# **Unhappiness in the Post-Communist Countries**

Hiroshi Ono, Hitotsubashi University \*

### **ABSTRACT**

Not much has been written, and even less has been empirically studied about happiness under the communist regime. From what little we know, it appears that life under communism was not a happy life indeed. But what is more shocking is that happiness declined even more after the transition. One would assume that the transition from communism to capitalism, from controlled economy to market economy, and from tyranny and oppression to democracy and freedom would make people happier. But in fact the end of the Cold War had the opposite effect. There is now overwhelming evidence that the post-communist countries rank among the unhappiest countries in the world.

Why are the people in post-communist societies so unhappy? Why does the transition from communism to capitalism lower people's happiness, and not the other way around? This paper explores these questions in great depth. We first discuss the sources of unhappiness among the post-communist countries. We then examine unhappiness in two particular countries – Bulgaria, because it is consistently ranked among the unhappiest countries in the world, and China, because empirical data are finally becoming available and we are just beginning to get a glimpse of the state of wellbeing in this country of 1.4 billion people.

<sup>\*</sup> Corresponding author: Hitotsubashi University, Graduate School of International Corporate Strategy, 2-1-2 Hitotsubashi, Chiyoda-ku, Tokyo 101-8439, Japan. <Email: <a href="mailto:hono@ics.hit-u.ac.jp">hono@ics.hit-u.ac.jp</a> This paper is a chapter out of our book currently under review — Ono, Hiroshi and Kristen Schultz Lee. *Redistributing Happiness: How Social Policies Shape Life Satisfaction*.

## Introduction

What was it like to grow up under communism? At least for those of us in the Western world, the answer is that we don't really know. We don't know because information was limited during the Cold War. These were the days before the Internet, and the little information we learned about life in communist countries came from the selective and calculated information which were released from these countries. The arts and entertainment industry pitched in from the West but the images coming from fiction and film were ominous and far from rosy. In spite of the abundance of books and films which stoked our fears for the Cold War (e.g. Fail Safe, Dr. Strangelove, War Games, and the Hunt for Red October), we knew very little about the everyday lives of ordinary citizens under communism. Much was left to our imagination, and so we assumed the worst, or worse in comparison to Western democracies.

And partly, the Cold War may have been a necessary evil because the world needed a common enemy. The constant and imminent threat of war kept the Western Bloc united, and politics focused towards outsmarting the external enemy. Bad news coming from the communist countries was good, because it masked our problems and made the West look better. Based on the logic, "the enemy of my enemy is my friend," the world as we knew it was divided in two as communist countries like Russia

and China became united in their opposition against the Western countries. It was naturally easier to keep the enemy as an evil dark force where citizens were not free and life was miserable. Centralized planning, rationing of food and supplies, the government as the vigilant "big brother" and controller of information, people working in factories like mindless drones... These were the stereotypes of life under communism. In the West, we simply assumed that people were unhappy there, and that they wanted to escape the iron grip of communism. The occasional news of citizens who risked their lives by climbing the Wall to escape from the East to the West only confirmed our preconceptions. People want to move from East to West to escape the tyranny of oppression, and not the other way around, although some filmmakers poked fun at this polarized view.<sup>1</sup> The transition from communism to capitalism is a transition to happiness. Why would we think otherwise?

Not much has been written, and even less has been empirically studied about happiness under the communist regime. From what little we know, it appears that life under communism was not a happy life indeed (but see discussion below). In a rare study, Inglehart and Klingemann (2000) report happiness data from the World Values Survey in Russia in 1981. The results (see Figure 1) show that Russia in 1981was in fact one of unhappiest places in the world.

## FIGURE 1 ABOUT HERE

Ironically, promoting happiness played a big part of the Soviet propaganda.

Among the grand titles that Joseph Stalin carried was "Gardener of Human Happiness."

Communist-era propaganda posters feature Stalin casting a vote "for the people's happiness."

Just like under capitalism, where the pursuit of happiness was hailed as one of our fundamental rights in Western societies, happiness appears to have been an important part of the communist agenda during the Soviet era.

In recent years, happiness data are being collected and analyzed among the post-communist countries. We are now learning that one of the greatest sources of unhappiness at the country-level is whether one lives in a post-communist society or not. Looking at Figure 2, we can see a systematic pattern where these countries of the former Soviet blocs are clustered in the lower left corner, i.e., low national income and low happiness. There is now overwhelming evidence that these so-called transition economies, who transitioned from centrally planned economy to market economy, rank among the unhappiest countries in the world.

