



Leibniz Institute for  
**EAST AND SOUTHEAST  
EUROPEAN STUDIES**

---

Arbeitsbereich Ökonomie

## **IOS Working Papers**

No. 385 January 2020

### **Transition welfare gaps: one closed, another to follow?**

Maksym Obrizan<sup>\*</sup>

<sup>\*</sup> Kyiv School of Economics, Ukraine. Address for correspondence: 92-94 Dmytrivska Str., Suite 402, Kyiv, 01135, Ukraine. Phone: (+380) 44-492-8012. E-mail: [mobrizan@kse.org.ua](mailto:mobrizan@kse.org.ua)



Landshuter Straße 4  
D-93047 Regensburg

Telefon: (0941) 943 54-10  
Telefax: (0941) 943 54-27  
E-Mail: [info@ios-regensburg.de](mailto:info@ios-regensburg.de)  
Internet: [www.leibniz-ios.de](http://www.leibniz-ios.de)  
ISSN: 2199-9465

**Contents**

Abstract ..... v

1 Introduction ..... 1

2 Methods ..... 4

3 Results ..... 6

    3.1 Data exploration ..... 6

    3.2 Regression analyses ..... 9

4 Conclusions ..... 12

References ..... 13

Appendix ..... 14

**List of Tables**

Table 1: Distribution of responses on self-reported health within countries  
and country groups ..... 8

Table 2: Transition gap in linear probability model for ‘Good’ or ‘Very Good’  
self-rated health ..... 9

Table A1: Means and standard deviations for covariates in four groups of countries ..... 14

Table A2: Transition gap in linear probability model for ‘Good’ or ‘Very Good’  
self-rated health ..... 16

**List of Figures**

Figure 1: Share of respondents at PSU reporting ‘Good’ or ‘Very Good’ health ..... 6



## **Abstract**

Respondents from post-communist countries have been found to systematically report lower levels of happiness and self-rated health. While the first welfare gap in happiness has closed recently, the second transition gap in self-perceived gap only started to close. Specifically, this paper shows that treating all transition countries as a homogeneous group may be misleading and divides 28 transition countries into three groups. As result, in the most recent 2016 round of 'Life in Transition' survey, transition countries in Southern Europe are no longer different from non-transition nations in terms of their self-rated health. Although the gap in self-perceived health for transition nations in Eastern Europe is present in a basic model, it becomes less statistically and economically significant when subjective beliefs and macro-level variables are added. Countries from the former Soviet Union and Mongolia remain the only group in which respondents report 16.5–29.1% lower probability of 'Good' or 'Very Good' health compared to other transition and non-transition countries. Controlling for communist party membership, ideological beliefs and macro-level variables somewhat reduces the gap for the former Soviet Union and Mongolia but it remains significant in multiple robustness checks. Although the gap in self-rated health now applies to only one group of transition countries, it remains an important empirical puzzle with far-reaching implications for health policy, demand for health care and the process of transition.

**JEL-Classification:** I15, N34, P46

**Keywords:** Self-rated health, transition gap, Life in Transition



## **1 Introduction**

The process of transition, which started in the countries of the former Eastern Bloc in the late 1980s, has been characterized by two robust empirical findings – transition gaps in happiness and self-rated health. Specifically, respondents in transition countries have been found to report systematically lower levels of happiness and self-rated health compared to their counterparts in non-transition countries even after controlling for many potential covariates of these two welfare measures.

The transition happiness gap has been identified in all major sources of internationally comparable data including the World Values Survey (Sanfey and Teksoz, 2007, Guriev and Zhuravskaya, 2009 and Easterlin, 2009); the Gallup World Poll (Deaton, 2008) and Life in Transition, Pew Global Attitudes Survey and Eurobarometer (Djankov et al., 2016). The key transition challenges that made people in post-communist countries less satisfied with their lives include the transformation shock of early 1990s with subsequent macroeconomic instability as well as substantial increase in income inequality and deterioration of the quality and availability of public goods. While the statistically significant gap had been robust in all of these earlier studies, the most recent work published in this journal by Guriev and Melnikov (2018) shows that the transition happiness gap had finally closed.

The second transition gap – in self-rated health – has been known at least starting from Carlson (1998) who used the data from the World Values Survey in 1990 to identify the East-West divide in self-reported health based on a sample of 25 Eastern and Western European countries. Deaton (2008) re-confirmed this result using the Gallup World Poll (2006) to show that transition countries report very low levels of health satisfaction, representing 11 of the 20 lowest among 132 countries. Jen et al. (2010) used data for 69 countries from four waves (1981, 1991, 1995–1997 and 1999–2001) of World Values Survey and European Values Study and found that nine out of ten countries with the highest levels of poor health are transition countries. Finally, the most recent study by Obrizan (2018) used up to 241,698 observations from the World Values Survey and the European Values Study collected between 1989 and 2014 to estimate the gap in the range of 12.7–23.7 percentage points lower probability of reporting ‘Good’ or ‘Very Good’ self-rated health for respondents from transition countries.

