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November 2020

Public Healthcare Expenditures in Transition Countries: does Government Spending Respond to Public Preferences?

The transition from centrally planned to free-market economies in 1989 initiated a period of social and economic upheaval in post-communist countries, which affected healthcare quality, expenditures, and outcomes. We use data from the Life in Transition Survey (LiTS) to demonstrate that in spite of improvements across various measures of these facets of the healthcare system, it remains the first choice for additional government spending among the public in all countries of the region included in this study. Preferences in priorities for extra budget spending were similar among men and women in respective countries, but the preference for additional healthcare spending was stronger among women than men. The transition countries are compared with Germany and Italy – two Western European LiTs survey participants, countries with higher spending and better healthcare outcomes.



Introduction

Across the globe, the outbreak of the COVID-19 pandemic has brought a new spotlight to the preparedness of healthcare systems for profound shocks (Anser et al, 2020). Critical care is a particularly costly element of healthcare provision, and thus, under-resourced systems are uniquely susceptible to spikes in mortality resulting from an oversaturation of intensive care units during an epidemiological crisis of this sort. (Fowler et al, 2008; Mannucci et al, 2020) Considering the widespread discussion surrounding health system capacity and the necessity for implementing economically painful lockdowns when those limits are reached, pressure from society to increase public spending may grow even further. With these developments in mind, in this policy paper, we confront past expressions of preferences regarding public expenditures with changes in government spending on healthcare between 2006 and 2017. The analysis draws on the one hand on the data from the Life in Transition Survey (LiTS), and on the other on publicly available data on government expenditures and outcomes.

In the context of preferences for additional public spending, we present a descriptive summary of trends in government expenditures on healthcare in Armenia, Belarus, Estonia, Georgia, Latvia, Lithuania, Moldova, Poland, Russia, and Ukraine. We include Italy and Germany as wealthier Western benchmarks, for which the data became available in the second wave of the survey in 2010. Data on public healthcare spending shows that despite a clear and strong public preference for increased investment in healthcare provision, additional spending as a proportion of total government expenditures between 2006 and 2017 has been moderate in most countries, and even negative in some. It must be underlined that expenditures are not always reflected in healthcare outcomes, quality, and coverage. Issues of efficiency, system design, and underlying health conditions of the population play a significant role in the returns on investment. For instance, the United States has spent drastically more per capita on healthcare than any other country and yet ranked lowest in the Healthcare Access and Quality (HAQ) Index among comparable countries (Fullman et al, 2016). However, due to the focus of the survey on government spending, we emphasize government expenditures on healthcare as a pertinent measure, especially in relation to overall GDP, per capita spending, and the public budget as a whole.

There is mounting evidence that one of the most important elements in the mitigation of COVID-19 mortality is the ability to expand system capacity and acquire the necessary equipment (e.g. respirators, ventilators) while ensuring that there is equitable access to measures for spread prevention (e.g. testing) (Khan et al, 2020; Ranney et al, 2020; Wang and Tang, 2020). The increasing pressure on healthcare systems, coupled with the additional fiscal strain resulting from the economic fallout of the pandemic, could lead to further divergence between public preferences and government spending on healthcare.

Healthcare systems during the transition

The ability of transition countries to absorb the risks and short-term economic shocks associated with pivoting from a centrally planned to a free-market economy has had dramatic implications for healthcare systems. Although countries in this region were divergent in terms of underlying health conditions, levels of expenditures, and health outcomes, most of them fell victim to deficient funding and additional health risks associated with the initial increases in poverty that were commonplace (Adeyi et al, 1997)



Compared to other transition countries, Georgia and Armenia faced a sharper economic collapse as well as armed conflicts, which caused scarcity in the availability of public healthcare providers and spikes in out-of-pocket expenses. Belarus was slower in the implementation of economic reforms and faced issues of fiscal sustainability further down the line (Balabanova et al, 2012). However, following this short tumultuous period, countries transitioning away from centrally planned economies have generally invested heavily in healthcare since the early 1990s. In many cases, these investments were facilitated by rapid GDP growth and accompanied by significant improvements in life expectancy. For example, between 1989 and 2012, Latvia, Lithuania, and Poland increased their per capita healthcare expenditures by more than 1,000 PPP per year, with an increase in life expectancy ranging from 1.7 years in Lithuania to 5.8 years in Poland (Jakovljevic et al, 2015). Despite heterogeneous and extensive reforms in many of these countries, as well as mixed results in measurements of efficiency and outcomes, healthcare expenditures consistently rank as the top priority for further government spending among both men and women in each country. This consistency lends itself to further policy considerations.