### FIGURE 2 ABOUT HERE

But what is more shocking is that happiness declined even more after the transition. Happiness was already low under communism. However, (at least in our Western minds) we were hopeful that the end of the Cold War would bring greater happiness to the former-communist countries. One would assume that the transition from communism to capitalism, from controlled economy to market economy, and from tyranny and oppression to democracy and freedom would make people happier. But in fact the end of the Cold War had the opposite effect. Inglehart and Klingemann (2000) report happiness data for two transition economies – Hungary and Russia – before (around 1981) and after the transition. In both countries, happiness dropped dramatically to an even lower level after the transition. The case of Russia is illustrated in Figure 1. We can see that happiness in 1981 was the high point for Russia, although it was already low relative to other countries even then. Happiness plummets in 1990, and even more so in 1995. Easterlin (2010) examines life satisfaction data from 13 Eastern European countries and shows a consistent pattern of decline among all 13 countries immediately following the transition, specifically around the years 1990 to 1994.<sup>2</sup> In some countries, life satisfaction bounces back after 1994, resulting in a V shaped recovery.

Why are the people in post-communist societies so unhappy? Why does the transition from communism to capitalism lower people's happiness, and not the other way around? This paper explores these questions in great depth. We first discuss the sources of unhappiness among the post-communist countries. We then examine unhappiness in two particular countries – Bulgaria, because they are consistently ranked among the unhappiest countries in the world, and China, because empirical data are finally becoming available and we are just beginning to get a glimpse of the state of wellbeing in this country of 1.4 billion people.<sup>3</sup>

# Sources of unhappiness

Unhappiness in post-communist countries come from many sources. First, the transition from centrally planned economy to market economy did not improve people's lives. Rather, the transition left these countries worse off, with many still struggling to recover to pre-transition levels. Easterlin (2010) explains the economic facts of the transition process:

Most notable was an abrupt and massive economic collapse, with measured GDP falling to levels of around 50 to 85 percent of the 1989 level, usually in a few years or less. Subsequently GDP recovered somewhat, though rarely by 1999 to the initial level. A visiting economist from Mars, confronted only with these GDP data, might well conclude that an economic disaster on the scale of the Great Depression had befallen some 400 million of the world's population. (p.83)

As economic conditions worsened, so did the job market. Easterlin explains that the 13 countries experienced a "sharp deterioration in employment conditions... with most countries experiencing double digit declines (in employment rates)" (p.92). Considering that these countries operated at virtually full employment under communism, the deteriorating labor market conditions had a sizeable negative impact on happiness.

The poor performance of the transition economies has left dark impressions on the people. Citing a large-scale survey of 28,000 individuals in 28 transition countries, Guriev and Zhuravskaya (2009) report that half of the respondents in these countries believe that the transition has not brought any gains at all. According to a 2009 Pew Research Center survey, the majority of those surveyed in Russia, Ukraine, Lithuania, Slovakia, Bulgaria and Hungary felt that they were better off economically under communism. In a study of six transition countries – Bulgaria, Hungary, Poland, Romania, Russia and Slovakia – Czismady (2003) explains that "(w)ithout exception,

interviewees in all countries remembered that they had a better life in 1988 than in 2000" (p.5).

There is also the widespread misconception that people lived miserably under communism. Many Westerners have a strong conviction that these countries were liberated from the iron grip of communism. The path towards democracy and free market capitalism must be a path towards happiness. But for the people in transition economies, the reality was quite different. Many claim that they were in fact happier back then, as illustrated in Figure 1 in the case of Russia, before and after the transition. Under communism, people were fully "insured" under a comprehensive safety net, and people were guaranteed employment, education and healthcare. One writer explains in the case of Hungary: "communist Hungary, far from being hell on earth, was in fact, a rather fun place to live." Another blogger reminisces the past, and explains that the

The dismantling of socialism has, in a word, been a catastrophe, a great swindle that has not only delivered none of what it promised, but has wreaked irreparable harm... Numberless voices in Russia, Romania, East Germany and elsewhere lament what has been stolen from them — and from humanity as a whole: "We lived better under communism. We had jobs. We had security."

Unsurprisingly, the decline in satisfaction following the transition is most acute in the life domains where support was assured prior to the transition (Easterlin 2010).