Various factors have been suggested in the literature aiming to explain the observed transition gap in self-rated health. These include differences between transition and non-transition countries in objective demographic, social and economic characteristics of respondents (such as age, education and income levels). Another important channels include subjective measures of trust, prevalence of “collectivist” personality type and support for communist values and beliefs. These more subtle features still characterizing respondents from the post-communist countries may undermine the enactment of healthy lifestyles and the habit of being an active citizen responsible for own health (Carlson 1998, Cockerham et al. 2002).

Self-reported life and health satisfaction are two important non-monetary characteristics of citizen well-being and the process of transition cannot be considered complete if respondents in post-communist countries still fall behind their counterparts from non-transition countries. While the transition happiness gap has closed (Guriev and Melnikov, 2018) it is not clear yet whether the same has happened with the transition gap in self-rated health. Hence, the purpose of this short paper is to test whether the transition gap in self-rated health still prevails using a number of innovative features that have not been explored in the existing studies.

First, the current paper uses the most recent 2016 ‘Life in Transition’ survey III which is a standard data source for happiness studies but has not been used to study the transition gap in self-rated health. The dataset includes more than 41 thousand observations from nationally representative samples in all 28 transition countries (except for Turkmenistan) and 5 non-transition states. Second, ‘Life in Transition’ survey allows to include a number of potentially important correlates of self-reported health such as communist party membership, ideological beliefs and exact geographic location identified by latitude and longitude. Inclusion of these variables which were not previously available is important for checking robustness of the gap.

Finally, in previous studies, transition countries are typically treated as a single homogeneous group. A more recent approach in the literature, however, is to divide post-communist states into three relatively homogeneous groups of Eastern Europe, Southern Europe, and the former Soviet Union and Mongolia (Habibov and Cheung 2017). This classification reflects variation in the speed of reforms and the levels of socio-economic and political development, with Eastern Europe being the most successful, followed by the less transformed Southern Europe, with former Soviet Union (FSU) and Mongolia being the least reformed (Gros and Suhrke 2000; Habibov and Cheung 2017).

This innovative approach using three groups of transition countries produces new, more granular results not reported in the existing literature (to the best of the author's knowledge). Specifically, robust gap in self-rated health is identified only for the countries of the former Soviet Union while the gap in Eastern Europe becomes less statistically and economically significant when subjective beliefs and macro-level variables are added to model specifications. These new findings remain robust in regressions with a wide range of commonly used correlates of self-rated health (including geographic location, ideological beliefs and communist party memberships) as well as different definitions of the dependent variable.

## 2 Methods

This study employs data from the ‘Life in Transition’ survey III (LiTS III) conducted in 2016 by the European Bank for Reconstruction and Development (EBRD) and the World Bank in 29 transition countries (except for Turkmenistan) and 5 non-transition countries for comparison. A nationally representative sample for each country includes about 1,500 households answering questions in nine modules dealing with demographic and economic characteristics of the household, access to public utilities and consumption patterns, work history and employment, values and attitudes, governance and use of public services (EBRD 2016). ‘Life in Transition’ is the major data source for studying economic, political and social transformation of post-communist countries.

A standard model of testing for a transition gap in the literature takes a form of<sup>1</sup>

$$SRH_i = \alpha + \beta_{TC} * TC + \gamma * X_i + \varepsilon_i, \quad (1)$$

where  $TC$  is an indicator variable for a transition country and  $X_i$  is a set of covariates potentially associated with individual’s  $i$  self-rated health  $SRH_i$ . In this formulation, the focus is on the coefficient  $\beta_{TC}$  measuring the additional negative effect of living in one of 28 post-communist countries in LiTS III after controlling for many other potential correlates of self-rated health. In this model, the base category is living in one of five non-transition countries (Cyprus, Germany, Greece, Italy and Turkey), which are included in LiTS III for comparison.

This paper also explores possible variation in self-rated health in three smaller subgroups of transition countries using

$$SRH_i = \alpha + \beta_{EE} * EE + \beta_{SE} * SE + \beta_{FSU} * FSU + \gamma * X_i + \varepsilon_i, \quad (2)$$

where  $EE$ ,  $SE$  and  $FSU$  are indicator variables taking a value of 1 for living in a country in Eastern Europe, Southern Europe and the former Soviet Union and Mongolia, correspondingly (with the same base category of living in a non-transition country) following the country group definition in Habibov and Cheung (2017). Specifically, Eastern Europe consists of the most advanced transitional countries in Eastern Europe (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia and Kosovo). Southern Europe includes Albania, Bosnia, Bulgaria, Croatia, Montenegro, Republic of Macedonia, Romania and Serbia.

---

<sup>1</sup> For example, Guriev and Melnikov (2018) use this formulation to test for a happiness gap in LiTS III.

The final group includes non-Baltic republics of the former Soviet Union (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Ukraine and Uzbekistan) and Mongolia.