Preferences for government spending in transition countries

As is demonstrated by Figure 1, in 2016, healthcare was the most common answer to the question - “Which field should be the first priority for extra government spending?” - for all ten post-transition countries included in our analysis (the other options were: education, housing, pensions, assisting the poor, public infrastructure, the environment, and other). The survey was carried out on a representative sample that covers approximately 1,000+ respondents from each of the 29 countries in wave I and up to 1,500+ respondents from each of the 34 countries in wave III (EBRD: LiTS, 2020). Despite intercountry differences, in 2016 healthcare persisted as the top priority for both men and women in every transition country we studied apart from Belarus. While healthcare remained the top priority on average, men expressed a higher preference for additional investment in education. In the countries where preferences for health were particularly strong, healthcare was the first priority for as many as 53.5% of Latvians, 47.7% of Poles, and 43.9% of Moldovans (Figure 1a). Notwithstanding some fluctuations in scale, these preferences were not only common across countries but also across time, with people expressing very similar preferences in the first two waves of the survey in 2006 and 2010. (See Annex Figure A1 and Figure A2). While healthcare remained a popular choice in Germany and Italy, spending on healthcare as a percentage of GDP was nearly twice that of any transition country in Germany. There, education outweighed healthcare among men and women in both available waves (II and III), while pensions surpassed healthcare among men in the latter wave. In Italy, despite a more comparable level of healthcare spending relative to the transition countries, a drastic shift took place as healthcare fell from being the first priority by a large margin of 24.9 percentage points (pp) in 2010 to becoming the second priority after pensions in 2016. This can likely be attributed to the prominence of pensions as a major political campaign issue following the austerity-driven reforms of 2011 (Alfonso and Bulfone, 2019).



Figure 1a: Preferences for additional government spending, 2016

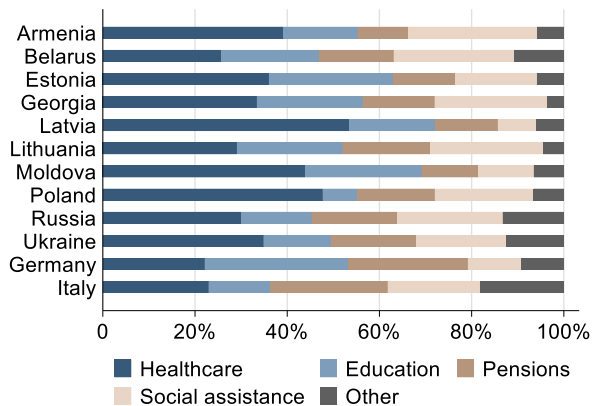
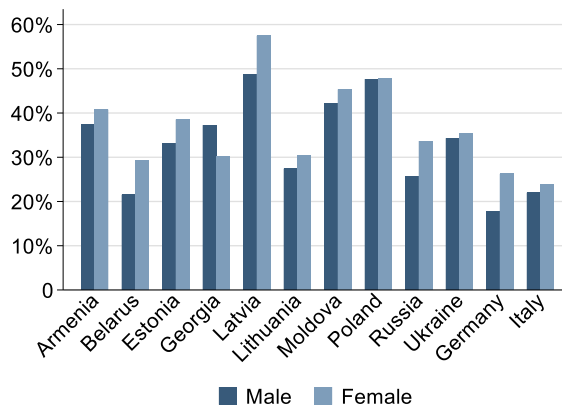


Figure 1b: Preference for additional healthcare spending by gender, 2016



Source: LiTS Wave III data (2016).

Notes: Figures show proportions of declared preferences as replies to the question: “Which field should be the first priority for extra government spending?” For clarity of exposition the category ‘social assistance’ aggregates first priority choices of ‘assisting the poor’ and ‘housing’; the category ‘other’ also includes the least popular choices ‘public infrastructure’ and ‘environment’.