For example, citing the former German Democratic Republic as an example, Easterlin explains that the largest drop in satisfaction were in the domains of childcare, work and health. In contrast, gains in satisfaction were reported in material consumption, such as goods availability and dwelling. These findings are thus consistent from our key message which underscores the important link between social safety nets and happiness.

Removing the safety net which people took for granted prior to the transition has significantly lowered people's subjective wellbeing and perceived quality of life.

Naturally, nostalgia and the longing for the communist past are felt more acutely among the older generation, i.e. the people that grew up under communism.

Consequently, we observe a considerable happiness gap between the old and the young (see Figure 3). Happiness is typically U-shaped with respect to age (e.g. Ono and Lee 2013; Yang 2008). This is indeed the case among the non-transition countries shown in Figure 3. Happiness is high among young people, sinks to a low among middle-age people, then recovers again among older people. This U-shaped curve does not exist in transition countries. Happiness declines with age, period. Data from Eurostat released in March 2015 also confirm this general trend in post-communist countries,

especially in Bulgaria, where the old people report happiness levels substantially lower than the young people.<sup>6</sup> The older generation predominantly believe that life was better under communism. Market capitalism did not improve their quality of life, but made it worse.

### FIGURE 3 ABOUT HERE

Second, there is a deep sense of injustice and powerlessness among the citizens. People had high expectations that the transition towards the market economy would bring about a meritocratic society where there would be ample opportunities for advancement based on effort and achievement. The transition and its accompanying market reforms fell greatly short of people's expectations, and optimism was replaced by hopelessness. In the case of Hungary, Bukodi and Goldthorpe (2010) demonstrate that the transition from state socialism to market capitalism was not accompanied by meritocracy.

In a sociological sense, blocked opportunities and unfulfilled expectations are sources of anomie that can lead to great frustration and dissatisfaction. After the transition, the people experienced "relative deprivation" (Merton 1968), i.e. a large gap

emerged between what could have been achieved in contrast to what actually transpired.

Summarizing the results from the aforementioned survey of six transition countries,

Czismady (2003) explains that people report having experienced less relative

deprivation and poverty under communism, in this case, 1988 compared to 2000.

Hopes of well-functioning markets were displaced by widespread corruption and organized crime following the transition. Romania, Bulgaria, Croatia, Slovakia, Czech Republic, Latvia and other transition countries consistently rank among the most corrupt countries in the European Union according to Transparency International. The transition countries also rank low in the "trust index." Overall, the transition has left these countries with a deep sense of injustice and unfairness. People feel powerless as they perceive that nothing can be done to overcome these market failures.

And third, many people of the post-communist countries experienced depreciation or devaluation of the skills that they had acquired prior to the transition (Guriev and Zhuravskaya 2009). In economic terms, people invest in their human capital expecting to collect the benefits through higher lifetime earnings.

Unfortunately, many who were educated under the command economy accumulated skills that became irrelevant hence valueless for the market economy. Consequently, many people lost their jobs, and were forced to reallocate and to adapt to the new labor

market dynamics. For example, an economics professor who had dedicated his life to studying Marxist ideology in Romania will find no demand for his knowledge and skills, and he will be forced to find work elsewhere.<sup>8</sup> Undoubtedly, the loss of purpose feeds into the anomie of post-communism.

Guriev and Zhuravskaya (2009) find some empirical support for the hypothesis that lower satisfaction following the transition is linked to human capital depreciation. Specifically, they show that life satisfaction is higher among people where were still enrolled in school when the transition started, compared to the people who had graduated just before the transition. They offer the following interpretation:

A person who graduated just before transition and had secured a nice job is unhappy after the transition as this job is likely to be discontinued or paid less. A person who graduates right after the transition makes an informed career choice and therefore is happier. This explanation is very similar to the human capital depreciation story. (165).

### *Unhappiness in Bulgaria*

Bulgaria has the misfortune of recording the lowest happiness level among the countries included in the 2002 International Social Survey Programme (ISSP) data.

Other sources also confirm this low standing; Bulgaria was ranked the unhappiest country in the European Union according to the 2015 Eurostat survey.

Like in other former communist countries, people had great expectations towards the transition to capitalism in Bulgaria. Achieving membership status in the European Union in 2007 was viewed as a significant progress towards market reform, and fueled people's expectations even higher. Sadly, these expectations were largely unfulfilled, leaving a void and an overall feeling of betrayal and hopelessness. The plunge from being the poster-child under communism to the worst performing country in the E.U. (on the basis of GDP per capita in 2014) left their citizens with an identity crisis and a sense of inferiority accompanied by nostalgia and longing for the communist past.

