Population, living standards and well-being since 1989¹

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1. Introduction

The transition from state-socialism to a democratic, political and market-based economic system, even though it started more than 25 years ago, is still a relatively recent phenomenon in Eastern Europe. Consequently, opinions on its final success and the effect of this transition on welfare are still subject of politically influenced debates. This requires historians to exercise caution and stick to measurable facts and statistically proven tendencies to an even greater extent than usual. Hence, the structure of this chapter closely follows that of Chapter 14 on the same topic in the period 1949-1989.

In section 2 we review the main demographic tendencies of in post-communist countries. Here we find large regional differences. Former soviet republics and South Eastern European countries experienced an increase in mortality, while the Central European post-communist countries rather converged to the mortality patterns of the West. Birth rates reduced in the whole region, partly as result of the second stage of demographic transition, but also due to the transition crisis. Finally, the migration patterns from the post-communist countries to the wealthier market economies continued even after the change of system.

In section 3, we discuss how the population is characterized by differential standards of living during and after the transition away from state socialism. The various aspects of well-being, i.e. human capital (health and education), and income, are dealt with consecutively in Sections 3-4. The basic finding is that in various countries the system moved towards a more Western oriented situation. In terms of population growth this caused a clear decline while, in terms of well-being, there was some catching up. This was counteracted, however by rising inequality both within and between countries. Indeed, as is argued in Section 5, even though happiness was increasing after the transition, the gap in happiness between various countries in Eastern Europe increased. We end with a brief conclusion.

2. Demographic tendencies in Eastern Europe after the fall of state-socialism

2.1 General population tendencies

The transition from state-socialism to a market economy and parliamentary democracy proved to be a difficult process. The trying nature of the transition is reflected in the relative position of former socialist countries within Europe. The gradual growth of population slowed down and halted in the 1980s and the population share of Eastern European countries in Europe without the USSR remained basically unchanged after 1990 (Figure 1). When the former USSR is taken into consideration, the share of Eastern Europe even decreased. Some countries lost a significant part

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of their population in the 1990s and 2000s: Bulgaria's population decreased by 1.5 million, while Romania and Hungary lost 3.3 million and 514 thousand residents respectively between 1990 and 2014. This was not a new tendency though. The population expansion of European state-socialist countries already halted in the 1970s, as discussed in Chapter 14, partly as a result of the inability of state-socialist regimes to effectively participate in the technological development of healthcare, and partly due to social and economic problems. These trends continued during the transformation as well.

Most of the population growth of socialist countries in the 1945-89 period had occurred in the Central Asian republics of the Soviet Union, such as Azerbaijan, Kyrgyzstan, Tajikistan and Turkmenistan. While the population of these countries continued to grow even after the fall of the socialist regime and gaining independence, the total population growth balance of the former soviet republics turned negative by 1994 as the Russian and Ukrainian populations decreased by 4.5 and 6.5 million during the 1990-2014 period.

Figure 1
European population, 1980-2010

Source: World Development Indicators (2014)

2.2 The transition crisis and the demographic transition in post-communist countries

The literature usually lists four possible explanations that are equally likely to have played some role in the change in birth rates (Bradatan and Firebaugh, 2007; Sobotka, 2011) (see also Figure 2a). The first is the drop in income level as a result of the transformation crisis (see section 4). While this effect was to be temporary, since economic growth restored a few years later, the

transformation also affected the income distribution by increasing inequality and poverty. Besides income effects, also health and childcare systems suffered. Indeed, the extensive childcare system of the communist countries turned out to be unsustainable and the number of pre-school childcare institutions, kindergartens and nurseries decreased thus increasing the opportunity costs of children even further. Change in the legal system also had its effect, as in many countries abortion was made legal or easier than in the pre-1990 period. The only counterexample is Poland, where a strict abortion control was introduced in 1993. Also, contraceptives became easier available and more popular, especially in the former USSR.

The second explanation for stagnating population numbers is the growing unemployment, caused by rising inequality and uncertainty regarding future income levels, which is partly attributable to the transformation crisis but is also a typical feature of a market economy. As Sobotka (2011) remarks, socialist regimes offered lower living standards but more security for the individual than market economies. This fundamentally changed with the withdrawal of the government from the economy and the labor market. Ranjan (1999) showed that under reasonable assumptions rational agents will find it more appealing to postpone their childbearing when uncertainty is increasing. Philipov and Kohler (2001) empirically estimated the effect of the transition on postponing childbearing (tempo effect) and the reduction in the number of offspring (quantum effect), and found that the quantum effect was strong in Russia and Bulgaria until 1993, possible because the transition was especially difficult in these countries, while the tempo effect was dominant in the whole region between 1993 and 1996. The effect of uncertainty of employment on fertility decisions is not obvious and uniform though, as shown by Özcan et al. (2011) who found that economic uncertainties in East Germany led to an increase in the number of births. Nevertheless, the dominant view of demographers is that uncertainties usually resulted in the reduction of the number of planned offspring.

A third explanation is the phase shift in the demographic transition. As outlined in Chapter 14, the demographic transition is a phenomenon, starting in the 19th century, that, due to various factors such as income and health care, death rates start to decline while birth rates stayed high (phase 1). This creates a brief time with high birth rates and low death rates, i.e. strong population growth (phase 2). After some time, society then also faces declining birth rates which brings the system back in equilibrium again (phase 3). Whereas, for many western countries this process already started in the 19th century, for Eastern Europe it only occurred in the 20th century (see chapter 14). Consequently, the decline in birth rates after the transition period as observed above might be aggravated by the former socialist economies entering the third phase of the demographic transition.

Figure 2a

Crude Birth Rate (CBR, number of births per 1,000 inhabitants), 1980-2012

Source: World Development Indicators (2014); UN Demographic Yearbook (various issues)

Death rates had no uniform trend in the post-communist countries (Figure 2b). While mortality trend in Central European countries converged to the Western European trend, mortality rates increased in South Eastern Europe and exploded in the Eastern Europe (the European part of the former USSR). Combined with an overall decline in birth rates, this resulted in an absolute loss of population in the post-communist countries (Figure 2c).