Moreover, it is evident that men and women within countries have rather similar preferences, as far as extra government spending is concerned. Not only is healthcare the first priority in all ten transition countries, but their second, third, and fourth choices are also very similar. When digging deeper into the differences that do exist, in every country except for Georgia women had a stronger preference for healthcare than men, and by as much as 8.8 pp, 8.4 pp, 7.8 pp, and 7.9 pp in Latvia, Germany, Belarus, and Russia respectively (Figure 1b). Conversely, in every case except for Georgia and Ukraine, men had a stronger preference for additional spending on education than women, most notably in Armenia – by 7.8 pp, Germany – by 5.7 pp, Lithuania – by 4.6 pp and Poland – by 3.9 pp. It is apparent that despite rapid investment in healthcare over the first two decades of the transition, there remains a widespread desire for further expansion of expenditures in this area.

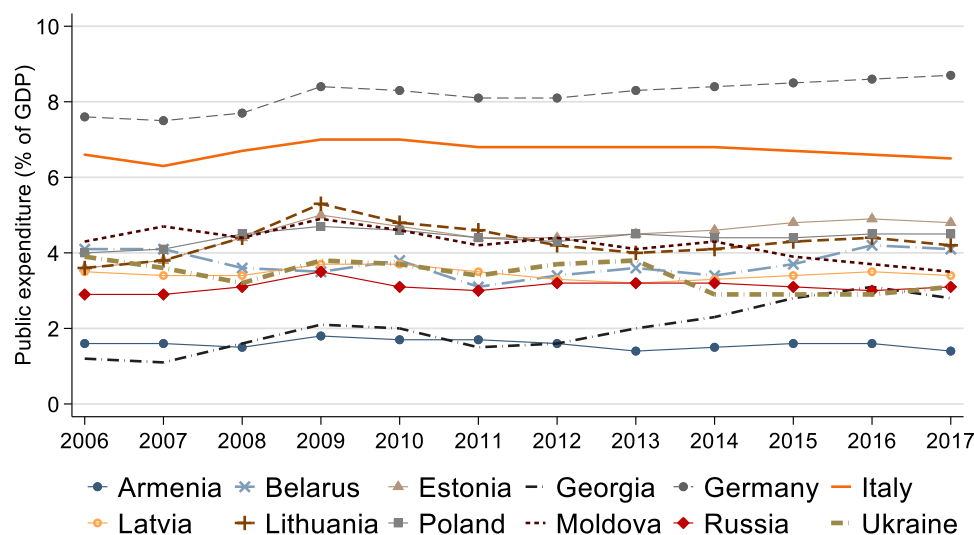
Trends in government expenditures, 2006-2017

Considering the primacy of healthcare as the priority for additional government spending in all ten studied transition countries, we look at trends in aggregate statistics on government expenditures on healthcare over the surveyed period to explore the extent to which these preferences have been reflected in government spending. Taking the most basic measure into account in Figure 2a, i.e. public health expenditures as a percentage of GDP, among the transition countries only Georgia and Estonia have significantly increased their healthcare expenditures, by 1.6 pp and 1.2 pp, respectively. Lithuania, Poland, and Russia saw more moderate increases in the range of 0.6 pp and 0.2 pp. Other countries have remained essentially stagnant, apart from Moldova and Ukraine which saw a notable drop of 0.8 pp. Considering that this measure is sensitive to fluctuations in GDP growth, we also consider public health spending as a proportion of all government expenditures (see figure A3 in the Annex), which is a better



indicator of government priorities for additional spending from 2006 until 2017. Georgia was the only transition country with a significant increase in healthcare spending proportional to total government expenditures, nearly doubling it from 5.2% to 9.5%. Belarus, Estonia, Lithuania, Poland have implemented a more moderate redirection of the budget towards healthcare, increasing proportional expenditures by a factor of 1.26, 1.15, 1.21, and 1.21 respectively. In spite of public preferences, Armenia decreased the proportional share of the budget dedicated to healthcare by as much as 2.6 pp, Moldova, Russia, and Ukraine by 1.3 pp, and Latvia by 0.8 pp. Regardless of the direction of the trend, notwithstanding some slight convergence, no transition country spent as much of its budget on healthcare as Italy and Germany. The latter spent nearly two to four times as much on healthcare as a proportion of total expenditures compared to the studied transition countries, and this gap has been widening relative to all of those included in the analysis, apart from Georgia.