A final model used in this study focuses on transition countries only

$$SRH_i = \alpha + \delta_{EE} * EE + \delta_{FSU} * FSU + \gamma * X_i + \varepsilon_i \quad (3)$$

where the reference group is living in Southern Europe, with coefficients  $\delta_{EE}$  and  $\delta_{FSU}$  measuring potential differences between self-rated health in the other two groups of Eastern Europe and FSU with Mongolia.

Depending on the model specification, vector  $X_i$  may include socio-demographic variables (age, age squared and indicator variables for female and marital status); socio-economic variables (dummies for achieved education level and current employment status)<sup>2</sup>; subjective statements and beliefs (whether a household can afford meat and a vacation, if a household can meet unexpected expenditures, a household's subjective place on 0 to 10 income ladder, if a primary respondent trusts most people, whether a primary respondent prefers a planned economy, an authoritarian government and few political liberties but strong economic growth,<sup>3</sup> if a primary respondent was a member of a communist party) and macro-level variables (longitude and latitude at Primary Sampling Unit, average share of respondents in a country who trust others, GDP per capita in constant 2010 US\$, GDP annual growth rate in %, life expectancy at birth, total health expenditure (HE) as % of GDP, out-of-pocket HE as % of total HE, smoking prevalence among females and males as % of adults, litres of alcohol consumption per capita of citizens older than 15 years). Since some of these variables are potentially endogenous, the paper presents results separately, first, with only socio-demographic and socio-economic variables (which are not judgmental) and, second, with all variables to see if results are affected by this potential endogeneity problem.

---

<sup>2</sup> The base category is a primary respondent who did not work in the last week and who has no formal education.

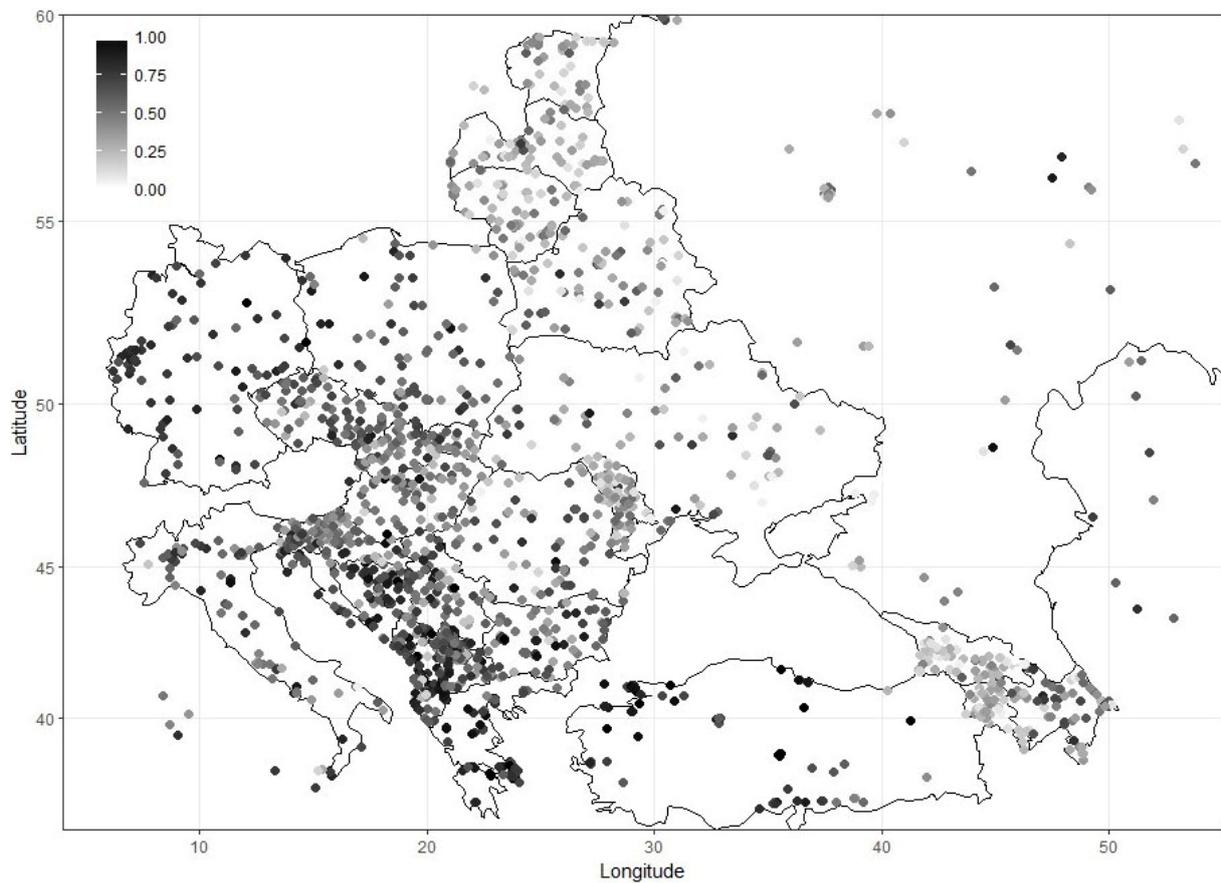
<sup>3</sup> The three indicators for whether the respondent prefers planned economy, authoritarian government and strong economic growth over political liberty are statistically significant (p-value<0.01) predictors of membership in a communist party. They are used in models with non-transition countries instead of an indicator for communist party membership because Germany is the only non-transition country with non-missing answers on that question.