Figure 2b

Crude Death Rate (CDR, number of deaths per 1,000 inhabitants), 1980-2012

Source: World Development Indicators (2014); UN Demographic Yearbook (various issues)

Figure 2c
CBR-CDR, 1980-2012

Source: Data from Figure 2a minus the data from Figure 2b

The total fertility rate (TFR) reflects the same general tendencies (Figure 3), namely a slow convergence to the Western European demographic trends. By 1990 all European countries were below the replacement level of TFR (about 2.1) signifying the ageing of population and predicting a reduction in future population. Yet, the picture is not overall negative,

Figure 3
Total Fertility Rate trends 1980-2012

Source: World Development Indicators (2014).

we can observe a resurgence of the TFR in the post-communist countries after 2000. Even though this is not enough to reverse the long-term population tendencies it confirms the existence of tempo effect of transition that is the postponement of childbearing as a result of economic hardships. Sobotka (2011) even concludes that the tempo effect was the dominant source of fertility decline during the transition period.²

2.3 Intra-European migration

The fourth factor determining the demographic structure is migration. As we saw in the Chapter 14, the main direction of intra-European migration changed after the 1960s and the dominant migration from Southern Europe toward Western Europe was replaced by a flow of Central and Eastern Europeans to the West. In 1988 41% of all migrant were from state-socialist countries moving to a Western European country (Table 2 in Chapter 14). By 2008 it was still Central and Eastern Europeans that were the most eager to migrate (57.1% of all migrants), but the

² It is not obvious to what extent the fertility and family policies of different governments in transition countries affected the demographic trends. Most of them had probably only a temporary effect except for Slovenia and Estonia, where the effect was probably more significant. (Frejka and Gietel-Basten, 2016)

destinations diversified somewhat: Southern and Northern European countries (22.2%) became almost as important destinations as Western Europe (24%) for immigrants from post-communist countries.

Table 1
Migration, main destinations ca. 2008

	DESTINATION	Central Europe	South East Europe	Eastern Europe	Western Europe	Southern Europe	Scandinavia
O R I G I N	Total numbers (total intra-European migration: 2,040,639)						
	Central Europe	5,545	13,509	23,892	24,274	4,858	167,548
	South East Europe	33,232	87,419	19,727	27,905	74,376	508,386
	USSR	113,920	20,647	73,235	55,797	388,611	25,222
	Western Europe	352,142	180,761	103,310	713,448	128,105	70,360
	Southern Europe	35,100	4,908	30,135	7,153	4,892	31,149
	Scandinavia	22,592	2,673	374	435	5,784	204
	As % of migration from origin						
	Central Europe	0.24%	0.08%	0.08%	99.42%	0.01%	0.18%
	South East Europe	1.20%	0.04%	0.67%	97.25%	0.11%	0.74%
	USSR	3.87%	0.00%	0.00%	90.95%	0.00%	5.19%
	Western Europe	1.06%	0.99%	0.06%	43.17%	51.83%	2.89%
	Southern Europe	0.85%	0.80%	4.38%	78.53%	13.96%	1.48%
	Scandinavia	0.45%	0.23%	4.05%	27.73%	3.09%	64.45%
	As % of intra-European migration (totals 97.39%)						
	Central Europe	0.3%	0.0%	0.0%	13.9%	1.1%	1.5%
	South East Europe	0.4%	1.6%	0.0%	7.0%	14.8%	0.6%
	USSR	2.7%	0.2%	5.6%	3.0%	3.4%	0.8%
	Western Europe	2.0%	0.2%	0.4%	17.3%	4.5%	1.8%
	Southern Europe	0.1%	0.1%	0.1%	8.3%	1.7%	0.4%
	Scandinavia	0.0%	0.0%	0.1%	1.3%	0.3%	1.6%

Source: United Nations, Department of Economic and Social Affairs, Population Division, *International Migrant Flows* (<http://www.un.org/en/development/desa/population/publications/migration/migrant-flows.shtml>)
Accessed Dec. 2015.

This shift in destination was due to the successful convergence of Italy and Spain in terms of income and the increased openness of the high-income welfare states of Northern Europe to accept immigrants from within the European Union. Another important factor is that the majority of Central and South-Eastern European post-communist countries joined the European Union in 2004 or in the following few years, which made employment abroad easier.

The long-term effect of migration on the social security and welfare in Europe may be far-reaching. Ageing resulted in an increased demand for young migrants in Western Europe and this was accelerated by the free movement of labor principle of the EU. As a result, host countries

managed to temporarily mitigate the pressure on their pay-as-you-go type pension systems and could avoid or postpone serious cuts in pensions (Han, 2013).³ The effect on the welfare system of the sending countries, however, is ambiguous. Generally, it is the younger more educated people who leave Eastern Europe, hence outward migration results in a loss of tax revenue and this results problems in financing the current, usually pay-as-you-go pension systems (Atoyan et al 2016). Also, emigration has taken such extent that it led to labor shortages in some sectors and regions (see for example ‘More vacancies than visitors’, The Economist, Sept 19, 2015). Remittances (income transfers) from expatriates to their families at home, may alleviate poverty among the poor but also may increase consumption more than savings. Consequently, in the long-run economic growth and governance quality may reduce (Atoyan et al 2016).

3. Human capital: health and Education after 1989

In Chapter 14 we already provided a definition of human capital. That is, those skills and abilities that are used in creating new value. In this chapter, we follow the same approach, that is, we look at the two main components of human capital: a health component that affects the availability of raw labor and also labor affects effectivity and an education/training component.⁴

3.1 Longevity, health and healthcare during socialism

Life expectancy, that is the number of years that a group of individuals born in the same year is expected to live, is a fundamental measure of health and the quality of life. Life expectancy has considerably grown in all regions with the exception of the former soviet republics. The growth of life expectancy in Central Europe was faster in 1990-2012 than in Western Europe (0.36% versus 0.32% per annum). After 2000, however, the Central European life expectancy growth continued at the same pace as in Western Europe (0.31% and 0.32% per annum respectively), which resulted in a stable 5.5-year difference in life expectancy. In the former soviet republics, the life expectancy dropped initially partly as a result of the collapse of the healthcare system. It is only after 2005 that the life expectancy started to increase again. In this period however, Eastern European life expectancy started to rise at 0.9% per annum leading to the restoration of the pre-transition level.