Figure 2: Public healthcare expenditures (% of GDP)



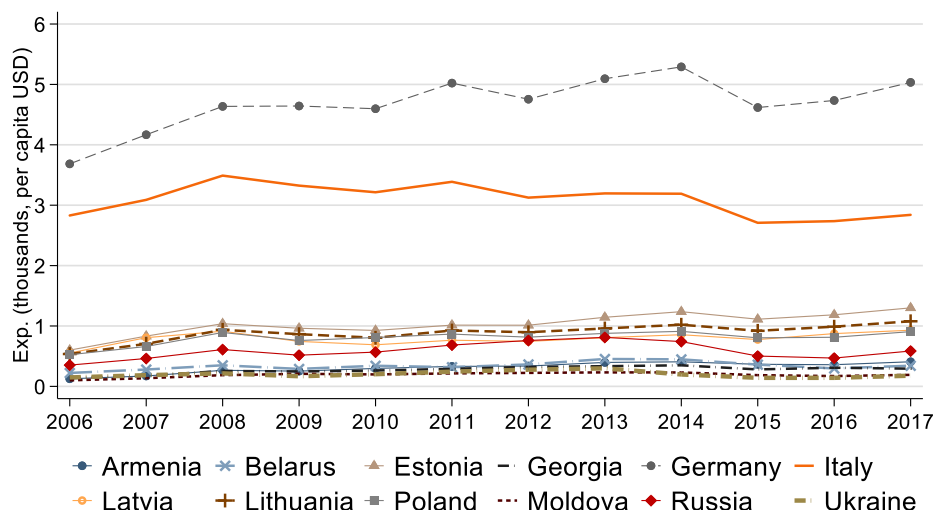
Source: WHO, 2020

While expenditures per capita are less indicative of government priorities in the budget, they are a better comparative measure for assessing the changes in healthcare provision, barring differences in efficiency. This comes with a huge caveat, namely that it is well established in the literature that additional healthcare expenditures often translate into “small to moderate” direct improvements in healthcare quality and outcomes due to inefficient spending or underlying factors (e.g. lifestyle choices, poverty) that are not addressed by investment in the healthcare system itself (Hussey et al, 2013; Self and Grabowski, 2003). Nevertheless, this measure is more likely to translate to an improvement in the quality of care each person receives, and the data paints a more positive picture considering the clear preference of both men and women for higher spending. In Figure 3 we present healthcare expenditures per capita in USD, and apart from Italy and Ukraine, all of the countries have significantly increased spending between 2006 and 2017. While expenditures per capita in transition countries are dwarfed by Germany and Italy, Estonia, Georgia, and Lithuania have more than doubled their expenditures, and Armenia has more than tripled. Belarus, Latvia, Poland, Moldova, and Russia have also significantly increased their per capita spending on healthcare, by factors in the range of 1.54 and 1.91. However,



while expenditures per capita is one indicator of improving healthcare quality, it does not identify government priorities and is largely dependent on overall economic growth (Fuchs, 2013; Bedir, 2016).

Figure 3: Health care expenditure per capita, USD

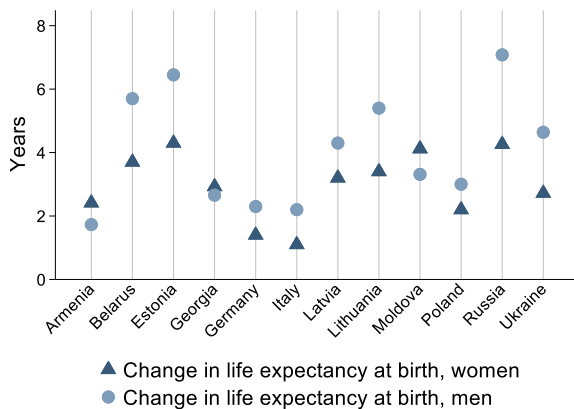


Source: WHO, 2020

In every country we include, increasing healthcare expenditure per capita is accompanied by advancements in many measures of healthcare outcomes for men and women. Between 2006-2017, life expectancy at birth increased across the board, with men in Russia experiencing the greatest improvement of 7.1 years (Figure 4a). These are promising trends – for women, life expectancy at birth improved by a larger margin in each transition country than in Germany or Italy, and the same can be said for men in every country apart from Armenia. Furthermore, the Healthcare Access and Quality (HAQ) index, which is composed of 32 indicators related to preventable causes of mortality, has improved across all 12 countries between 2005-2016. The change was most notable in Armenia, Belarus, Estonia, and Russia, constituting as much as 8.7, 10.2, 8.9, and 8.9 points out of a hundred, respectively (Figure 4b). These trends indicate convergence in the quality of healthcare as they significantly outpaced improvements in the HAQ index in Italy (3.1 points) and Germany (3.9 points). As of 2016, among the countries of interest, Georgia (67.1 points) and Moldova (67.4) had the lowest scores, while Germany (92.0) and Italy (94.9) scored highest, as could be expected based on healthcare spending measures presented in Figures 2 and 3.

