Research Article

Post-Communist Health Transitions in Central and Eastern Europe

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1. Introduction

Two decades have passed since the countries of Central and Eastern Europe (CEE) like countries in the former Soviet Union went through immense political and socioeconomic restructuring that began around 1990 with the collapse of communism. Since then, they have embarked on a transition from closed, totalitarian, and centrally planned economies towards open, democratic, and market-based economies. Such transition has affected the lives of populations in these countries in many significant respects. A key aspect of life and wellbeing in any society is that of population health. This paper traces the transitions in population health—life expectancies and mortality rates for both males and females—in seven of the CEE countries during the two decades after the fall of communism. We estimate a series of panel data models to identify some of the common factors that would explain health transitions in these countries, while allowing for country-specific variability. Our findings indicate that the health transitions are strongly country specific. Moreover, income per capita and trade openness are statistically significant common contributors to health transitions.

The countries of Central and Eastern Europe (CEE) have gone through immense political and socioeconomic restructuring after the collapse of communism around 1990. Such transition has affected the lives of populations in these countries in many significant respects. A key aspect of life and wellbeing in any society is that of population health. This paper traces the transitions in population health—life expectancies and mortality rates for both males and females—in seven of the CEE countries during the two decades after the fall of communism. We estimate a series of panel data models to identify some of the common factors that would explain health transitions in these countries, while allowing for country-specific variability. Our findings indicate that the health transitions are strongly country specific. Moreover, income per capita and trade openness are statistically significant common contributors to health transitions.
Beyond the lifestyle factors, poor health outcomes in the CEE countries are related to poorly organized and inefficient health care systems. The latter have been typically oversupplied with doctors and hospital beds, but unequipped with modern technology, and are said to be ill-prepared to engage in health promotion or behavior change [8].

At the societal level, Kickbusch [11] considers the extent of civil society, Bobak et al. [12] find income inequality and corruption, and Stuckler et al. [13] point out mass privatization as some of the relevant factors that have influenced population health in these countries. Although a key aspect of transition has been that of political change from autocratic/totalitarian regimes to democratic ones, little attention has been paid to the role of polity on health in these transitional countries. A few studies have empirically examined the role of democracy (or lack thereof) on population health [13–16]. Such studies involve many countries around the world with no particular focus on transitional countries. Also, Cockerham et al. [17] and Cockerham et al. [18] in two related studies examine the effect of political ideology (pro- or anti-communism) on healthy life styles and individual self-rated health in Russia, Belarus, and Ukraine.

This paper traces the transitions in population health in connection with a few broad macroeconomic and political covariates over the 1990–2009 time period. While it is true that the CEE countries all went through restructuring at about the same time and, generally speaking, they have all moved towards greater political freedom and market-based economy, there have been significant variations in the experiences of individual countries as related to their historical, sociocultural, ethnic, and other distinguishing backgrounds. To allow for such variability, we use a series of panel data models to capture unobserved heterogeneity across these countries. The intent is to identify some of the common factors that would explain health transitions in these countries, while allowing for country-specific variability.

The rest of the paper is organized as follows. Section 2 provides a description of health transitions in each of the seven CEE countries along with trends in income per capita and trade openness over the period of study. Section 3 discusses the details of the methodology and data considerations. Section 4 reports and discusses the estimation results. Section 5 concludes the paper.

2. Description of Health Transitions

Before doing a formal statistical analysis, a description of health transitions over time would be helpful. To give a sense of the health outcomes before the fall of communism for comparison to those over the period after the fall, health data for the extended period 1985–2009 are considered, although the focus of the study is in the post-communist period 1990–2009. Our focus in this study is on seven countries of CEE, namely, Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia, and Slovenia. With the exception of Czech Republic and Slovakia (both part of the former Czechoslovakia till 1993), these countries were independent states before the collapse of communism and thus have retained much of their national identities.

We examine transitions in infant mortality (IM), child (less than 5 years old) mortality (CM), standardized all-cause mortality for all ages, (AM), and suicide rates (SR). As well, we describe the trends in life expectancies at birth (LEB), at age 45, (LE45), and at age 65 (LE65) as general indicators of population health. These data were taken from the World Health Organization (WHO) databases. Mortality rates are shown in Figures 1, 2, 3, and 4 for males and Figures 5–8 for females. Life expectancies are depicted in Figures 9, 10, and 11 for males and Figures 12, 13, and 14 for females.