### 3 Results

#### 3.1 Data exploration

The great advantage of LiTS III data is availability of longitude and latitude for each Primary Sampling Unit (PSU), which allows nice visualization of average self-rated health. Figure 1 shows the share of respondents with ‘Good’ or ‘Very Good’ self-rated health at PSUs in the European region of the sample.

**Figure 1: Share of respondents at PSU reporting ‘Good’ or ‘Very Good’ health**



Notes: Author’s calculations based on LiTS III data. The map includes only PSUs in the European region. Darker circles indicate higher share of respondents with ‘Good’ or ‘Very Good’ self-rated health at PSU.

Figure 1 demonstrates that in 2016 the non-transition countries of Germany, Greece and Turkey (and to a lesser extent Italy) are characterized by a consistently high share of respondents with good self-reported health. However, many transition countries including Poland, Czech Republic and

countries in Southern Europe also have many PSUs with high shares of healthy respondents. Countries of the former Soviet Union, on the other hand, lie in the area of poor self-reported health, going from Estonia in the north, through Latvia, Lithuania, Belarus, Ukraine, Russian Federation, Moldova, Georgia and Armenia (but not Azerbaijan) in the south-east direction. Overall, there is a clear geographic gradient in self-rated health, which worsens in the north-east direction.

Table 1 shows the distribution of responses on self-rated health by countries divided into four groups: non-transition countries, and three groups of transition countries in Eastern Europe, Southern Europe and non-Baltic states of the former Soviet Union and Mongolia. The table clearly indicates a higher prevalence of ‘Good’ and ‘Very Good’ health in non-transition countries and also transition countries in Southern Europe. In Eastern Europe (which includes three Baltic States of the FSU) and the former Soviet Union, on the other hand, there are fewer respondents with ‘Very Good’ health but more with ‘Medium’ or ‘Bad’ health. The three former Soviet Republics of Armenia, Georgia and Moldova have abnormally high shares – in excess of 8% – of respondents with ‘Very Bad’ self-rated health. These findings somewhat contradict a general agreement in the literature that Eastern Europe includes the most successful transition countries followed by the less reformed Southern Europe, with the former Soviet Union and Mongolia being the least transformed. In terms of self-rated health, Southern Europe is the leading transition region, with health outcomes comparable to non-transition countries.

It is also possible that variation in self-rated health can be driven by differences in the sample composition. Table A1 in the Appendix shows the means and standard deviations of covariates across four groups of countries. The results of the Kruskal–Wallis test indicate that samples from the four groups of countries do not originate from the same distribution (except for preference for planned economy with p-value of 8.178%).<sup>4</sup> In order to account for these differences in sample characteristics, the results of regression analyses are presented next.

---

<sup>4</sup> A more standard one-way ANOVA test for the four groups of countries could not be used because of unequal variances.

**Table 1: Distribution of responses on self-reported health within countries and country groups**

Non-transition	Very Good	Good	Medium	Bad	Very Bad
Cyprus	21.3%	37.2%	29.2%	9.7%	2.7%
Germany	18.7%	56.5%	21.2%	3.1%	0.4%
Greece	35.4%	42.3%	16.4%	5.2%	0.7%
Italy	13.9%	43.5%	34.4%	7.6%	0.6%
Turkey	19.7%	60.6%	18.2%	1.3%	0.1%
Eastern Europe	Very Good	Good	Medium	Bad	Very Bad
Czech Republic	13.7%	44.5%	32.0%	8.6%	1.1%
Estonia	6.2%	27.1%	45.9%	18.0%	2.7%
Hungary	11.0%	38.2%	34.0%	14.0%	2.8%
Kosovo	21.8%	43.1%	26.2%	7.7%	1.3%
Latvia	3.6%	30.7%	48.7%	14.5%	2.5%
Lithuania	5.6%	31.2%	43.5%	16.9%	2.8%
Poland	16.1%	43.9%	29.9%	9.0%	1.2%
Slovak Republic	9.6%	41.1%	36.2%	11.3%	1.9%
Slovenia	13.3%	40.3%	32.9%	12.2%	1.3%
Southern Europe	Very Good	Good	Medium	Bad	Very Bad
Albania	30.3%	39.6%	26.4%	3.6%	0.1%
Bosnia and Herz.	16.6%	53.4%	23.1%	6.2%	0.7%
Bulgaria	21.7%	37.2%	28.0%	10.2%	2.9%
Croatia	16.8%	42.5%	28.8%	9.2%	2.7%
Macedonia, FYR	21.4%	40.0%	29.7%	7.6%	1.2%
Montenegro	31.7%	39.9%	19.1%	7.0%	2.3%
Romania	12.3%	38.0%	30.5%	15.6%	3.6%
Serbia	16.4%	41.8%	30.1%	10.7%	1.0%
FSU & Mongolia	Very Good	Good	Medium	Bad	Very Bad
Armenia	7.5%	16.6%	49.7%	16.4%	9.8%
Azerbaijan	6.9%	40.3%	43.4%	7.1%	2.3%
Belarus	5.5%	30.8%	45.6%	16.3%	1.9%
Georgia	6.3%	18.8%	47.0%	19.8%	8.1%
Kazakhstan	9.2%	41.4%	41.0%	7.6%	0.7%
Kyrgyz Republic	12.2%	47.9%	31.8%	7.0%	1.1%
Moldova	3.8%	29.3%	36.0%	22.5%	8.5%
Russian Federation	4.4%	37.1%	44.7%	11.9%	1.9%
Tajikistan	10.9%	46.8%	34.9%	6.4%	0.9%
Ukraine	4.4%	33.4%	47.5%	14.2%	0.5%
Uzbekistan	8.3%	47.2%	39.5%	4.7%	0.4%
Mongolia	5.3%	43.5%	42.7%	7.5%	1.0%