Figure 4
Life expectancy at birth in Europe 1980-2012

³ It should be noted that the financial effect of immigration on host countries is not unconditional as suggested by Bonin et al (2000) as it depends on the financial behavior of the immigrants. Similarly, the background of migrants is also of primal importance, because less educated immigrants are more likely to be dependent on social benefits and have lower chance of finding employment. See Roodenburg et al. (2003) for the Netherlands, Blume and Verner (2007) for Denmark.

⁴ We acknowledge that health could also be seen as part of wellbeing. As a result, certain health related indicators are discussed in section 5 as well.

Source: World Development Indicators (2014).

Indeed, the large, complex healthcare systems in of the state-socialist regimes became a major financial burden by the end of the 1980s. This coincided with the general transformation of healthcare systems consisting of a change in traditional healthcare roles and a revolution of medical technologies that made healthcare increasingly costly in the whole of Europe. First, in Western Europe traditional healthcare roles were partly taken over by social care network and some hospitals were redesigned as nursing facilities. It was especially in Sweden and Denmark where such reforms have reduced the number of hospital beds. This trend, however, was enhanced by the financial crisis of 2008 which lead in many countries to a reduction in public spending (European Observatory on Health Systems and Policies, 2012; Thomas and Burke 2012). Second, advance in medical technology increased the possibility of same-day surgery thus decreasing the duration of patients on the hospital (OECD 2012).

As a result, the number of hospital beds decreased in whole Europe during the 1990s and 2000s (see also McKee 2004). But it was uneven. Besides Scandinavia, the greatest reduction in absolute terms occurred in the former soviet republics, especially in Central Asia, where the financial difficulties resulted in reduced

Figure 5
Hospital beds per 1,000 residents in Europe, 1980-2011

Source: World Development Indicators (2014).

funding. This was also the case in Albania, where the healthcare system collapsed in the first half of the 1990s. In other post-socialist countries, like in Eastern Europe and the Baltic, the reduction in the number of beds was also a result of rationalization programs: small hospitals were closed down and the average time spent in hospitals was reduced. However, in certain cases such as Bulgaria and Romania this led to smaller decreases (or even increases over the past 10 years).

Of course, other indicators about health and health care quality also exist such as the number of CT scanners or caloric intake. In terms of the number of CT scanners per capita, the picture is more positive: as Figure 6 shows in those post-communist countries for which we have data, their numbers slowly increased, and the region seems to converge to Western and Northern Europe in terms of modern medical equipment. Nevertheless, in the first decade of the 21st century the difference was still significant. As for caloric intake,

Figure 6
Number of computerized tomographic (CT) scanners per million inhabitants

Source: OECD Health Statistics 2016

in Figure 7 we can observe that the two available post-communist countries, Hungary and Poland (which were relatively better off within the Soviet Bloc), the caloric intake converged to the Western and Northern European trends. The calorie intake actually decreased in Hungary, which in itself could be a result of the convergence to Western European eating habits. Figure 8 however further refines the picture since, while fat consumption remained roughly stable in Hungary, protein intake reduced, which can be seen as a sign of detrimental tendencies in the composition of nutrients. The reduction in protein consumption in Hungary can also be explained by the end of state subsidies of agriculture and the liberalization of prices, that reduced domestic production and increased the relative price of meat and dairy products. This, paired with the growing income inequality (see later in this chapter), results in a lower average protein intake.

Figure 7

Daily average calorie intake (kcal)

Source: OECD Health Statistics 2016

Figure 8
Average daily protein intake (in grams)

Source: OECD Health Statistics 2016

3.2 Education

Besides health, a second factor of human capital concerns education. In Chapter 14 we saw that the main area where state-socialist regimes were relatively successful was the expansion of education, which played an important role in their modernization plans and social engineering attempts. By 1990 socialist countries had already removed most of their initial disadvantage (chapter 14, Table 5). Higher education became accessible to wider strata of the society, and the number of higher education institutions grew rapidly. By 2010 Bulgaria, the Czech Republic, Slovakia, Hungary and the Baltic States reached the same level in terms of educational attainment as Western European countries.

Figure 9
Average years of education in some European regions, 1980-2010

Note: Germany and former-Yugoslavia is omitted for comparability.
Source: Van Leeuwen and Van Leeuwen-Li (2014); Foldvari and Van Leeuwen (2014).

Table 2
Regional population weighted means of average years of education

	European market economies			State socialist economies			
	Western Europe	Southern Europe	Scandinavia	Central Europe	South-Eastern Europe	USSR	European part of the USSR
1980	10.8	7.3	10.5	7.9	8.4	8.6	8.6
1990	11.4	8.4	11.4	8.6	9.2	9.9	9.9
1995	11.7	9.0	11.6	9.0	9.7	10.6	10.6
2000	11.8	9.6	11.7	9.6	10.0	11.0	11.2
2005	12.0	10.0	11.8	9.9	10.3	11.4	11.7
2010	12.2	10.3	12.0	10.3	10.6	11.9	12.4

Note: Germany and former-Yugoslavia is omitted for comparability.

Source: Van Leeuwen and Van Leeuwen-Li (2014); Foldvari and Van Leeuwen (2014).

The structure of education also converged to the Western European standards:

Figure 10
Gross tertiary enrolments (%)

Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

Figure 10 reports the main trends in gross tertiary enrolment, that is, the percentage of the respective age group that is enrolled at some tertiary education institute. Even though the Russian enrolment was already quite high already in the 1970s, partly due to the country's increased

emphasis on technical higher education⁵, in the Central European socialist countries tertiary education preserved its elite status until the mid-1990s when mass-education reached colleges (undergraduate institutions in applied sciences and pedagogy) and universities (with postgraduate education).