These demoralizing conditions have not only lowered the happiness and wellbeing of their citizens, but have also had devastating consequences for the overall population. Bulgaria now suffers from a serious brain drain of their skill base. As Figure 4 shows, Bulgaria's population grew at a steady pace in the postwar period, reaching a peak of 9 million persons in 1988. Since then, the country has experienced an enormous out-migration. Compounded by mortality rates that exceed fertility rates, the country has now shrunk to 7.2 million persons (in 2014), a loss of nearly 2 million people since 1988.

## FIGURE 4 ABOUT HERE

Since market wages were significantly lower in Bulgaria, workers fled the country in search of higher wages elsewhere. Most were younger workers between the ages of 25 and 50. This mass exodus of the younger generation has severely hurt Bulgaria's efforts to rebuild its economy. Although the country is in dire need of young talent to move the country forward, many have emigrated because, as one newspaper explained, "it is now easier to go to Germany than to make Bulgaria function like Germany." In 2013, students at Sofia University launched an Occupy Movement to protest their frustrations and demanded action from their government. Cleaning up the government, implementing market reforms, and regaining the people's trust are required first steps to stop the brain drain, and to rebuild the path towards happiness in Bulgaria.

## Unhappiness in China

Like the other communist countries, data on happiness and wellbeing from

China are scant. But based on what we know, the trend in wellbeing following

China's transition to market capitalism is largely consistent with the Easterlin Paradox,

i.e. there is a disconnect between life satisfaction and economic performance over time. In fact, life satisfaction in China actually declined during the same period that the country experienced unprecedented economic growth and significant improvements in quality of life measures such as the Human Development Index (Graham et al 2015). Citing data from the Gallup Organization, Kahneman and Krueger (2006) show that the proportion of individuals responding "satisfied" declined and the proportion responding "dissatisfied" increased from 1994 to 2005, a period during which China's average real income rose by 250 percent (see Figure 5).<sup>13</sup> Graham et al (2015) explain that the declines in life satisfaction were accompanied by increases in suicide rates and incidence of mental illness. Easterlin et al (2012) show a similar decline in life satisfaction using data from the World Values Survey, with recent trends showing some recovery after 2005. They surmise that "China's life satisfaction over the last two decades has largely followed the trajectory seen in the central and eastern European transition countries." (p.9778)

### FIGURE 5 ABOUT HERE

What are the sources of unhappiness in China? Unlike the former Soviet states, China did not suffer from an economic collapse following the transition. But like the former Soviet states, China did experience a deterioration of the social safety net and increasing inequality in their path to market capitalism. And like the former Soviet states, people were guaranteed employment under communist China.

Invariably, the transition from command economy to market economy resulted in a significant increase in unemployment. As Easterlin (2010) explains, these devastating conditions following the transition "have exerted both China and Europe a similar drag on life satisfaction" (p.95).

And speaking to the point of rising inequality, we now know that the transition benefited the upper crust of Chinese society compared to the rest (see Figure 6). When broken down into income categories, life satisfaction in China during 1990 and 2007 declined for the middle third and lower third income groups, but actually increased (albeit marginally) for the upper third (Easterlin et al 2012). Income inequality increased due to the greater economic disparities between urban and rural areas, in terms of wages, wealth, employment opportunities, etc. (Graham et al 2015). The deteriorating safety net compounded by the movement towards privatization also generated greater inequality. The transition towards a more market-driven system

widened the gap between those who can afford certain services versus those who cannot. It is unsurprising then, that the transition resulted in the increased dissatisfaction of the poor in post-communist China.

#### FIGURE 6 ABOUT HERE

Finally, it is worth noting that the deteriorating conditions unduly coincided with the timing of improved economic performance and rising aspirations. As discussed previously, relative deprivation is a probable cause of people's frustrations and anxiety. People had high aspirations towards a better society in post-communist China but were disillusioned by the realities that emerged. Easterlin et al (2012) describes the growing disconnect between economic wellbeing and life satisfaction in China, and concludes by emphasizing the importance of examining life satisfaction as a more comprehensive measure of wellbeing.