It can be seen from Figures 1 and 2 (for males) and Figures 5 and 6 (for females) that both infant and child mortality rates were generally falling prior to 1990, with the exception of Romania that showed no decline. Indeed, Romania had the highest infant and child mortality rates at the beginning of the period and remained in this position for the entire period. Lack of adequate prenatal care and the epidemic of pediatric AIDS are noted to have been responsible for the higher rates of infant and child mortality, respectively, in this country [19]. Bulgaria whose infant and child mortality was about the average for the rest of the countries showed no discernable trend during 1985–1990 either. However, it distinguished itself from those countries after 1990 and attained the second highest mortality rates for infants and children with a marked distance from Romania. Poland, Hungary, and Slovakia were in the middle of the group, while Czech Republic and Slovenia had the lowest mortality among the group. However, aside from different starting rates across the countries, a general downward trend throughout this time period is visible for both infant and child mortality. Thanks to steeper declines in such mortalities in Romania and Hungary, especially during the recent years, the countries appear to converge to significantly
lower mortality rates, but still keeping their relative distances. As expected, infant and child mortality rates are consistently higher for males than females.

Figures 3 and 7 show a less clear country-specific pattern for all-cause mortality. Hungary had the highest rate for all-cause male mortality for much of the period, whereas Romania had the highest rate for females. While the other countries in the middle changed their positions, Slovenia clearly stood out as the country with the lowest all-cause mortality. Despite a rise in all-cause male mortality in Romania, Bulgaria, and Hungary in the years right after the collapse due to factors such as rising mortalities from cardiovascular and digestive system diseases as indicated by Dolea et al. [19] and Chenet et al. [20], there has been an overall decline in all-cause mortality rates across the countries for both males and females starting in mid- to late 1990s. All-cause male mortalities were much higher than those for females.

Separate data for male and female suicide rates were not available prior to 1990. Therefore, the data cover the period 1990 onward. Figures 4 and 8 indicate that suicide rates transitions are clearly patterned across the countries. The countries began the period with a vast difference in suicide rates that were four times as high in Hungary as they were in Romania, Slovakia, or Poland. Slovenia that showed the best outcome for other mortalities stood next to Hungary with the second highest suicide rate. To their credit, however, the latter two countries recorded a sizable decline in their
This “healthy transition” in the CEE countries can also be examined by looking at life expectancies, a measure closely related to mortalities. Figures 9–11 depict life expectancies at birth (LEB), at age 45 (LE45), and at age 65 (LE65) for males, and Figures 12–14 do the same for females.

As expected, thanks to declining mortality rates, life expectancies generally rose over that same period. Like mortality rates, life expectancies started at different levels across the countries. However, life expectancies showed either no trend or a slightly upward trend during 1985–1990. After 1990, they rose for some countries and declined for others in the early years of the transition but continued to rise consistently thereafter for all the countries. Slovenia consistently led the group in terms of LEB, LE45, and LE65 for both males and females followed by the Czech Republic for males and Poland or Czech Republic for females. Romania and Bulgaria lagged behind the rest of the group for female life expectancies throughout the period, while sharing such status with Hungary for male life expectancies. What is remarkable is the persistence of divergence among the seven countries so much so that by 2009 there was a gap of 6 years in LEB (between Slovenia and Romania), compared to a gap of 5 years in 1990. The divergence grew wider for LE45 and LE65. A gap of almost 3 years at the beginning of the period grew to over 5 years towards the end of the period for LE45 and from almost 2 years to over 3 years for LE65. Such divergence clearly implies that life expectancies followed different transitions across these countries. Some like Slovenia are almost at par with the countries in Western Europe, whereas others like Bulgaria are still behind.

The trends in mortality rates and life expectancies over the period 1990–2009 as shown in the above figures portray a picture of overall improvement in the health of populations in the CEE countries, with marked variations in the experiences of individual countries.
3. Data and Methodology