3.3 Human capital stock

This catching up in years of education, in terms of tertiary education, and (partly) in health did not necessary lead to increased levels of human capital stock. As we discuss in Chapter 14, educational attainment is not the same as the value of human capital assigned by the market. One possible way to estimate the value of human capital can be defined as the discounted sum (or present value) of all expected future earnings (Van Leeuwen and Foldvari, 2013) corrected for life expectancy, depreciation and real economic growth.

Applying the same method as in sub-section 3.3 of Chapter 14, we find that, after the transition the value of human capital remained low in the transition economies when compared to Austria or Germany, or even Southern European countries. What is more, the value of the per capita human capital stock seems to have decreased around and after the transition. This is partly explainable by the decrease in physical capital stock, that necessarily reduced the marginal product of labor and hence the real wages, but also by the disorganization in the first years of transition that resulted in a further drop in terms of productivity. The drop was the most dramatic in Russia, where the transition crises was arguably the most difficult, and where the large-scale inflation until about 1996 quickly eroded the purchasing power of earnings.

After the transition crises, beginning in the mid-1990s, the value of human capital per capita seems to have started to increase at least in Hungary, Russia and Ukraine at an even faster

Figure 10

Income based human capital per capita estimates for selected European countries (2005 Intl dollar)

⁵ Prokofiev (1963) mentions that in 1959 the number of students enrolled in technical tertiary education (837.5 thousand) was almost as high as the number of students in classic universities and colleges focusing on humanities or science (927.5 thousand).

Source: Van Leeuwen and Foldvari (2013); Didenko et al. (2013); this text.

pace than in Austria or Germany. However, being driven partly by a rebound of average wages after the transition, this may be a temporary trend rather than a real catch-up.

4. Income

4.1 The transition crisis

Kornai (2006) lists five main characteristics of the transformation in Eastern and Central Europe: 1. It was recreating the Western European pattern of development (capitalism and democracy), 2. The transformation was complete in the sense that it all happened simultaneously in all spheres of society: economy, the legal system, and politics, 3. The transformation was mostly non-violent (with the exception of Romania in 1989, and the former Yugoslavia), 4. The transformation was not triggered by a war or occupation, 5. The transformation occurred very quickly, it took just 10-15 years. While some of these features can be found in other historical examples of economic and societal transformations, the presence of all five defining features is unique in history.

The transformation was thus mainly an economic and political, and to a lesser extent institutional change, which occurred rapidly. As pointed out before, it affected all parts of well-being. However, arguably the biggest change occurred in the economic system. Indeed, in 1989 the highest per capita income in the region was in the DDR (16,900\$ in 2005 prices), Czechoslovakia (10,578\$), followed by Hungary (9,111\$). The lowest was in Albania (1,926\$) and Bulgaria (3,089\$). The Soviet GDP per capita was still high in comparison, but masks significant income differences: the Baltic Republics were relatively rich (Estonia 6,800\$, Latvia 5,863\$, Lithuania 7699\$) and the poorest was Armenia with 1,207\$ at 2005 intl dollars. Yet, looking a few years after the transition, we can see that in 1995, compared to 1989, per capita GDP in most Eastern European countries had declined with between 0 and 20%, while in the Former Soviet Union Area this decline was larger, with between 20 and 40% (Figure 11).

Figure 11

The effect of the transformation crisis on per capita income differed in magnitude but not a single post-communist economy could escape it. Latvia, Lithuania, Russia and Yugoslavia were hit the hardest, each losing about 40% of their aggregate income over 5 years. The dissolution of Yugoslavia was a violent process and the war among the successor states, followed by bloody ethnic conflicts, is responsible for most of the losses in Yugoslavia. Coricelli and Maurel (2011) examined the length and depth of the crises in different groups of post-communist countries. They found that while in the 10 Central and South-Eastern former socialist countries the transition was more reminiscent to a recession following a financial and banking crisis in a developed market economy, the transition crisis had a magnitude in the former soviet (CIS) republics that can be best compared to the effects of a civil war.

This observed decline of per capita income may be attributed to various factors. First, the size of per capita income in the last year of the socialist systems in Europe can be misleading and may lead to an overestimation of the income drop. In the late 1980s the economies of Eastern countries were still largely controlled by the state and a higher income did not necessarily reflect the abundance of goods (especially not in the Soviet Republics).

Second, the difficulties of transition varied significantly within the region. The luckiest countries, like Czechoslovakia, Poland and Hungary underwent a political stabilization relatively rapidly and could start the economic reforms, while in other countries the political turmoil (Russia, some former USSR republics and Yugoslavia) aggravated the already difficult situation.

Third, at the end of the state socialist period, a slowing down of economic development occurred, which led in some countries to excessive borrowing to keep investments and standards

of living at their old levels (see Figure 12). Excessively high debts were a limiting factor in economic growth.

Source: Clio-infra, gross government debt to GDP ratio

A fourth reason for the decline in income were the economic changes that occurred in these countries. Some of the post-socialist countries already had some limited experience with the market economy, such as Hungary and Poland, where some reforms were introduced already during the state-socialism such as the Hungarian New Economic Mechanism or some reforms in Poland in the 1980s intended to reduce shortages by allowing for more private enterprises and by reducing government planning. Nevertheless, even with such significant differences in the socialist heritage, all regimes had to face the same fundamental economic problems, such as:

- 1) the state-socialist experience proved the inefficiency of state ownership, which required a program of *privatization*. Most transition countries, including Bulgaria, Hungary, Poland and Slovakia choose direct sales as primary method of privatization (that is the ownership for cash). In the Czech Republic, Russia and other former Soviet republics privatization was carried out by issuing vouchers to citizens that could be exchanged into shares in companies.
- 2) The transformation of the existing *legal and financial system* to become compatible with a market economy. The Eastern European *tax system* before 1989 was fundamentally the same as the Soviet tax system: the major taxes were the profit, turnover and payroll taxes paid by state-owned firms. Wage and payroll taxes were withheld by the employer; hence the income taxes were somewhat masked by the system implying a lack of tradition of voluntary compliance (Martinez-Vasquez and McNab, 1997). Also the tax system was not neutral but it was used as a tool of economic planning and subsidization.