Notes: Author's calculations based on LiTS III data. Each cell reports the share of non-missing responses choosing a category of 'Very Good', 'Good', 'Medium', 'Bad' or 'Very Bad' self-rated health in a country. Data bars are derived using the entire table to show the relative importance of each category. FSU stands for the former Soviet Union.

### 3.2 Regression analyses

Model (I) in Table 2 indicates that living in a transition country is associated with 18.5% points lower probability of reporting ‘Good’ or ‘Very Good’ health when only socio-demographic and socio-economic variables are included. However, the gap becomes insignificant once subjective beliefs and macro-level variables are added to regression in the model (II). It appears that treating all transition countries as identical in models (I)–(II) may produce misleading results. For example, transition countries in Southern Europe are no different from non-transition countries in terms of self-rated health as indicated by models (III)–(IV). Similarly, statistical and economic significance of gap in Eastern Europe is reduced in an extended model (IV) with subjective beliefs and macro-level variables.

**Table 2: Transition gap in linear probability model for ‘Good’ or ‘Very Good’ self-rated health**

	Self-rated health (1 if ‘Good’ or ‘Very Good’ SRH, 0 otherwise)					
	(I)	(II)	(III)	(IV)	(V)	(VI)
Transition country	–0.185*** (0.044)	–0.061 (0.043)				
Eastern Europe			–0.168*** (0.050)	–0.076* (0.039)	–0.106*** (0.036)	–0.046 (0.035)
Southern Europe			–0.062 (0.041)	–0.058 (0.048)		
FSU & Mongolia			–0.291*** (0.044)	–0.194*** (0.061)	–0.229*** (0.026)	–0.165*** (0.050)
Age/10	–0.132*** (0.019)	–0.141*** (0.018)	–0.152*** (0.018)	–0.141*** (0.018)	–0.162*** (0.020)	–0.151*** (0.020)
Age squared/100	0.005** (0.002)	0.005*** (0.002)	0.006*** (0.002)	0.005*** (0.002)	0.007*** (0.002)	0.006*** (0.002)
Female	–0.018** (0.007)	–0.019** (0.007)	–0.020*** (0.007)	–0.019** (0.007)	–0.020*** (0.007)	–0.020*** (0.007)
Married	–0.012 (0.015)	0.006 (0.012)	0.024** (0.011)	0.007 (0.012)	0.023* (0.013)	0.005 (0.013)
Widowed	–0.072*** (0.020)	–0.027 (0.016)	–0.023 (0.015)	–0.024 (0.016)	–0.032** (0.014)	–0.032* (0.016)
Divorced/Separated	–0.091*** (0.015)	–0.045*** (0.011)	–0.055*** (0.011)	–0.042*** (0.011)	–0.060*** (0.012)	–0.044*** (0.013)
Primary Education	0.078** (0.031)	0.062** (0.028)	0.079*** (0.028)	0.066** (0.028)	0.052** (0.025)	0.039 (0.025)

Table 2 (continued)