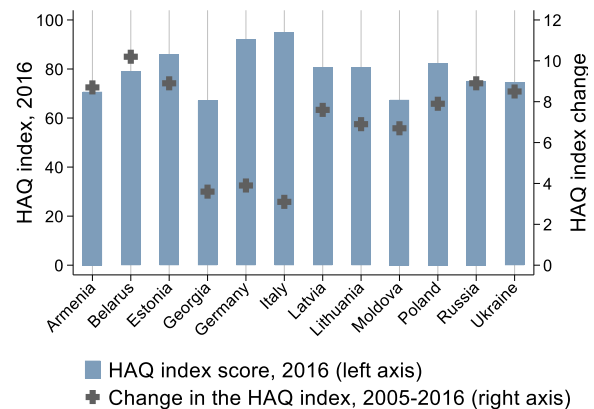


Figure 4a: Change in life expectancy, 2006-2017



Source: The World Bank (2020).

Figure 4b: HAQ index

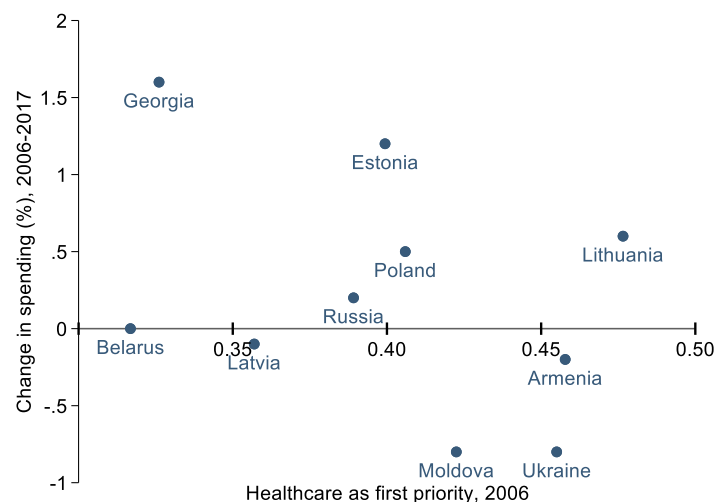


Source: Institute for Health Metrics and Evaluation (2018).

Notes: The HAQ index is composed of 32 indicators, each related to a cause of death that is preventable with the proper healthcare. The scale ranges from 0 (worst) to 100 (best).

However, as presented in Figure 5, there is no clear relationship between the strength of the preference for additional healthcare spending and the scale of expansion in spending. Taking three of the four countries (Armenia, Belarus, and Russia) with the greatest improvement in the HAQ index as an example, there was virtually no change in healthcare spending as a percentage of GDP over the same period. These countries were also different in terms of how strong the preferences were for additional spending on healthcare as the first priority in 2006.

Figure 5: Public preferences and government healthcare spending (% of GDP)



Source: LiTS Wave I data (2006), The World Bank (2020).

Notes: Germany and Italy were not included in the 2006 wave of the LiTS survey; thus, they are not shown here.



Conclusion

As we have demonstrated in this brief, in the ten post-communist countries for which we have analyzed LiTS data, there was a consistent and common preference for healthcare as the first priority for extra government spending between 2006 and 2016. We also find that in each country except Georgia, on average, women had a stronger preference for additional public healthcare spending, supporting a wealth of literature that suggests that women utilize healthcare services more frequently and spend more out of pocket on healthcare than men (Owens, 2008; Cylus et al, 2011; Williams et al, 2017). However, over the period we study, these preferences have not translated directly into a reallocation of budgetary resources. The countries with the strongest preferences for additional healthcare spending in 2006 did not experience the highest increases in any of the discussed measures of public healthcare expenditures since then.