- 3) The banking system also needed a fundamental reform. The state-socialist banking system was fundamentally a one-tier of monobank system (Barisitz, 2008). The two-tier system, with one monetary authority and a system of independent banks was introduced by Hungary in 1987, then in Czechoslovakia in 1988 and in the whole region in the first years of the 1990s (Ruziev and Dow, 2015).

Finally, as an additional factor one should not underestimate the importance of informal or underground economy, which is not reflected by the official GDP statistics. Feige and Urban (2006) report different estimates of the size of the underground economy relative to GDP in the transition economies. While there are methodological challenges⁶, the magnitude of economic activities, unregistered in post-communist countries is astonishing. While the share of unregistered incomes in Central European countries is estimated at between the range 9-16%, in the former Soviet states it reached 25-30% (especially in Armenia, Georgia and Kazakhstan).⁷ The size of the informal economy, with few exceptions like Poland, increased after 1989. For example, the official estimates suggest that the share of unobserved economic activities was about 6.7% in Romania in 1992, it grew steadily to 23.3% in 1998. The main motivation behind the expansion of informal economy was tax avoidance and the desire to circumvent labor laws and safety rules. Yet, after the years of the transition crisis, the region entered into a phase of economic growth surpassing that of the former state-socialist economies. While per capita income the region grew on average by 2.6% annually in the 1950-89 period, the regional average of economic growth increased above 3.5% until the crisis of 2008. Also, the regional average of economic growth surpassed that of Western, Southern and Northern Europe, which means that the region started to converge to the most developed welfare states of Western Europe in terms of aggregate income. In this sense the transition process led to the improvement of the standard of living of the average citizen in these countries. The only shortcoming of this approach is that such a person as the average citizen does not exist.

4.2 Economic inequality

Economic growth and the new possibilities did come at a price. While the average income began to increase in the mid-1990s, the distribution of income changed for the worse. The dominant egalitarian socialist ideology had a lasting impact on attitudes and expectations in post-communist states. The transition to a market economy meant that the previous controls on wage differentials were abolished and income differences started to grow.

Also with the end of price control and the liberalization of trade with the rest of Europe, prices of fundamental consumption goods started to increase and this eroded the purchasing power of wages (Figure 13). The high inflation was partly due to the adjustment to the European price levels as a result of trade liberalization, but also a result of the high debts accumulated in the region that often led to inflationary monetary policies. Inflation disproportionately affected

⁶ While statistical agencies use the discrepancies between reported economic activities and other statistics (for example production data or expenditure). This covers however only part of the unobserved activities. Many studies rely on the electric consumption methodology (ECM) that approximates the growth of the informal sector by the difference between the growth rate of electric consumption and that of GDP. The fundamental assumption is that there is a constant elasticity (varying by region, but usually close to one) of electric consumption with respect to GDP.

⁷ Probably lower-bound estimates since they employ the discrepancy technique.

different income groups, as it reduced the value of savings and earnings and could be considered as a highly regressive tax.

Figure 13
Annual inflation (% change of CPI), 1980-2012, logarithmic scale of base 10

Source: IMF Financial Statistics, <http://data.imf.org>

Another important reason behind growing inequality was unemployment: while socialist governments declared the goal of full employment, and made employment a basic civic right and duty, the number of unemployed and inactive increased in the region.⁸

Indeed, whereas the number of rich increased quite considerably after the transition, the welfare of the general population lagged which led to an increase in inequality as reflected in Figure 14. Even though income inequality slowly increased in

Figure 14
Income inequality (Gini coefficients⁹) in European market economies and state-socialist countries, 1970-2010

⁸ One should not forget that the full employment policy was basically a social welfare policy for many. Instead of social benefits, the state-socialist regimes preferred offering employment and salary even if it was economically not efficient.

⁹ Gini coefficient is a widely used measure of inequality. A value of 0 refers to perfect equality, that is income spreads even in the society, while a value of 100 means perfect inequality, that is the richest person of the society owns all income.

Source: Solt (2009); Van Zanden et al. (2014)

Western European countries, the growth of inequality was much faster in the transition economies. While the Eastern and Central European post-socialist countries gradually converged to Western Europe in terms of income inequality, most former Soviet Republics became from relatively equal societies to highly unequal in just a few years. The growing inequality can be attributed to a multitude of factors: besides the obvious explanations, such as inflation or income insecurity, the growth of the informal economy also played a role. Rosser et al (2000) observed a positive, statistically relationship between the size of the informal economy and income inequality. That is, in countries where informal economy played a more important role income inequality was also higher. An obvious explanation may be that with more informal activities, a larger share of the earnings of the poorer strata is not recorded, and hence the total income share of the poor may be underestimated. On the other hand, with lower tax revenues the social welfare system is also less efficient to alleviate poverty.

Another possible explanation for increased inequality lies in the growth of regional disparities (Förster et al 2005). While the state-socialist development policies aimed at reducing the difference between urban centers and the countryside, with market economy the efficiency gains from agglomeration clearly dominated the location of enterprises. This, paired with the bad state of infrastructure and the low degree of internal mobility of the population, led to lower employment in the country side and a much higher growth of incomes in the main cities and especially in and around the capitals.

The role of the state changed as well. While state-socialist regimes introduced state-wide policies to reduce inequality, this became much less possible with the dominance of the private sector in the economy after the 1989. Bandelj and Mahutga (2010) found a positive statistical relationship between income inequality and Foreign Direct Investments in CEE countries. The size of FDI is a good measure of the share of private sector in total income and wages also tend to be higher in the more efficient foreign-owned companies. While foreign capital may contribute to economic growth, it may also increase disparity. Bandelj and Mahtuga also found that countries

with higher ethnic fragmentation are also more unequal, which points to another important social problem namely the social exclusion of some minorities that translates into bad social and economic position even by local standards. For example, the Roma minority in central Europe (Romania, Bulgaria, Hungary and Slovakia) suffer from much higher unemployment and lower income than the majority after their main employers (state-owned companies, local agricultural cooperatives) dissolved or went bankrupt. Similarly, ethnic Russians in Estonia and Latvia were denied of citizenship after the collapse of the USSR, unless they mastered the local official language and underwent a naturalization process. This made them more vulnerable to changing economic conditions.

