Hungary	%	%	%	%	%	%
Russian Federation	%	%	%	%	%	%
Ukraine	%	%	%	%	%	%
Belarus	%	%	%	%	%	%
Austria	%	%	%	%	%	%
Sweden	%	%	%	%	%	%
France	%	%	%	%	%	%

Table 6: Changes in Specific Death Rate due to Selected Diseases of Circulatory System (1989-1999) [37]

Results

Conclusion

References

- [1] Sabrina P. Ramet, editor. *Central and Southeast European Politics Since 1989*. Cambridge University Press, Cambridge, 2010.
- [2] Saul Estrin, John Bennett, James Maw, and Giovanni Urga. Privatization methods and economic growth in transition economies. Discussion Paper 4291, Centre for Economic Policy Research (CEPR), 2004.
- [3] Károly Attila Soós. Primary and secondary privatisation in central europe: The case of hungary, poland, and the czech republic. In Roman Frydman, Andrzej Rapaczynski, and Joel Turkewitz, editors, *Privatisation in the Visegrad Countries*. Central European University Press, London, 1997.
- [4] Dalibor Roháč. What are the lessons from post-communist transition? *Economic Affairs*, 36(3):324–334, 2016. doi: 10.1111/ecaf.12202.
- [5] Giovanni Andrea Cornia. Transition, recession and mortality crisis in the former soviet bloc: an update to the year 2014. Discussion Paper 10/2016, Dipartimento di Scienze per l’Economia e l’Impresa, Università di Firenze, 2016.
- [6] Elizabeth Brainerd. Market reform and mortality in transition economies. *World Development*, 26(11):2013–2027, 1998. doi: 10.1016/S0305-750X(98)00108-8.
- [7] Ewa Bujwid-Kurek and Dominika Mikucka-Wójtowicz. *Transformacja ustroju politycznego wybranych państw Europy Środkowej i Południowo-Wschodniej: Podręcznik akademicki*. Wydawnictwo LIBRON - Filip Lohner, Kraków, 2015. ISBN 978-83-65148-56-8.
- [8] Samuel P. Huntington. *The Third Wave: Democratization in the Late Twentieth Century*. University of Oklahoma Press, Norman, 1991.
- [9] Jerzy J. Wiatr. The crisis of democracy: An east-central european perspective. *Politics in Central Europe*, 16(2):353–365, 2020. doi: 10.2478/pce-2020-0016.
- [10] Herbert Kitschelt. Divergent paths of postcommunist democracies. In Larry Diamond and Marc F. Plattner, editors, *The Global Divergence of Democracies*, pages 307–331. Johns Hopkins University Press, Baltimore, 2001.
- [11] Saul Estrin. *Privatisation in Central and Eastern Europe*. Longman, London, 1994.
- [12] Andrew Berg and Jeffrey Sachs. Structural adjustment and international trade in eastern europe: The case of poland. *Economic Policy*, 7(14):117–174, 1992.
- [13] Patrick Hamm, Lawrence P. King, and David Stuckler. Mass privatization, state capacity, and economic growth in post-communist countries. *American Sociological Review*, 77(2):295–324, 2012. doi: 10.1177/0003122412437648.