Comprehensive data are not available for the CEE countries. In particular, data on life style factors such as tobacco and alcohol consumption, health expenditures, and resources are sketchy and not consistently available for the seven countries considered in this study. In the interest of covering the post-communist period to the extent possible for these countries, the study uses a parsimonious set of macrovariables to capture the societal influences on health transitions. More specifically, we use real GDP per capita as a measure of overall material wellbeing, trade openness as a measure of integration to the world economy, and democracy scores for capturing governance quality. Data for mortality rates (except for suicide rates) and life expectancies along with real GDP per capita at constant purchasing parity prices were obtained from the European Health for All Database [21]. Data for suicide rates were taken from the WHO mortality database [22]. Data on trade openness were taken from the Penn World Tables [23]. The openness index is also based on constant purchasing parity prices. The democracy score was obtained from the Unified Democracy Scores (UDS) project’s website [24]. These scores are estimated by Pemstein et al. [25] from other existing democracy scores which are claimed to be at least as reliable as other scores. A key advantage of such scores over other scores (e.g., Freedom House or Polity IV democracy rankings) is that they are
We used both fixed- and random-effect panel regression models for each of the four mortality rates (IM, CM, AM, and SR) and each of the three life expectancies (LEB, LE45, and LE65). The models were estimated for males and females separately. Lack of reliable data (especially for macroeconomic variables) prior to 1990 prevented the estimation of the models for the extended period 1985–2009. Moreover, the focus of this study is on the post-communist era, that is, 1990–2009. The length of this period and the number of cross-sections (seven countries) would have ideally given us a balanced panel of 140 observations. However, missing observations on UDS for some years led to unbalanced panel estimations of regressions with less than the full size of the panel. The fixed and random cross-section effect approaches were used to capture country-specific heterogeneity arising from historical, cultural, and other structural idiosyncrasies of the individual countries. We could not simultaneously consider random time-period effects since our panel was unbalanced. Instead, we have considered country-specific (fixed) time trends.

In light of the above, our typical regression models would thus have the following generic specification:

\[ H_{it} = \beta_1 \text{LGDP}_{it} + \beta_2 \text{OPI}_{it} + \beta_3 \text{UDS}_{it} + \beta_4 T_{it} + \lambda_i + \epsilon_{it}, \quad (1) \]

where the dependent variable \( H_{it} \) is a health outcome (mortality or life expectancy) in country \( i \) for the year \( t \). LGDP is the log of real GDP per capita, OPI is the openness index, and UDS is the unified democracy score. \( T_{it} \) is a country-specific time trend, \( \lambda_i \) is the cross-sectional intercept corresponding to country \( i \), and \( \epsilon_{it} \) is the random error term.

The models were estimated by the software Eviews Version 5.1. To account for cross-sectional heteroskedasticity and temporal autocorrelation, a panel-corrected standard error (PCSE) methodology as suggested by Beck and Katz [26] was used.

### 4. Results and Discussion

The first set of results reported in Table 1 are those based on the random cross-section effects. The results for mortality rates (IM, CM, AM, and SR) are given in the top portion of this table, and those for the life expectancies are given in the bottom portion. Coefficient estimates (\( \beta \)) are given along with the corresponding \( P \) values. \( R^2 \)s indicate the overall fit of the models, and \( n \) is the number of observations. These results are very similar to the fixed cross-section effects estimations reported in Table 2. In fact, formal Hausman’s specification tests strongly indicate that the fixed cross-section effect specification is an appropriate specification. (Hausman’s specification test results are available from the author.) Therefore, our discussion focuses on the fixed cross-section results. (In an earlier version of this paper cross-section-specific time trends were used along with the other variables in the models. Although such time trends were all statistically significant, concerns about lower degrees of freedom and “over fitting” of the models led to the exclusion of those time trends.)

The fixed cross-sectional results for mortality rates (IM, CM, AM, and SR) are given in the top portion of Table 2, whereas the results for life expectancies (LEB, LE45, and LE65) are given in the bottom portion. The fixed country effects (intercepts) are labeled appropriately for the seven CEE countries.