	Self-rated health (1 if 'Good' or 'Very Good' SRH, 0 otherwise)					
	(I)	(II)	(III)	(IV)	(V)	(VI)
Secondary education	0.088** (0.036)	0.109*** (0.031)	0.139*** (0.030)	0.117*** (0.031)	0.104*** (0.027)	0.079*** (0.028)
Tertiary education	0.142*** (0.037)	0.148*** (0.030)	0.204*** (0.029)	0.158*** (0.030)	0.173*** (0.027)	0.130*** (0.029)
Full-time employee	0.095*** (0.022)	0.062*** (0.014)	0.082*** (0.018)	0.063*** (0.014)	0.089*** (0.020)	0.067*** (0.015)
Part-time employee	0.026 (0.018)	0.025 (0.015)	0.037** (0.018)	0.026 (0.016)	0.059*** (0.017)	0.042** (0.015)
Never Worked	-0.034* (0.020)	-0.034** (0.014)	-0.022 (0.018)	-0.036** (0.015)	-0.020 (0.019)	-0.037** (0.016)
Did not work last year	-0.095*** (0.019)	-0.088*** (0.017)	-0.089*** (0.018)	-0.085*** (0.017)	-0.090*** (0.019)	-0.087*** (0.017)
Can Afford Meat and Holiday		0.083*** (0.013)		0.085*** (0.013)		0.086*** (0.015)
Can Meet Unexpected Expenditures		0.042*** (0.013)		0.037*** (0.013)		0.026** (0.013)
Place on 0 to 10 income ladder		0.023*** (0.003)		0.023*** (0.003)		0.025*** (0.003)
Most people can be trusted		0.046*** (0.008)		0.045*** (0.008)		0.050*** (0.009)
Planned economy may be preferable		-0.030*** (0.010)		-0.030*** (0.010)		-0.030*** (0.010)
Authoritarian government may be preferable		-0.004 (0.009)		-0.006 (0.009)		-0.006 (0.009)
Prefer few liberties but strong growth		-0.014** (0.007)		-0.017** (0.007)		-0.012** (0.006)
Respondent was a communist						-0.043*** (0.012)
Latitude (North)		-0.012*** (0.003)		-0.010*** (0.003)		-0.008*** (0.003)
Constant	1.138*** (0.065)	1.223** (0.556)	1.128*** (0.063)	1.627*** (0.547)	1.121*** (0.060)	1.539** (0.578)
Observations	49538	48657	49538	48657	42041	41263
Adjusted R-squared	0.196	0.253	0.225	0.256	0.220	0.252
# of transition countries	28	28	28	28	28	28
# of non-transition states	5	5	5	5	0	0

Notes: Author's calculations based on LiTS III data. All models using sampling weights with robust standard errors clustered at the country level. Extended models (II), (IV) and (VI) also control for macro-level variables, but insignificant coefficient estimates are not shown to save space. Kosovo is excluded because of missing macroeconomic variables. \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1.

Models (V)–(VI) re-estimate the equation for self-rated health in a sample of transition countries only (with Southern Europe being a base category). In this formulation transition gap in self-rated health in 2016 remains robust only in the countries of the former Soviet Union. Specifically, respondents in the countries of the former Soviet Union are 19.4–29.1% points less likely to report ‘Good’ or ‘Very Good’ self-rated health compared to non-transition countries and 16.5–22.9% points less likely to be in good health compared to transition countries in Southern Europe. This gap remains robust in models controlling for many correlates of self-rated health identified in previous studies, which jointly account for as much as 22–26% of variation in a binary indicator for good health.<sup>5</sup>

The results for other significant predictors of self-rated health are consistent with earlier studies (Cockerham et al. 2002, Obrizan 2018). Self-rated health is worsening with age but at a diminishing rate, is lower for females, divorced or separated respondents, those who never worked or did not work last year, respondents who share communist beliefs and those living further to the north. On the other hand, better educated respondents, full-time employees, respondents with better economic conditions and those who trust others are more likely to report ‘Good’ or ‘Very Good’ self-rated health. In models (V)–(VI) it is also possible to include an indicator variable for communist party membership which is only asked about in transition countries. Interestingly enough, former members of the communist party are 4.3 percentage points less likely to report ‘Good’ or ‘Very Good’ self-rated health even after controlling for age and age squared.

Despite these strengths this paper also has some limitations. First, the sample of non-transition countries includes only five countries. Second, self-rated health provides only one, subjective, view on health while more objective measures (such as indicators for certain diseases) are not available in LiTS III data. These limitations will be addressed in future research when appropriate data become available.

---

<sup>5</sup> Table A2 in the Appendix provides the results of three robustness checks: an indicator variable taking value of 1 for ‘Very Good’ self-rated health and 0 for the other four categories, an alternative model for an indicator variable taking value of 1 for ‘Bad’ and ‘Very Bad’ health and, finally, a categorical variable taking values of 0–0.25–0.5–0.75–1 from ‘Very Good’ to ‘Very Bad’ self-perceived health. The heterogeneity in self-rated health in three groups of transition countries in general carries over with some coefficients changing significance level.

## **4 Conclusions**

This paper presents new evidence on the transition gap in self-rated health using more than 41 thousand observations from 28 transition and 5 non-transition countries in the 2016 round of ‘Life in Transition’ survey. While transition gap in life satisfaction has recently closed the results in this paper indicate that gap in self-rated health has only started to close. The analyses indicate why it is misleading to treat all transition countries in the same way – the robust gap in self-rated health is only present in the least reformed countries of the former Soviet Union and Mongolia. This important contribution to the existing literature remains robust in many different model specifications.