- [14] David Stuckler, Lawrence King, and Martin McKee. Mass privatisation and the post-communist mortality crisis: a cross-national analysis. *The Lancet*, 373(9661):399–407, 2009. doi: 10.1016/S0140-6736(09)60005-2.
- [15] Anton Marcinčin and Sweder van Wijnbergen. The impact of czech privatization methods on enterprise performance incorporating initial selection bias correction. Discussion Paper 1640, Centre for Economic Policy Research (CEPR), 1997.
- [16] Simeon Djankov and Peter Murrell. Enterprise restructuring in transition: A quantitative survey. *Journal of Economic Literature*, 40(3):739–792, 2002. doi: 10.1257/002205102760199933.
- [17] Daniel Kaufmann and Paul Siegelbaum. Privatization and corruption in the transition economies. *Journal of International Affairs*, 50(2):433–458, 1997.
- [18] Karla Hoff and Joseph E. Stiglitz. After the big bang? obstacles to the emergence of the rule of law in post-communist societies. *American Economic Review*, 94(3):754–763, 2004. doi: 10.1257/0002828041464521.
- [19] Joseph E. Stiglitz. Whither reform: Ten years of the transition. In *Annual World Bank Conference on Development Economics*, Washington, DC, April 1999.
- [20] Andrzej Cieřlik and Łukasz Goczek. Corruption, privatisation and economic growth in post-communist countries. *Europe-Asia Studies*, 70(8):1303–1325, 2018. doi: 10.1080/09668136.2018.1511771.
- [21] Irina Denisova, Markus Eller, Timothy Frye, and Ekaterina Zhuravskaya. Everyone hates privatization, but why? survey evidence from 28 post-communist countries. *Journal of Comparative Economics*, 40(1):44–61, 2012. doi: 10.1016/j.jce.2011.08.001.
- [22] Giovanni Andrea Cornia. The mortality crisis in transition economies. *IZA World of Labor*, (298), October 2016. doi: 10.15185/izawol.298.
- [23] Nicholas Eberstadt. The enigma of russian mortality. *The Public Interest*, 135:3–28, 1999.
- [24] Aytalina Azarova, Dmirtij Irdam, Alexi Gugushvili, Mihaly Fazekas, R. V. Horn, Magdalena Będzia-Kawa, Gęnter Sotgetges, Yulia Sereda, Martin McKee, Lawrence P. King, and David Stuckler. The effect of rapid privatisation on mortality in mono-industrial towns in post-soviet countries: a serial cross-sectional study. *The Lancet Public Health*, 3(10):e485–e493, 2018. doi: 10.1016/S2468-2667(18)30172-8.
- [25] Agnieszka Fihel. Between ‘pioneers’ of the cardiovascular revolution and its ‘late followers’: Mortality changes in the cee region. *Studia Demograficzne*, 1(159):3–26, 2011.
- [26] Lawrence King, Patrick Hamm, and David Stuckler. Rapid large-scale privatization and death rates in ex-communist countries: An analysis of stress-related and health system mechanisms. *International Journal of Health Services*, 39(3):443–459, 2009. doi: 10.2190/HS.39.3.c.

- [27] Aytalina Azarova, David Stuckler, Martin McKee, Alexi Gugushvili, T. Roberts, and Lawrence King. Did alcohol policy really cause the postsocialist mortality crisis? a re-examination of stuckler et al. *European Sociological Review*, 35(6):902–910, 2019. doi: 10.1093/esr/jcz041.
- [28] Gabor Scheiring, Denes Stefler, Darja Irdam, Mihaly Fazekas, Aytalina Azarova, Irina Kolesnikova, János Köllő, Vladimir Popov, Ivan Szelenyi, and Michael Marmot. The gendered effects of foreign investment and prolonged state ownership on mortality in hungary: an indirect demographic, retrospective cohort study. *The Lancet Global Health*, 6(1):e78–e88, 2018. doi: 10.1016/S2214-109X(17)30391-1.
- [29] John S. Earle and Scott Gehlbach. Mass privatisation and the post-communist mortality crisis: Is there really a relationship? Discussion Paper 5155, Institute for the Study of Labor (IZA), 2010.
- [30] Christopher J. Gerry, Tomasz M. Mickiewicz, and Zlatko Nikoloski. Did mass privatisation really increase post-communist mortality? *The Lancet*, 375(9712):371, 2010. doi: 10.1016/S0140-6736(10)60158-4.
- [31] John S. Earle and Scott Gehlbach. Did post-communist privatization increase mortality? *The B.E. Journal of Economic Analysis And Policy*, 13(2):647–679, 2013. doi: 10.1515/bejeap-2012-0008.
- [32] Jay Bhattacharya, Christina Gathmann, and Grant Miller. The gorbachev anti-alcohol campaign and russia’s mortality crisis. *American Economic Journal: Applied Economics*, 5(2):232–260, 2013. doi: 10.1257/app.5.2.232.
- [33] Daniel Treisman. Death and prices: The political economy of russia’s alcohol crisis. *Economics of Transition*, 18(2):281–331, 2010. doi: 10.1111/j.1468-0351.2010.00388.x.
- [34] Gabor Scheiring, Darja Irdam, and Lawrence P. King. Cross-country evidence on the social determinants of the post-socialist mortality crisis in europe: a review and performance-based hierarchy of variables. *Sociology of Health & Illness*, 41(S1):36–56, 2019. doi: 10.1111/1467-9566.12846.
- [35] Christopher J. Gerry. The journals are full of great studies but can we believe the statistics? revisiting the mass privatisation–mortality debate. *Social Science & Medicine*, 75(1):14–22, 2012. doi: 10.1016/j.socscimed.2011.12.027.
- [36] University of California, Berkeley and Max Planck Institute for Demographic Research. Human mortality database. <https://www.mortality.org>, 2025. Accessed: 2025-11-16.
- [37] WHO Regional Office for Europe. European health for all database (hfa-db). <https://gateway.who.int/en/datasets/european-health-for-all-database/>, 2025. Accessed: 2025-11-16.