5. Wellbeing in Eastern Europe after 1989

5.1 Human Development Index

Similarly to Chapter 14, we combine three measurable components of well-being (i.e. the unweighted average of life expectancy, education and income) into the Human Development Index (HDI). It should be noted, that our HDI combines feature of the pre- and post-2010 HDI calculation, hence their values do not equal the statistics in the official reports. The income component is calculated as:

$$INC_i = \frac{\ln(y_i) - \ln(100)}{\ln(40000) - \ln(100)}, \text{ where } y_i \text{ is the per capita GDP in country } i \text{ expressed in international}$$

USD at 2005 prices. The logarithmic transformation is used to introduce the non-linear, decreasing effect of income on wellbeing.

The education component is a modified version of the post-2010 HDI:

$$EDU_i = \frac{educ_i}{15}, \text{ where } educ_i \text{ denotes the average years of schooling in country } i \text{ of the population}$$

aged 25 and above. In other words, it is assumed that the maximum average years of education of the present population is 15 years. We do not use the expected years of education, a component included in the post-2010 HDI, since it does not reflect the actual situation but should rather be seen as a prognosis for the educational attainment in the future based on certain assumptions.

Finally, the life expectancy component is simply:

$$LE_i = \frac{LifeExp_i - 25}{85 - 25} \text{ where } LifeExp_i \text{ is the life expectancy at birth in country } i. \text{ We assume hence}$$

that the maximum life expectancy is 85 years (near the current level in the most developed countries), while a life expectancy of 25, typical of pre-industrial societies, is the lower limit.

Finally, just like in the pre-2010 version of the HDI, the three indices are aggregated by a simple arithmetic average.

Figure 15

Population weighted regional Human Development Index in Europe, 1970-2012

Source: Bas

Figure 15 reveals a general positive trend in well-being in the whole continent. The transformation crises generally caused a drop in HDI, fundamentally because of a temporary decrease in per capita income, nevertheless, the positive trend returned from about 1995 and the growth rate of HDI in Eastern and Central European post-communist countries even surpassed that of the Western Europe, indicating a return to the previous trend, or even a convergence to Western Europe (it is too early to tell which). Some of the Central and Eastern European countries, such as the Czech Republic, Croatia, Slovakia and Slovenia managed to reach or even surpass the HDI of Greece by 2010.

5.2 Happiness

The measurable indicators of wellbeing and living standards reflect a slow convergence to Western Europe after the transition crisis. However, wellbeing is just imperfectly approximated by quantitative measures. After all, living a long life will be much more valuable when being healthy and having a good health care. Education is only valuable when it is properly employed in the productive process and a high income will only be useful if it is not distributed in an extremely unequal way.

To obtain a more detailed view of wellbeing, we also look at some soft measures such as happiness and alcohol consumption. During state-socialism, neither poverty nor happiness research was encouraged, since the ruling ideology denied the existence of deep poverty or despair in a socialist society. It is since the mid-1980s and the 1990s that the geographical coverage of happiness studies has grown and expanded into former socialist countries, which allows us to make a much more accurate comparison than in Chapter 14 on the period 1949-1989.

As Table 3 suggests, even a decade after the change of system in former socialist countries, the happiness in post-communist countries remained well below the Western European average. Happiness statistics generally reflect the speed and the difficulties of the transition. The lowest share of happy respondents was recorded in Albania, which remained the poorest of former socialist countries in Europe. We observe comparable low happiness in Russia, Bulgaria and Romania, where the transition was slow and economic growth came with a significant delay. The Polish are still the happiest people in Eastern Europe. The more fortunate Central European countries, Poland, Hungary and the Czech Republic scored quite high, comparable to the German or Spanish level of happiness. Even though many Poles migrated to Western Europe in hope for a better life, they turn out to be the happiest of the former Eastern Bloc.

Table 3

Share of respondents with category “rather happy” or above in selected European countries

country	Year	% of happy respondents	Source
Albania	1998	33.4	World Values Surveys, 1995/1999: V10
	2002	58.8	World Values Surveys, 2000/2004: V11
Bulgaria	1997	55.5	World Values Surveys, 1995/1999: V10
	2005	56.4	World Values Surveys, 2000/2004: V11
Czech Republic	1991	72.1	World Values Surveys, 1990/1994: V18
	1995	82.7	World Values Surveys, 1995/1999: V10
Estonia	1996	63.7	World Values Surveys, 1995/1999: V10
	2011	76.7	World Values Surveys, 2010/2013: V10
Hungary	1998	77.3	World Values Surveys, 1995/1999: V10
	2005	75.6	World Values Surveys, 2000/2004: V11
Poland	1989	87.6	World Values Surveys, 1990/1994: V18
	1997	85.3	World Values Surveys, 1995/1999: V10
	2005	87.7	World Values Surveys, 2005/2009: V10
Romania	1998	56.1	World Values Surveys, 2005/2009: V10
	2005	55.3	World Values Surveys, 2005/2009: V10
Russia	1995	50.2	World Values Surveys, 1995/1999: V10

	2006	65.7	World Values Surveys, 2005/2009: V10
	2011	73.3	World Values Surveys, 2010/2013: V10
Germany	1997	80.5	World Values Surveys, 1995/1999: V10
	2006	81.2	World Values Surveys, 2005/2009: V10
	2013	84.0	World Values Surveys, 2010/2013: V10
Netherlands	2005	93.9	World Values Surveys, 2005/2009: V10
	2012	92.4	World Values Surveys, 2010/2013: V10
Spain	1995	86.5	World Values Surveys, 1995/1999: V10
	2000	87.0	World Values Surveys, 2000/2004: V11
	2007	92.0	World Values Surveys, 2010/2013: V10
UK	1998	90.6	World Values Surveys, 1995/1999: V10
	2005	93.4	World Values Surveys, 2005/2009: V10

Figure 16 graphs the happiness scores for a number of European selected countries. There is no obvious positive trend in the happiness in post-communist countries: the share of respondents pleased with their situation even declined between 2000 and 2010 in the Czech Republic and Hungary, while steadily increased in Russia.