People living in Italy and Germany chose an increase in public spending on healthcare as their first priority less frequently than residents of post-transition countries. Better understanding these differences requires further research, but there is likely a combination of factors that play into this effect. For one, wealthier Western countries performed better when looking at simple measures of healthcare outcomes such as life expectancy and deaths from non-communicable diseases (WHO, 2020), and hence other priorities may have gained in salience. Furthermore, they allocated a greater proportion of the public budget towards healthcare. This in part stems from the significant challenges associated with the transition following 1989. Healthcare systems in post-communist countries experienced a fiscal shock when joining the global economy, with the loss of centrally controlled price mechanisms causing an increase in the relative prices of healthcare inputs such as medicines and equipment (Obrizan, 2017). This was exacerbated by a shrinking capability of governments to spend more on healthcare related to the general economic shocks at that time and led to the passing over of costs to patients in the form of out-of-pocket expenses (Balabanova, et al. 2012). Although access to healthcare and the quality of that care have improved after the transition (Romaniuk and Szromek, 2016), these have failed to converge towards Western European countries on a number of substantial measures up to this point. Before the commencement of the COVID-19 pandemic, government healthcare spending did not reflect the preferences of the public in any of the ten studied transition countries. The outbreak of the pandemic has not only intensified the pressure on the healthcare system but also brought about a number of negative economic consequences. This combination can be expected to simultaneously increase the strain on the public budget and necessitate difficult decisions of reallocation at a time when fiscal sustainability during a global recession is already being brought under question (Creel, 2020).

References

- Adeyi, O., Chellaraj, G., Goldstein, E., Preker, A. and Ringold, D., 1997. Health status during the transition in Central and Eastern Europe: development in reverse?. *Health Policy and Planning*, 12(2), pp.132-145.
- Afonso, A. and Bulfone, F., 2019. Electoral coalitions and policy reversals in Portugal and Italy in the aftermath of the eurozone crisis. *South European Society and Politics*, 24(2), pp.233-257.
- Anser, M.K., Yousaf, Z., Khan, M.A., Nassani, A.A., Alotaibi, S.M., Abro, M.M.Q., Vo, X.V. and Zaman, K., 2020. Does communicable diseases (including COVID-19) may increase global poverty risk? A cloud on the horizon. *Environmental Research*, 187, p.109668.
- Balabanova, D., Roberts, B., Richardson, E., Haerpfer, C. and McKee, M., 2012. Health Care Reform in the Former Soviet Union: Beyond the Transition. *Health services research*, 47(2), pp.840-864.
- Bedir, S., 2016. Healthcare expenditure and economic growth in developing countries. *Advances in Economics and Business*, 4(2), pp.76-86.