As the findings in Table 2 show, there is strong evidence that all mortality rates have a significant country-specific component as the country intercepts (constants) are extremely statistically significant (\( P \) values = 0.000 in majority of cases). The variations in the intercept estimates reflect the pattern of variations observed in the descriptive health transitions in Section 2. Income per capita (LGDP)
| Table 1: Estimation results for random cross-section effect models. |
|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                          | Dependent variables—mortality rates |                           |                          |                          |                          |                          |                          |                          |
|                          | IM          | CM          | AM          | SR          | IM          | CM          | AM          | SR          |
| Independent variables    | Male  | Female | Male  | Female | Male  | Female | Male  | Female | Male  | Female | Male  | Female | Male  | Female |
| β                        | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value |
| Constant                 | 81.61  | 0.000   | 60.86  | 0.000   | 97.77  | 0.000   | 75.93  | 0.000   | 3195  | 0.000   | 2306  | 0.000   | 48.40  | 0.002   |
| LRGDP                    | −7.215 | 0.000   | −5.309 | 0.000   | −8.677 | 0.000   | −6.726 | 0.000   | −185.3 | 0.000   | −158.2 | 0.000   | −2.022 | 0.262   |
| OPI                      | −0.013 | 0.134   | −0.014 | 0.067   | −0.012 | 0.281   | −0.011 | 0.263   | −1.957 | 0.000   | −0.703 | 0.000   | −0.096 | 0.000   |
| UDS                      | −2.137 | 0.002   | −1.275 | 0.030   | −2.630 | 0.000   | −1.681 | 0.023   | 27.07  | 0.304   | −0.480 | 0.972   | 4.734  | 0.001   |
| $R^2$                    | 0.839  | 0.796   | 0.819  | 0.777   | 0.817  | 0.872   | 0.495  | 0.635   |
| $n$                      | 132    | 132     | 132    | 132     | 132    | 132     | 126    | 126     |
|                          | Dependent variables—life expectancies |
|                          | LEB       | LE45      | LE65      |
| Independent variables    | Male  | Female | Male  | Female | Male  | Female | Male  | Female |
| β                        | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value | $\beta$ | $P$ value |
| Constant                 | 42.26  | 0.000   | 50.19  | 0.000   | 12.26  | 0.000   | 14.23  | 0.000   |
| LRGDP                    | 2.745  | 0.000   | 2.780  | 0.000   | 1.553  | 0.000   | 2.062  | 0.000   |
| OPI                      | 0.020  | 0.000   | 0.012  | 0.000   | 0.014  | 0.000   | 0.008  | 0.001   |
| UDS                      | −0.310 | 0.268   | −0.017 | 0.934   | −0.325 | 0.194   | −0.076 | 0.682   |
| $R^2$                    | 0.868  | 0.894   | 0.753  | 0.851   | 0.737  | 0.833   |
| $n$                      | 132    | 132     | 132    | 132     | 132    | 132     |
| Independent variables | Male | B | P value | Female | B | P value | Male | B | P value | Female | B | P value | Male | B | P value | Female | B | P value | Male | B | P value | Female | B | P value |
|-----------------------|------|---|---------|--------|---|---------|------|---|---------|--------|---|---------|------|---|---------|--------|---|---------|------|---|---------|--------|---|---------|
| BUL                   | 80.87| 0.000| 60.05  | 0.000 | 97.12| 0.000| 75.10  | 0.000 | 31.63| 0.000| 2320  | 0.000| 44.19  | 0.000| 14.79| 0.001 | 2320  | 0.000| 44.19  | 0.000| 14.79| 0.001 |
| CZE                   | 78.84| 0.000| 57.67  | 0.000 | 94.44| 0.000| 72.30  | 0.000 | 31.03| 0.000| 2278  | 0.000| 47.39  | 0.000| 14.33| 0.002 | 2278  | 0.000| 47.39  | 0.000| 14.33| 0.002 |
| HUN                   | 80.04| 0.000| 59.90  | 0.000 | 96.72| 0.000| 74.46  | 0.000 | 33.36| 0.000| 2343  | 0.000| 65.97  | 0.000| 19.38| 0.000 | 2343  | 0.000| 65.97  | 0.000| 19.38| 0.000 |
| POL                   | 78.69| 0.000| 58.15  | 0.000 | 93.81| 0.000| 72.31  | 0.000 | 30.44| 0.000| 2171  | 0.000| 45.09  | 0.000| 11.14| 0.017 | 2171  | 0.000| 45.09  | 0.000| 11.14| 0.017 |
| ROM                   | 85.78| 0.000| 63.93  | 0.000 | 103.1| 0.000| 79.81  | 0.000 | 30.79| 0.000| 2297  | 0.000| 39.60  | 0.000| 10.55| 0.019 | 2297  | 0.000| 39.60  | 0.000| 10.55| 0.019 |
| SLK                   | 79.51| 0.000| 58.79  | 0.000 | 95.01| 0.000| 73.24  | 0.000 | 32.14| 0.000| 2266  | 0.000| 48.67  | 0.000| 13.02| 0.003 | 2266  | 0.000| 48.67  | 0.000| 13.02| 0.003 |
| SLN                   | 78.87| 0.000| 57.78  | 0.000 | 94.54| 0.000| 72.29  | 0.000 | 30.38| 0.000| 2195  | 0.000| 63.20  | 0.000| 18.99| 0.000 | 2195  | 0.000| 63.20  | 0.000| 18.99| 0.000 |
| LRGDP                 | −7.097| 0.000| −5.155 | 0.000 | −8.526| 0.000| −6.537 | 0.000 | −178.2| 0.000| −153.5| 0.000| −2.252 | 0.211| −0.593| 0.279 | −153.5 | 0.000| −2.252 | 0.211| −0.593| 0.279 |
| OPI                   | −0.014| 0.098| −0.015 | 0.031 | −0.013| 0.180| −0.012 | 0.137| −2.036 | 0.000| −0.753 | 0.000| −0.049 | 0.000| −0.040| 0.000 | −2.036 | 0.000| −0.753 | 0.000| −0.049| 0.000 |
| UDS                   | −2.066| 0.004| −1.193 | 0.044 | −2.544| 0.005| −1.581 | 0.040| 24.15 | 0.382| −1.237 | 0.931| 4.493  | 0.000| 0.502 | 0.205 | −1.237 | 0.931| 4.493  | 0.000| 0.502| 0.205 |