Figure 16
Happiness in selected European countries (% of respondents stating that they are at least “rather happy”)

Source: Eurobarometer; World Values Surveys.

Another indicator that can be used to approximate the quality of life is the hypertension related deaths per 100,000 inhabitants. Since stressful life increases the probability of hypertension, it should mirror the lack of happiness. Figure 17 reveals that hypertension related deaths started to increase even in some Western European countries in the 1990s, especially in Austria, Italy, Germany and Switzerland. Yet even in these countries the probability of death

Figure 17

Hypertension related deaths per 100,000 inhabitants in Europe 1970-2010

Note: We used hypertensive diseases.

Source: UN, Demographic Yearbook (various issues).

as a result of hypertension was about the half of that in Bulgaria, Romania or Estonia. However, looking at the trend, we find a clear reduction in hypertension during and after the transition in Central European post-communist countries, at least partly indicating a lower stress level. This positive trend, however, reverted around 2005 causing the hypertension related deaths to return to their 1980s level by 2010. This pattern corresponds to the happiness data and suggest that it is very probable, that the change of social and political system did not reduce the average level of stress in these societies, but rather replaced some sources of stress and tension by others. In the South-Eastern European transition countries, we find much higher mortality rates due to hypertension. The level remained quite stable form the 1980s until 2000, when it started to rapidly grow. It should be noted, however that after about 2000 the hypertension related mortality started to increase even in Western Europe and Scandinavia, indicating an all-European trend.

In Chapter 14 we used the alcohol consumption statistics as alternative measure of societal stress and unhappiness. In Figure 18 we report the per capital alcohol consumption in some selected European countries. The general trend is negative, we can observe a reduction in alcohol consumption in Hungary and Slovakia, similarly to Austria and Greece. Alcohol consumption has grown significantly in Russia though, where after the strict anti-alcohol policy of Gorbachev, the official alcohol consumption statistics went up in the 1990s. Also alcohol consumption in Poland began to rise in the early 2000s.

Source: OECD.Stat, OECD Health Statistics 2016.

6. Conclusion

The transformation marked the end of the state-socialist regimes, but not the end of their legacy. As shown in chapter 14, after the initial success of the state-socialist regimes in certain areas of modernization, but this impetus wore off by the 1970s. The expectation around 1989 was that

the adoption of market economy and a democratic political system would not only restart the growth process, but even lead to a convergence to Western Europe in terms of standards of living. Even though the initial wishes remained partly unfulfilled, the balance is rather positive than negative. In terms of aggregate income, after a period of transitional crisis, the region managed to achieve higher economic growth than during the socialist period. Yet, this income growth affected individuals differently, as income distribution became increasingly unequal. Besides the usual factors affecting income distribution, such as education and asset holdings, the post-communist countries experienced a large inequality by region and ethnicity. The decade old social problems that were suppressed during the socialist regimes, remained mostly unresolved after the transition. The period of moderate welfare and high security of employment, typical of state-socialist economies, was replaced by the more efficient resource allocation of market economies at the cost of higher unemployment that resulted in the disillusionment of many who sought a better life in the wealthy half of Europe.

The expansion of the European Union with the Central- and Eastern European countries in 2004 transformed the structure of intra-European migration. During the height of Cold War, most movements occurred between Southern and Western Europe. By the end of the 1980s, the primary channel was the migration of East-Germans to West-Germany (see Chapter 14). By 2006 the main migration route was from Poland and Romania towards Western and Northern Europe and increasingly toward Southern Europe. While this new mass migration of Eastern and Central Europeans alleviated some problems caused by the ageing population in the West, its long-term effects on the sending countries can only be guessed.

The healthcare system, inherited from the state-socialist period, has proven a serious financial burden in the region. Yet, with all problems, the life expectancy has increased and modern medical technologies spread in the post-communist countries. Tertiary education also became increasingly open during the 1990s and after an initial drop, and the value of human capital stock also started to increase. This led to a convergence to the Western European average in terms of the Human Development Index.

The changes in the individual perception of living conditions is difficult to judge since happiness research was just marginal before 1989. Data from the 1990s show that happiness was the lowest in countries where the transition was delayed and the crisis was the most severe, such as Russia, Ukraine, Belarus and Albania. In the more fortunate countries the level of happiness seems to have achieved levels close to the Southern European countries. This finding is also confirmed by the mortality and alcohol consumption statistics: the former increased dramatically in the South-Eastern European transition countries, while alcoholism increased in Russia and Poland and decreased on Hungary and the Czech Republic. Yet, altogether, while the historical division between the two parts of Europe is still visible and measurable, clear signs of convergence are also present giving hope about the future of the continent.