- Creel, J., 2020. Fiscal space in the euro area before Covid-19. *Economics Bulletin*, 40(2), pp.1698-1706.
- Cylus, J., Hartman, M., Washington, B., Andrews, K. and Catlin, A., 2011. Pronounced gender and age differences are evident in personal health care spending per person. *Health Affairs*, 30(1), pp.153-160.
- Fuchs, V.R., 2013. The gross domestic product and health care spending. *N Engl J Med*, 369(2), pp.107-109.
- EBRD, 2020. Life in Transition Survey (LiTS). European Bank for Reconstruction and Development.
- Fowler, R.A., Adhikari, N.K. and Bhagwanjee, S., 2008. Clinical review: critical care in the global context—disparities in burden of illness, access, and economics. *Critical Care*, 12(5), p.225.
- Fullman, N., Yearwood, J., Abay, S.M., Abbafati, C., Abd-Allah, F., Abdela, J., Abdelalim, A., Abebe, Z., Abebo, T.A., Aboyans, V. and Abraha, H.N., 2018. Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational locations: a systematic analysis from the Global Burden of Disease Study 2016. *The Lancet*, 391(10136), pp.2236-2271.
- Global Burden of Disease Collaborative Network, 2018. Global Burden of Disease Study 2016 (GBD 2016) Healthcare Access and Quality Index Based on Amenable Mortality 1990–2016. Seattle, United States: Institute for Health Metrics and Evaluation (IHME).
- Hussey, P.S., Wertheimer, S. and Mehrotra, A., 2013. The association between health care quality and cost: a systematic review. *Annals of internal medicine*, 158(1), pp.27-34.
- Mannucci, E., Silverii, G.A. and Monami, M., 2020. Saturation of critical care capacity and mortality in patients with the novel coronavirus (COVID-19) in Italy. *Trends in Anaesthesia and Critical Care*.
- Jakovljevic, M.B., Vukovic, M. and Fontanesi, J., 2016. Life expectancy and health expenditure evolution in Eastern Europe—DiD and DEA analysis. *Expert Review of Pharmacoeconomics & Outcomes Research*, 16(4), pp.537-546.
- Obrizan, M., 2017. Does EU membership prevent crowding out of public health care? Evidence from 28 transition countries.
- Owens, G., 2008. Gender differences in health care expenditures, resource utilization, and quality of care. *Journal of Managed Care Pharmacy*, 14(3), pp.2-6.
- Ranney, M.L., Griffeth, V. and Jha, A.K., 2020. Critical supply shortages—the need for ventilators and personal protective equipment during the Covid-19 pandemic. *New England Journal of Medicine*, 382(18), p.41.
- Romaniuk, P. and Szromek, A.R., 2016. The evolution of the health system outcomes in Central and Eastern Europe and their association with social, economic and political factors: an analysis of 25 years of transition. *BMC health services research*, 16(1), p.95.
- Self, S. and Grabowski, R., 2003. How effective is public health expenditure in improving overall health? A cross-country analysis. *Applied Economics*, 35(7), pp.835-845.
- Wang, Z. and Tang, K., 2020. Combating COVID-19: health equity matters. *Nature Medicine*, 26(4), pp.458-458.
- Williams, J.S., Bishu, K., Dismuke, C.E. and Egede, L.E., 2017. Sex differences in healthcare expenditures among adults with diabetes: evidence from the medical expenditure panel survey, 2002–2011. *BMC health services research*, 17(1), p.259.
- World Bank, 2020. Data Bank: World Development Indicators. Washington D.C., World Bank Group.
- World Health Organization, 2020. Global Health Observatory (GHO) data.



Annex

Figure A.1a: Preferences for additional government spending, 2010

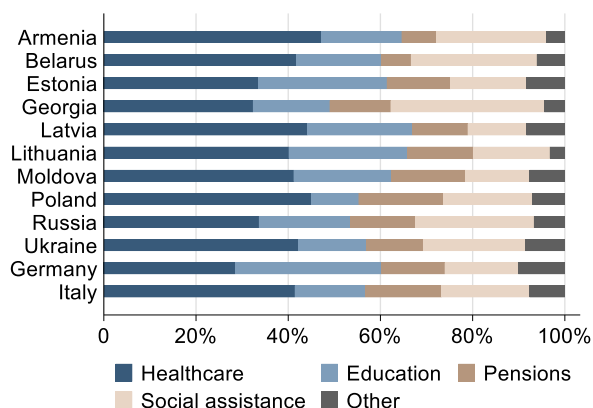
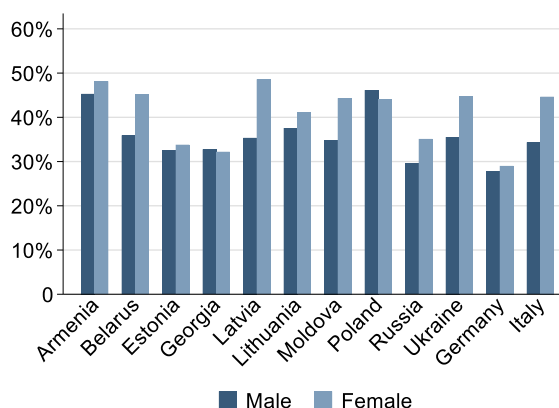


Figure A.1b: Preference for additional healthcare spending by gender, 2010



Source: LiTS Wave II data (2010).

Notes: Figures show proportions of declared preferences as replies to the question: "Which field should be the first priority for extra government spending?" For clarity of exposition the category 'social assistance' aggregates first priority choices of 'assisting the poor' and 'housing'; the category 'other' also includes the least popular choices 'public infrastructure' and 'environment'.