The GDP measure registers the spectacular average improvement in material living conditions, whereas the measure of life satisfaction demonstrates that among ordinary people, especially the less-educated and lower income segments of the population, life satisfaction has declined noticeably as material aspirations have soared and concerns have arisen about such critical matters as finding and holding a job, securing reliable and affordable health care, and providing for children and the elderly. Clearly, life satisfaction

is the more comprehensive and meaningful indicator of people's life circumstances and well-being. (9779)

### Discussion

In this paper, we examined the sources of unhappiness in post-communist countries. Although these countries were unhappy places under communism, what is more surprising is that they became even less happy after the transition. Many of the countries struggled to implement effective market mechanisms. The political void following the collapse of communism led to opportunistic behavior, widespread corruption and the rise in organized crime. The transition to market capitalism altered the demand for human capital, and many workers suffered from a devaluation of their skills.

The deterioration of the social safety net is a consistent source of dissatisfaction in the post-communist countries, among the former Soviet states and in contemporary China. Communism may not have provided a high quality of life, but the people were fully insured in important life domains such as healthcare, education and work. For the people, the market was clearly not the solution, at least in these life domains. As services that were formerly provided through public means were replaced by privatized markets, inequality widened between those who have access to

the services and those who do not. Since these countries operated under virtually full employment, joblessness invariably resulted in lower aspirations and will to work.

The deteriorating conditions following the transition led to a growing sense of injustice, powerlessness, and longing for the communist past. These sentiments combined have resulted in an overall negative impact on life satisfaction.

A lesson in happiness learned from the transition economies if any is that the social safety net plays an important role in sustaining our wellbeing. This safety net is especially important in preserving the wellbeing of the less privileged and high-risk demographic groups. What made the experiences of post-communism bittersweet especially for the older generation is that their lives were fully insured under communism. Many are nostalgic for the communist past because they felt more secure under the communist regime. Ironically, having experienced life under communism may have been worse than never having experienced it at all.

### **NOTES**

(We are) angered by the systemic violations of constitutional order in the country by the current government led by Plamen Oresharski... (Our) ultimate goal is for Bulgaria to become a country with governance, grounded in moral values rather than personal benefits.

[SOURCE: Thomas Seymat. "Bulgarian students join anti-government protests, occupy university buildings." Euronews, October 28, 2013.]

Although the protests did not become violent, the students were palpably frustrated at the blocked opportunities and unattainable goals that their generation confronted, and impatient at the lack of response and action taken by the government toward reform. For the students, clean politics and government transparency were the core foundations of a moral society, and a path to true happiness.

<sup>&</sup>lt;sup>1</sup> See for example, the 1985 film "Letter to Brezhnev" which is a romantic comedy produced during the height of the Cold War. It is a story about Teresa and Elaine, who are two working class women in Liverpool, England. The two women work in a meat packing factory, and see no future in their lives. Elaine falls in love with a Russian sailor who happens to be visiting Liverpool. She knows little about life in Russia, but aspires to move there because she believes that anything is better than her mundane life in Liverpool.

<sup>&</sup>lt;sup>2</sup> Easterlin (2010) uses the World Values Survey from 1990 onward for the 13 transition countries: Former German Democratic Republic, Poland, Hungary, Estonia, Latvia, Lithuania, Belarus, Russian Federation, Slovenia, Czech Republic, Slovakia, Bulgaria and Romania.

<sup>&</sup>lt;sup>3</sup> Ono is grateful to comments and suggestions from the participants of the "Conference on the Middle Class," which was organized by Sofia University and the Bulgarian Academy of Sciences in December 2013. The discussions here on post-communism and happiness are based largely on conversations with experts and scholars from the conference in Bulgaria, and the literature that we acquired following the conference.

<sup>&</sup>lt;sup>4</sup> Zsuzsanna Clark. 2009. "Oppressive and grey? No, growing up under communism was the happiest time of my life." *Daily Mail*. October 17, 2009.

<sup>&</sup>lt;sup>5</sup> Stephen Gowans, "We Lived Better Then." What's Left, December 20, 2011.

<sup>&</sup>lt;sup>6</sup> "How satisfied are people with their lives in the European Union? A new multi-dimensional data collection." Eurostat News Release, March 20, 2015.

<sup>&</sup>lt;sup>7</sup> The trust index is tabulated by various organizations based on the trust-related questions from the World Values Survey. See for example: http://www.wikiprogress.org/index.php/Trust

<sup>&</sup>lt;sup>8</sup> Based on Ono's interview notes from Bulgaria. The economics professor from Romania now works as a taxi driver.