References

- Atoyan, R., Christiansen, L., Dizioli, A., Ebeke, C., Ilahi, N., Ilyina, A., Mehrez, G., Qu H., Raei, F., Rhee, A. and Zakharova, D. (2016) *Emigration and Its Economic Impact on Eastern Europe*, IMF Staff Discussion Note 16/07.
- Bandelj, N. and Mahutga, M. C. (2010) How Socio-Economic Change Shapes Income Inequality in Post-Socialist Europe, *Social Forces*, Vol. 88 (5), 2133-2161
- Barisitz, S. (2008) *Banking in Central and Eastern Europe 1980-2006: From Communism to Capitalism*, Routledge, Abingdon
- Bernardi, L., Chandler, M. and Gandullia, L. (2005) *Tax Systems and Tax Reforms in New EU Member States*, Routledge, London.
- Bradatan, C. and Firebaugh, G. (2007) History, Population Policies, and Fertility Decline in Eastern Europe: A Case Study, *Journal of Family History* Vol. 32(2), 179-192.
- Blume K. and Verner M. (2007) Welfare dependency among Danish immigrants, *European Journal of Political Economy*, Vol. 23 (2), 453-471.
- Bonin, H., Raffelhüschen, B. and Walliser, J. (2000) Can Immigration Alleviate the Demographic Burden? *FinanzArchiv / Public Finance Analysis*, Vol. 57(1), 1-21.
- Clio-infra, gross government debt to GDP ratio
- Coricelli, F. and Maurel, M. (2011), Growth and Crisis in Transition: A Comparative Perspective. *Review of International Economics*, Vol. 19 (1): 49–64.
- Didenko, D., Foldvari, P. and Bas van Leeuwen (2013) 'The spread of human capital in the former Soviet Union area in a comparative perspective: Exploring a new dataset,' *Journal of Eurasian studies*, Vol. 4 (2) 2013, pp. 123-135.
- Duncan and Foley, Extended Penn World Tables.
- Eurobarometer (various issues).
- European Observatory on Health Systems and Policies (2012), *Eurohealth – Health Systems and the Financial Crisis*, Vol. 18 (1)
- Feige, E. L. and Urban, I. (2008) Measuring underground (unobserved, non-observed, unrecorded) economies in transition countries: Can we trust GDP? *Journal of Comparative Economics*, Vol. 36(2), 287–306.
- Földvári, P. and Van Leeuwen, B. (2014) Educational and income inequality in Europe, ca. 1870-2000. *Cliometrica*, vol. 8 (3), 271-300
- Förster, M., Jesuit, D. and Smeeding, T. (2005). Regional poverty and income inequality in Central and Eastern Europe: evidence from the Luxembourg income study. In Kanbur, R. and Venables, A. J. (eds) *Spatial Inequality and Development*, Oxford University Press 311-347.
- Frejka, T. and Gietel-Basten, S. (2016) Fertility and Family Policies in Central and Eastern Europe after 1990, *Comparative Population Studies*, Vol. 41 (1), 3-56.
- Han, K. J. (2013) Saving public pensions: Labor migration effects on pension systems in European countries, *The Social Science Journal*, Vol. 50(2), 152–161.
- Kornai, J. (2006) The great transformation of Central Eastern Europe. Success and disappointment, *Economics of Transition* Vol. 14 (2), 207–244.
- Martinez-Vazquez, J. and McNab, R. (1997) Tax Reform in Transition Economies: Experiences and Lessons, International Center for Public Policy Working Paper Series No. 9706
- McKee, M. (2004) Reducing hospital beds: what are the lessons to be learned? European Observatory on Health Systems and Policies Policy brief no. 6

- OECD (2012), "Hospital beds," in: *Health at a Glance: Europe 2012*, OECD Publishing (<http://dx.doi.org/10.1787/9789264183896-en>)
- OECD/European Union (1998), *Value-Added Taxes in Central and Eastern European Countries: A Comparative Survey and Evaluation*, OECD Publishing, Paris.
- Özcan, B., Mayer, K. M. and Luedicke, J. (2010) The impact of unemployment on the transition to parenthood, *Demographic Research*, Vol. 23, 807-846.
- Pemstein, Daniel, Stephen A. Meserve and James Melton (2010), *Democratic Compromise: A Latent Variable Analysis of Ten Measures of Regime Type*, *Political Analysis* Vol. 18, No. 4, 426-449
- Philipov, D. and Kohler, H. (2001) Tempo Effects in the Fertility Decline in Eastern Europe: Evidence from Bulgaria, the Czech Republic, Hungary, Poland, and Russia. *European Journal of Population* Vol. 17(1), 37–60.
- Prokofiev, M .A. (1963) Chapter One: The Soviet Higher School, In Prokofiev, M.A., Chilikin, M. G. and S.I. Tulpanov, *Higher Education in the USSR*, UNESCO Educational Studies and Documents No. 39, 3-16
- Ranjan, P. (1999) Fertility Behaviour under Income Uncertainty, *European Journal of Population* Vol. 15(1), 25-43.
- Roodenburg H., Euwals R. and ter Rele H. (2003) *Immigration and the Dutch economy*, The Hague: CPB Netherlands Bureau of Economic Policy Analysis.
- Rosser, J. B. Jr., Rosser, M. V., Ahmed, E. (2000) Income Inequality and the Informal Economy in Transition Economies, *Journal of Comparative Economics*, Vol. 28 (1), 156-171.
- Ruziev, K. and Dow, S. (2015) A Re-Evaluation of Banking Sector Reforms in Transition Economics: Intentions and Unintended Consequences. In Ruziev, K. and Perdakis, N. (2015) *Development and Financial Reform in Emerging Economies*, Routledge , London and New York, 81-98.
- Sobotka, T. (2011) Fertility in Central and Eastern Europe after 1989: collapse and gradual recovery, *Historical Social Research* Vol. 36(2), 246-296.
- Solt, F. (2009), 'The Standardized World Income Inequality Database,' <http://hdl.handle.net/1902.1/11992>, Harvard Dataverse, V14
- Thomas, S. and S. Burke (2012), "Coping with Austerity in the Irish Health System", *Eurohealth*, Vol. 18, No. 1, pp. 7-9.
- United Nations, *Demographic Yearbook* (various issues).
- United Nations, Department of Economic and Social Affairs, Population Division, *International Migrant Flows* (<http://www.un.org/en/development/desa/population/publications/migration/migrant-flows.shtml>) Accessed Dec. 2015.
- Van Leeuwen, B. and Foldvari, P. (2013) Capital Accumulation and Growth in Central Europe, 1920-2006. *Eastern European Economics* Vol. 51(5), 69-93.
- Van Leeuwen, B. and Van Leeuwen-Li, J. (2014) Education Since 1820. In: van Zanden, J. L., Baten, J., Mira d'Ercole, M., Rijpma, A., Smith, C. & Timmer, M. (eds.), *How Was Life?: Global Well-being since 1820*, Paris: OECD Publishing, pp. 8-100.
- Van Zanden, J.L., J. Baten, P. Foldvari, and B. van Leeuwen (2014), 'The changing shape of global inequality, 1820-2000,' *Review of Income and Wealth*, Vol. 60 (2), pp. 279-297.
- World Values Surveys