| Independent variables | Male | B     | P value | Female | B     | P value | Male | B     | P value | Female | B     | P value |
|-----------------------|------|-------|---------|--------|-------|---------|------|-------|---------|--------|-------|---------|
| BUL                   | 42.69| 0.000| 50.09   | 0.000 | 12.59 | 0.000| 14.24  | 0.000 | 3.204 | 0.052 | −0.090 | 0.955 |
| CZE                   | 43.55| 0.000| 50.65   | 0.000 | 13.06 | 0.000| 14.33  | 0.000 | 3.112 | 0.083 | −0.039 | 0.982 |
| HUN                   | 40.21| 0.000| 49.14   | 0.000 | 10.53 | 0.000| 13.38  | 0.000| 2.626 | 0.131 | −0.031 | 0.985 |
| POL                   | 43.43| 0.000| 52.06   | 0.000 | 13.18 | 0.000| 15.70  | 0.000| 3.875 | 0.031| 1.403  | 0.420 |
| ROM                   | 42.57| 0.000| 49.87   | 0.000 | 13.07 | 0.000| 14.40  | 0.000| 3.920 | 0.025| 0.347  | 0.837 |
| SLK                   | 41.87| 0.000| 50.55   | 0.000 | 11.73 | 0.000| 14.40  | 0.000| 2.708 | 0.114| 0.179  | 0.915 |
| SLN                   | 43.91| 0.000| 51.88   | 0.000 | 13.82 | 0.000| 15.66  | 0.000| 3.751 | 0.037| 1.233  | 0.482 |
| LRGDP                 | 2.702| 0.000| 2.730   | 0.000 | 1.513 | 0.000| 2.018  | 0.000| 1.066 | 0.000| 1.721  | 0.000 |
| OPI                   | 0.021| 0.000| 0.012   | 0.000| 0.015 | 0.000| 0.008  | 0.000| 0.010 | 0.000| 0.006  | 0.002 |
| UDS                   | −0.297| 0.289| −0.010  | 0.962| −0.309| 0.210| −0.064 | 0.721| −0.139| 0.434| −0.069 | 0.674 |

| R²                    | 0.942| 0.960| 0.898   | 0.940 | 0.834 | 0.928 |
| N                    | 132  | 132  | 132     | 132  | 132  | 132  |
has a consistent favorable impact on all mortality rates, which is statistically very significant. In other words, higher income per capita is associated with lower mortality rates. This desirable impact is consistently greater for males than females. For instance, a unit increase in LGDP (or an increase of $1700 in real GDP per capita) reduces IM by almost 7 (per 1000 live births) for males but by almost 5 for females. Similarly, a unit increase in LGDP reduces CM by 8.5 for males but 6.5 for females. The same increase in average income reduces AR by 178 (per 100,000) for males and 153 for females. This finding underscores the important role of income in reducing mortality rates especially for the males.