Figure A.2a: Preferences for additional government spending, 2006

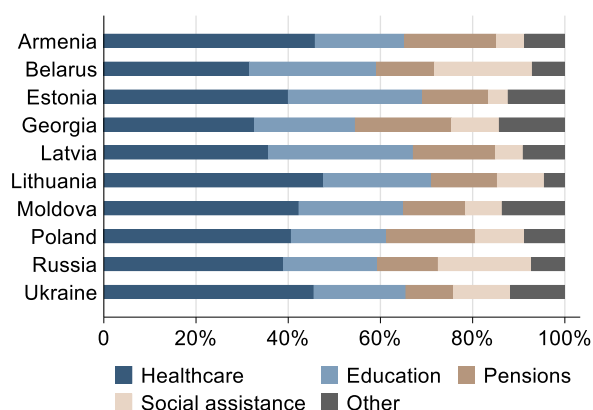
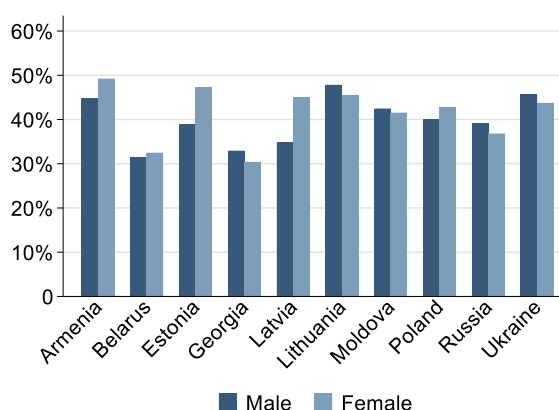


Figure A.2b: Preference for additional healthcare spending by gender, 2006

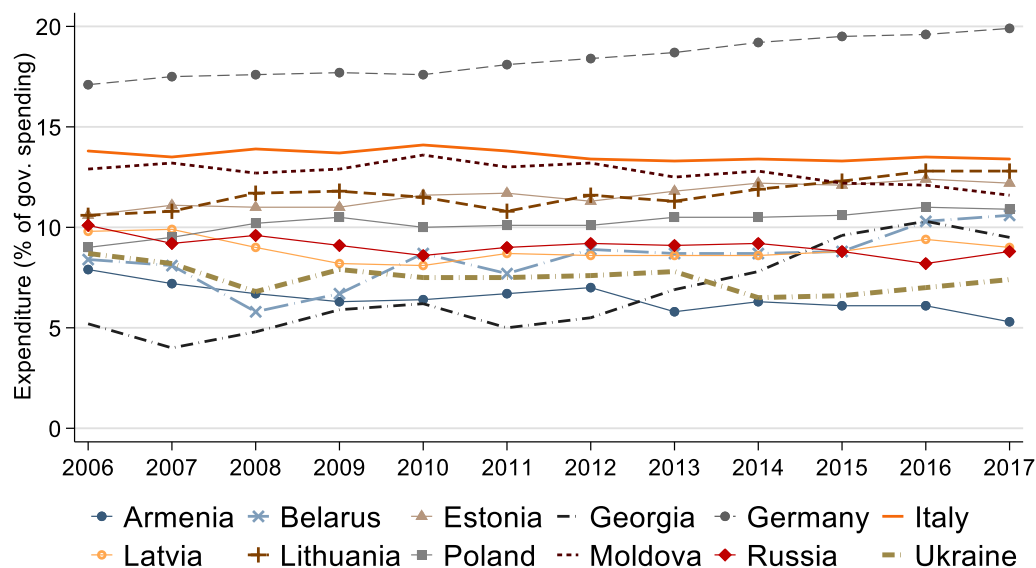


Source: LiTS Wave I data (2006).

Notes: Figures show proportions of declared preferences as replies to the question: "Which field should be the first priority for extra government spending?" For clarity of exposition the category 'social assistance' aggregates first priority choices of 'assisting the poor' and 'housing'; the category 'other' also includes the least popular choices 'public infrastructure' and 'environment'.

Figure A3: Public healthcare expenditures (% total government spending)





Source: WHO, 2020

Disclaimer

This Policy Paper was prepared under the FROGEE project, with financial support from the Swedish International Development Cooperation Agency (Sida). FROGEE papers contribute to the discussion of inequalities in the Central and Eastern Europe. For more information, please visit www.freepolicybriefs.com. The views presented in the Policy Paper reflect the opinions of the Authors and do not necessarily overlap with the position of the FREE Network or Sida.





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