The good news is that respondents in transition countries in Southern Europe are no longer different in terms of self-rated health from their counterparts in non-transition countries. The bad news is that respondents in the countries of the former Soviet Union (and to some extent of Eastern Europe) still systematically report lower levels of satisfaction with their health. From the policy point of view, this poor self-perceived health may lead to overutilization of health care services (reflecting either true need of the citizens or serving as mere justification for such an excessive use) which in turn may prevent effective downsizing of excessive hospital and physician network still characterizing many transition countries.

## References

- Carlson, P. 1998. Self-perceived health in East and West Europe: Another European health divide. *Social Science & Medicine* 46(10): 1355–1366.
- Cockerham W, Snead M, and D DeWaal. 2002. Health lifestyles in Russia and the socialist heritage. *Journal of Health and Social Behavior* 43(1): 42–55.
- Deaton A. 2008. Income, health, and well-being around the world: Evidence from the Gallup World Poll. *Journal of Economic Perspectives* 22(2): 53–72.
- Djankov S, Nikolova E, Zilinsky J. 2016. The happiness gap in Eastern Europe. *Journal of Comparative Economics* 44(1): 108–124.
- Easterlin R. 2009. Lost in transition: Life satisfaction on the road to capitalism. *Journal of Economic Behavior & Organization*, 71(2): 130–145.
- European Bank for Reconstruction and Development (2016). Life in Transition Survey III: a decade of measuring transition, London: EBRD LITS series.
- Gros D, Suhrke M. 2000. Ten Years after: what Is Special about Transition Countries? CESifo. Working Paper Series No. 327.
- Guriev S, Melnikov N. 2018. Happiness convergence in transition countries. *Journal of Comparative Economics* 46(3): 683–707.
- Guriev S, Zhuravskaya E. 2009. (Un)happiness in transition. *Journal of economic perspectives* 23(2): 143–68.
- Habibov N, Cheung A. 2017. Revisiting informal payments in 29 transitional countries: The scale and socio-economic correlates. *Social Science & Medicine* Apr 1, 178: 28–37.
- Jen M, Sund E, Johnston R, and K Jones. 2010. Trustful societies, trustful individuals, and health: An analysis of self-rated health and social trust using the World Value Survey. *Health & Place* 16(5): 1022–1029.
- Obrizan M. 2018. Quantifying the Gap in Self-Rated Health for Transition Countries Over 1989–2014. *Comparative Economic Studies* 60(3): 388–409.
- Sanfey P, Teksoz U. 2007. Does transition make you happy? *Economics of Transition*, 15(4): 707–731.

## Appendix

**Table A1: Means and standard deviations for covariates in four groups of countries**

Covariate	Non-transition	Eastern Europe	Southern Europe	FSU & Mongolia
Age/10	4.717 (1.713)	5.330 (1.800)	4.875 (1.736)	4.546 (1.639)
Age squared/100	25.182 (17.511)	31.652 (19.207)	26.776 (17.496)	23.353 (16.078)
Female	0.514 (0.500)	0.582 (0.493)	0.531 (0.499)	0.589 (0.492)
Married	0.633 (0.482)	0.447 (0.497)	0.591 (0.492)	0.653 (0.476)
Widowed	0.081 (0.274)	0.183 (0.386)	0.139 (0.346)	0.135 (0.341)
Divorced/Separated	0.072 (0.259)	0.146 (0.354)	0.064 (0.244)	0.083 (0.277)
Primary Education	0.164 (0.370)	0.116 (0.320)	0.148 (0.355)	0.027 (0.163)
Secondary education	0.604 (0.489)	0.655 (0.475)	0.619 (0.486)	0.680 (0.467)
Tertiary education	0.214 (0.410)	0.223 (0.416)	0.208 (0.406)	0.286 (0.452)
Full-time employee	0.314 (0.464)	0.399 (0.490)	0.379 (0.485)	0.308 (0.462)
Part-time employee	0.160 (0.367)	0.082 (0.274)	0.066 (0.249)	0.118 (0.323)
Never Worked	0.215 (0.411)	0.109 (0.312)	0.226 (0.418)	0.266 (0.442)
Did not work last year	0.275 (0.446)	0.365 (0.481)	0.288 (0.453)	0.264 (0.441)
Can Afford Meat and Holiday	0.481 (0.500)	0.528 (0.499)	0.382 (0.486)	0.318 (0.466)
Can Meet Unexpected Expenditures	0.266 (0.442)	0.289 (0.453)	0.250 (0.433)	0.297 (0.457)
Place on 0 to 10 income ladder	4.968 (1.715)	4.573 (1.638)	4.663 (1.677)	4.285 (1.712)
Most people can be trusted	0.261 (0.439)	0.325 (0.468)	0.256 (0.436)	0.301 (0.459)
Planned economy may be preferable	0.224 (0.417)	0.241 (0.428)	0.230 (0.421)	0.241 (0.427)
Authoritarian government may be preferable	0.117 (0.322)	0.193 (0.395)	0.200 (0.400)	0.185 (0.388)
Prefer few liberties but strong growth	0.426 (0.494)	0.656 (0.475)	0.727 (0.446)	0.716 (0.451)
Respondent was a communist	0.001 (0.037)	0.049 (0.216)	0.062 (0.241)	0.047 (0.211)