<sup>&</sup>lt;sup>9</sup> "Why is Bulgaria the EU's most unhappy country?" Euronews, March 20, 2015.

<sup>&</sup>lt;sup>10</sup> For example, BBC News ("New border controls: Does Bulgaria face a 'brain drain'?" November 21, 2013) explains that the average pay is about eight times higher in the U.K. than in Bulgaria.

<sup>&</sup>lt;sup>11</sup> Krastev, Ivan. 2015. "Britain's gain is eastern Europe's brain drain." *The Guardian* (March 24, 2015).

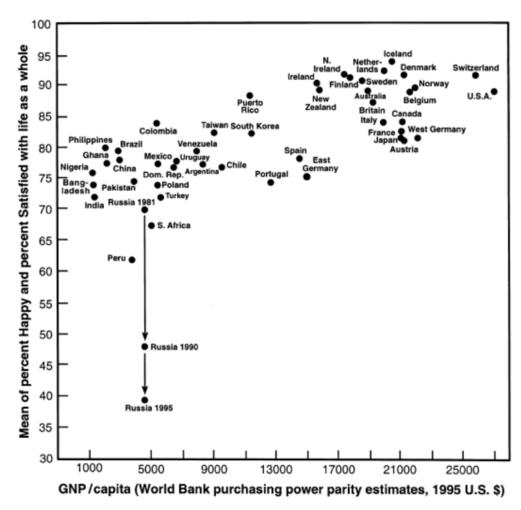
<sup>12</sup> While the old may reminisce the communist past, the young too harbor their frustrations. Inspired by the Occupy Wall Street movement, college students at Sofia University in Bulgaria took part in an Occupy Movement in 2013. They occupied the main building of the University, and launched an anti-government movement protesting the widespread corruption in government and politics. The students demanded, among other things, government transparency and accountability and the resignation of the (then) Prime Minister. Their icon, a fist of solidarity reminiscent of the communist past, could be seen around the streets of Sofia as supporters of the movement joined the cause. The students explained their position in a statement read to the public in October 25, 2013:

<sup>&</sup>lt;sup>13</sup> I am grateful to David Schkade for providing me with the data which I used to reconstruct this graph.

<sup>&</sup>lt;sup>14</sup> Interestingly, the Graham et al (2015) report that working in the public sector is negatively associated with the odds of experiencing economic relative deprivation in China, presumably because of the better job security provided by the public sector.

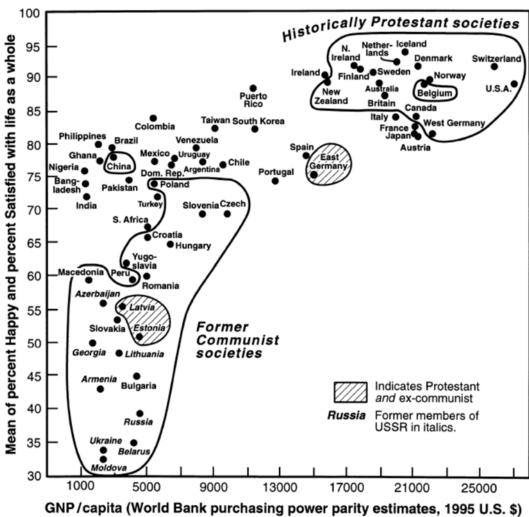
#### References

- Bukodi, Erzsebet and John H. Goldthorpe. 2010. "Market versus Meritocracy: Hungary as a Critical Case." *European Sociological Review* 26: 655-674.
- Czismady, Adrienne. 2003. "Poverty and ethnicity in six post-socialist countries." *Forum* 19: 3-10.
- Easterlin, Richard A. 2010. *Happiness, Growth, and the Life Cycle*. Oxford: Oxford University Press.
- Easterlin, Richard A., Robson Morgan, Malgorzata Switek, and Fei Wang. 2012. "China's life satisfaction, 1990–2010." *Proceedings of the National Academy of Sciences* 109: 9775-9780.
- Graham, Carol, Shaojie Zhou and Junyi Zhang. 2015. "Happiness and health in China: The paradox of progress." Global Economy and Development Working Paper Series No.89. Washington, D.C.: Brookings Institution.
- Guriev, Sergei and Ekaterina Zhuravskaya. 2009. "(Un)Happiness in Transition." Journal of Economic Perspectives 23: 143-168.
- Inglehart, Ronald and Hans-Dieter Klingemann. 2000. "Genes, culture, democracy and happiness." Pps.165-183. In *Culture and Subjective Well-being*. Edited by Ed Diener and Eunkook M. Suh. Cambridge: MIT Press.
- Kahneman, Daniel and Alan B. Krueger. 2006. "Developments in the Measurement of Subjective Well-Being." *Journal of Economic Perspectives* 20: 3-24.
- Merton, Robert K. 1968. Social Theory and Social Structure. New York: Free Press.
- Ono, Hiroshi and Kristen Schultz Lee. 2013. "Welfare States and the Redistribution of Happiness." *Social Forces* 92: 789-814.
- Yang, Yang. 2008. "Social Inequalities in Happiness in the United States, 1972 to 2004: An Age-Period-Cohort Analysis." *American Sociological Review* 73:204-226.