Trade openness also appears to have contributed to reductions in mortality rates. It has a statistically significant impact on female IM, AM (both males and females), and SR (both males and females). Its negative impacts on male IM and CM (males and females) are not statistically significant however. Here, too, the magnitude of the impact is higher for males than females, although such magnitudes are very small compared to those of income. For example, a 10 percentage point increase in the openness index reduces AM by almost 2 (per 100,000) for males but 0.75 for females. In the absence of other information, it is difficult to interpret the differential impact of openness on mortalities. But previous research by Dolea et al. [19] has indicated the increased prevalence of HIV-AIDS among infants and children following the collapse of communism and opening up to the rest of the world. As for AM, perhaps greater access to more effective medicine, better medical technology, and healthier diet through trade has played a role as suggested by Zatonski et al. [27].

The relationship between democracy score and mortality rates is found to be mixed. While democracy is negatively related to IM and CM, it does not have a statistically significant relationship with AM or female SR. Interestingly, it has a positive relationship with the male SR. A partial explanation for such results may be the fact that all these CEE countries moved to democratize within the first five years after the fall of communism with no marked further improvement thereafter. So, there has not been a great deal of variation in their democracy scores over a significant portion of the study’s time period. It may also be that correlation between democracy and openness makes it hard to disentangle the separate effects of the two as indicated by McKee and Nolte [28].

Turning to the estimation results for life expectancy transitions (bottom portion of Table 2), country-specific intercepts appear statistically highly significant for LEB and LE45. As for LE65, the intercepts are statically significant in four countries (BUL, POL, ROM, and SLN) for males. None is significant for females. Once again, the intercepts reflect the variations in life expectancies across the countries already seen in the descriptive results. As expected, income per capita (LGDP) makes positive contributions to life expectancies. The contributions to LEB are similar for males and females (2.7 years increase in LEB for a unit increase in LGDP). For LE45, such contribution is somewhat smaller for men than women (1.5 years compared to 2 years). The differential contribution of income is even more pronounced for LE65 (1 year for males and 1.7 years for females). The findings show that openness has consistently had a positive impact on all life expectancies for both males and females. The impacts are statistically very significant and are consistently greater for males than females. The magnitudes of impacts are not sizable however. For instance, a 10 percentage point increase in the openness index would increase LEB by 0.21 years (roughly 2 months and a half) for males and 0.12 years (1.5 months) for females. As was the case with some mortality rates, democracy does not appear to have any statistically significant association with life expectancies.

Despite their limited number of regressors, the estimated models fit the data quite well as indicated by the R²’s given in Tables 1 and 2. Sometimes, however, high R²’s could be a result of spurious regression. To check this pathology, cointegration tests were carried out for all the estimated models. In all but one case the health outcomes (mortalities and life expectancies) had one significant (at 5%) co-integrating relationship with LRGDP, OPI, and UDS. The exception was female LE45 where two cointegrating relationships were significant. To check for two-way causality, the Granger causalitiveness tests were run for all models. The overall results from such tests indicate that LGDP causes almost all health outcomes (mortalities and life expectancies). OPI and UDS Granger cause some health outcomes but not others. However, in no case health outcomes Granger cause LRGDP, OPI, or UDS. Therefore, the estimated models pass the diagnostic tests pretty well.

5. Conclusion

Population health outcomes in the transitional countries of CEE have been drastically affected by the major restructuring of these countries towards open, promarket, and democratic societies. While the transition from communism to capitalism has generally improved the health of populations in these countries, the experience of individual countries has not been the same. There have been some setbacks in the health of people in certain countries, especially in the immediate aftermath of the collapse of communism. Using panel data model, our study identifies some of the common determinants of mortality rates and life expectancies in seven transitional countries of CEE over the period 1990–2009. Of particular note is the significant role of country-specific effects on population health. Our findings consistently show that higher per capita income has been negatively associated with mortality rates and positively with life expectancies. Openness has also been positively associated with life expectancies and negatively associated with mortalities with the exception of male IM and CM for both genders. The findings reveal no significant role for democracy in life expectancies and mixed roles for mortality rates.

Data restrictions have prevented the examination of other socioeconomic covariates of health (e.g., poverty, income inequality) as well as risky behaviors (e.g., alcohol and tobacco consumption) in our study. It is likely that such omitted covariates along with the nonobservable characteristics of the countries have been captured in the country-specific effects. We hope that, with greater availability of
data in the above-mentioned domains in the future, some of the country-specific effects could be accounted for by more specific determinants of health in these countries.

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