**Table A1 (continued)**

Covariate	Non-transition	Eastern Europe	Southern Europe	FSU & Mongolia
Longitude (East)	22.246 (10.299)	20.300 (4.030)	20.738 (3.147)	55.190 (23.256)
Latitude (North)	41.374 (5.686)	51.714 (4.944)	43.494 (1.739)	45.214 (5.426)
Country average who trust others	0.261 (0.082)	0.325 (0.118)	0.256 (0.059)	0.301 (0.097)
GDP per capita, constant 2010 US\$	10.304 (0.240)	10.167 (0.087)	9.569 (0.238)	9.092 (0.723)
GDP annual growth rate, %	1.309 (2.208)	3.029 (0.643)	1.351 (1.614)	3.460 (3.714)
Life expectancy at birth, total	80.196 (2.652)	76.974 (2.126)	76.107 (1.173)	71.484 (1.349)
Health expenditure (HE) total (% of GDP)	132.518 (31.281)	114.586 (16.458)	121.049 (26.582)	101.868 (24.983)
Out-of-pocket HE, % of total HE	434.317 (207.741)	371.762 (116.932)	536.218 (198.703)	771.581 (173.065)
Smoking prevalence, females (% of adults)	23.404 (7.466)	24.411 (3.078)	29.267 (10.300)	6.502 (6.397)
Smoking prevalence, males (% of adults)	41.342 (9.941)	37.154 (6.764)	44.377 (4.557)	44.027 (11.448)
Litres of alcohol per capita, 15+ y.o.	8.820 (3.889)	12.625 (1.311)	9.417 (2.251)	7.507 (3.965)
Constant	7504	12082	12024	18096

Notes: Author's calculations based on LiTS III data. Standard deviations are in parentheses. Macroeconomic variables are lagged two years due to data not yet being available for 2015 and 2016. Kosovo is excluded because of missing macroeconomic variables. Question about communist party membership is only asked in Germany but not in the other 4 non-transition countries. FSU stands for the former Soviet Union.

**Table A2: Transition gap in linear probability model for ‘Good’ or ‘Very Good’ self-rated health**

	Self-rated health (1 if ‘Very Good’ SRH, 0 otherwise)					
	(I)	(II)	(III)	(IV)	(V)	(VI)
Transition country	-0.097* (0.049)	-0.007 (0.024)				
Eastern Europe			-0.103* (0.051)	-0.033 (0.026)	-0.104*** (0.027)	-0.079*** (0.024)
Southern Europe			0.001 (0.051)	0.012 (0.030)		
FSU & Mongolia			-0.168*** (0.050)	-0.040 (0.041)	-0.168*** (0.022)	-0.069** (0.030)
Observations	49538	48657	49538	48657	42041	41263
Adjusted R-squared	0.098	0.153	0.129	0.154	0.122	0.143
	Self-rated health (1 if ‘Bad’ or ‘Very Bad’ SRH, 0 otherwise)					
	(I)	(II)	(III)	(IV)	(V)	(VI)
Transition country	0.064*** (0.014)	0.024 (0.021)				
Eastern Europe			0.056*** (0.014)	0.028 (0.021)	0.025** (0.012)	-0.003 (0.018)
Southern Europe			0.031** (0.015)	0.025 (0.023)		
FSU & Mongolia			0.094*** (0.019)	0.087*** (0.026)	0.065*** (0.018)	0.082*** (0.027)
Observations	49538	48657	49538	48657	42041	41263
Adjusted R-squared	0.126	0.148	0.132	0.149	0.134	0.154
	SRH (categorical 0–0.25–0.5–0.75–1 from ‘Very Good’ to ‘Very Bad’)					
	(I)	(II)	(III)	(IV)	(V)	(VI)
Transition country	0.089*** (0.024)	0.025 (0.022)				
Eastern Europe			0.083*** (0.026)	0.037* (0.020)	0.060*** (0.017)	0.031 (0.019)
Southern Europe			0.024 (0.024)	0.020 (0.026)		
FSU & Mongolia			0.143*** (0.024)	0.088*** (0.031)	0.119*** (0.014)	0.086*** (0.027)
Observations	49538	48657	49538	48657	42041	41263
Adjusted R-squared	0.239	0.309	0.277	0.312	0.270	0.307
# of transition countries	28	28	28	28	28	28
# of non-transition states	5	5	5	5	0	0

Notes: Author’s calculations based on LiTS III data. All models using sampling weights with robust standard errors clustered at the country level. All models control for the same variables as in the main Table 2 but coefficients are not shown to save space. Kosovo is excluded because of missing macroeconomic variables. \*\*\*p < 0.01; \*\*p < 0.05; \*p < 0.1.