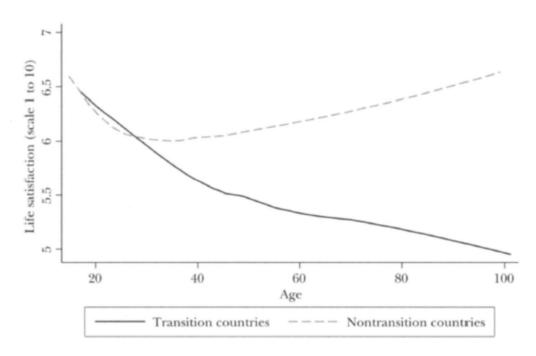
[SOURCE: Inglehart and Klingemann 2000]

Figure 1 Collapse of communism and decline of subjective wellbeing in Russia



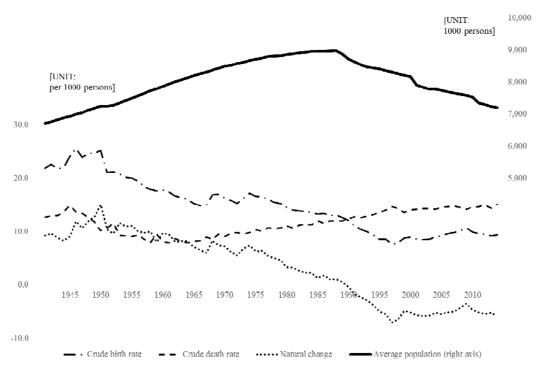
[SOURCE: Inglehart and Klingemann 2000]

Aggregate happiness by Gross National Product (GNP) per capita and historical heritage of given societies



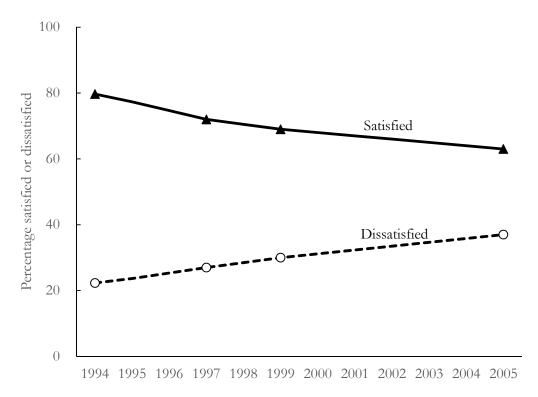
Note: The lines depict the results of nonparametric, locally weighted regressions with bandwidth = 0.8. Reprinted from Guriev and Zhuravskaya (2009).

Figure 3 Age and life satisfaction in transition countries and non-transition countries with per capita income comparable to transition countries



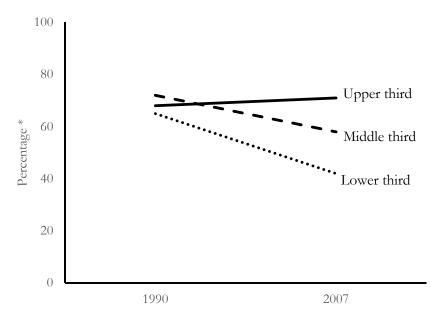
[SOURCE: United Nations]

Figure 4 Population change in Bulgaria



[Source: Reconstructed from Kahneman and Krueger (2006)]

Figure 5 Life satisfaction in China, 1994 to 2005



\* Vertical axis shows percent responding 7-10 on a scale of 1-10.

[Source: Reconstructed from Easterlin et al 2012]

Figure 6 Life satisfaction in China by income categories, 1990 and 2007