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The Post-communist Transition at 30

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Abstract

In the 30 years since the fall of communism, the countries of the former Soviet bloc and Yugoslavia have undergone tremendous change. Income per capita at purchasing power parity more than tripled in Albania, Bosnia and Herzegovina, Estonia, Latvia, Lithuania, Poland, and Slovakia. All seven economies outpaced such celebrated growth engines as Singapore and Korea at the same stage of their development. But in Tajikistan and Ukraine average income fell relative to 1989. In Moldova and the Kyrgyz Republic income growth was modest, below 20 percent cumulatively. We test three theories on this divergence in income growth. We find that Orthodox countries and countries with less democratic accountability grow less.

Keywords: Transition Economies; Income Growth; Institutions.

JEL Classification Numbers: P24, P52.

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1 Introduction

In the first years of transition, economists had intense debates about the best policies for transforming centrally planned economies into dynamic market economies. Broad consensus emerged on the basic economic model: liberalization of prices and markets, macroeconomic stabilization, and privatization of state-owned enterprises were deemed essential for achieving economic growth. However, strong differences appeared in views on the speed and sequencing of these reforms.

Proponents of early economic reforms favored rapid liberalization and privatization to prevent asset stripping in state-owned enterprises given economic reforms would create a demand for more political freedom. Leszek Balcerowicz was the most prominent proponent of this view (see, e.g., Balcerowicz, 1995). Stanley Fischer added that reforms had to be fast because of the collapse of the previous nonmarket system (Fischer and Frenkel, 1992).

Other theorists argued that the creation of a market economy did not require enterprises to be privatized quickly. János Kornai (1990), for example, favored gradual privatization, and thought that the state should select responsible owners to run the economy. Murrell (1992) and Roland (1994) similarly argued that gradualism in privatization and the creation of market institutions would avoid a political backlash against the reformers. The debate on the speed and sequence of economic reforms continued among economists for over a decade. In the end both sides could claim some vindication with respect to privatization results. In the case of Russia rapid privatization meant a lack of transparency and other negative consequences including evolution of an oligarchy and social resentment against reforms in general. But many other countries that privatized quickly (for example, Czechoslovakia and then the Czech Republic and Estonia) largely avoided these problems. Some countries that privatized more gradually (for example, Slovenia) also achieved smooth transition, while in others such as Ukraine slow privatization led to subsequent problems. Arguably the comparative results for economic and social performance (the last measured by indicators like the poverty ratio and the Human Capital Index) favor more the rapid reform position; countries that moved earliest and progressed farthest on the main elements of reform significantly outperformed those that delayed reforms (Treisman, 2014).

2 The Post-Communist Transformation

The post-communist transformation started with an economic slump of 15–40 percent of GDP across countries due to the collapse of trade, the disorganization that ensued, and the reallocation of labor to the informal sector. With the exception of Czechoslovakia, where the immediate post-communist period was orderly, every country experienced years of economic destruction. The fact that the economic transition started with such a large output decline puzzled economists: Because of myriad distortions under communism, they expected that removing them would in some small decline as old factories were closed but soon output would increase significantly. The decline was far beyond expectations.

One of the most visible signs of economic change was the shift to private property. By 2001, a dozen years after the fall of the Berlin Wall, the majority of productive assets in post-communist countries were in private hands – the share of the private sector in GDP varied from 80 percent in the Czech Republic, Hungary, and Slovakia to 20 percent in Belarus and 15 percent in Turkmenistan. The effects of privatization on productivity were generally positive, especially in the manufacturing and service sectors, as were the economic effects, adding several percentage points to enterprise growth rates. Privatization to foreign investors was associated with 50 percent more restructuring than privatization to insiders (managers and workers). Domestic and international investment funds were associated with more than ten times as much restructuring as individual owners. State ownership of partially privatized firms was also surprisingly effective, producing more restructuring than enterprise insiders (Djankov and Murrell, 2002).

Privatization and liberalization in the post-communist transition were part of broader reforms to achieve economic growth. Early reformers had to deal with pressing issues such as liberalization of prices and international trade, macroeconomic stabilization, restitution of property nationalized during the communist years, and—in the case of Czechoslovakia, the former Soviet Union, and the former Yugoslavia—the creation of many national institutions from scratch. Privatization and liberalization were seen, however, as critical for popular support for other reforms and for making political change irreversible. Anatoly Chubais (1999, p.47), in evaluating Russia's reform path toward deregulation and privatization, remarked that "I really believe that

now this historical problem is solved…even the communists have to accept the political reality in Russia. And the reality dictates that there's no room for those who want to take away private property. That's the result of the reform process, despite the mistakes that were made."

Thanks to such changes the precipitous fall in production was reversed and from 1995 on recovery began nearly everywhere.

3 Three Hypotheses

The divergence in economic growth across the former communist countries surprised observers. We offer thiree explanations for this pattern.

The first explanation is historical: the 5th century split of the Roman Empire into eastern (Byzantine) and western parts and the religious divide that followed was reflected in the fact that countries with Eastern Orthodox and Muslim religion reformed their economic policies less than countries where the population professes mostly Protestant and Catholic beliefs. Milan Kundera (1984, p. 1) wrote that "Geographic Europe (extending from the Atlantic to the Ural Mountains) was always divided into two halves which evolved separately: one tied to ancient Rome and the Catholic Church, the other anchored in Byzantium and the Orthodox Church. After 1945, the border between the two Europes shifted several hundred kilometers to the west, and several nations that had always considered themselves to be Western woke up to discover that they were now in the East."

The second hypothesis is based on more recent (14th to 19th century) imperial history. Countries that were part of the Austro-Hungarian Empire in the latter half of the 19th century maintained their European values (e.g. Dimitrova-Grajzl 2007) and were quickest to reintegrate economically into Europe after the fall of communism. In contrast, countries that at the turn of the 19th century were part of either the Ottoman or Russian empires have rejected a path to a market economy. In some cases, particularly in Belarus, the Caucasus, and Central Asia, large state ownership of productive assets remained after the fall of communism. Imperial

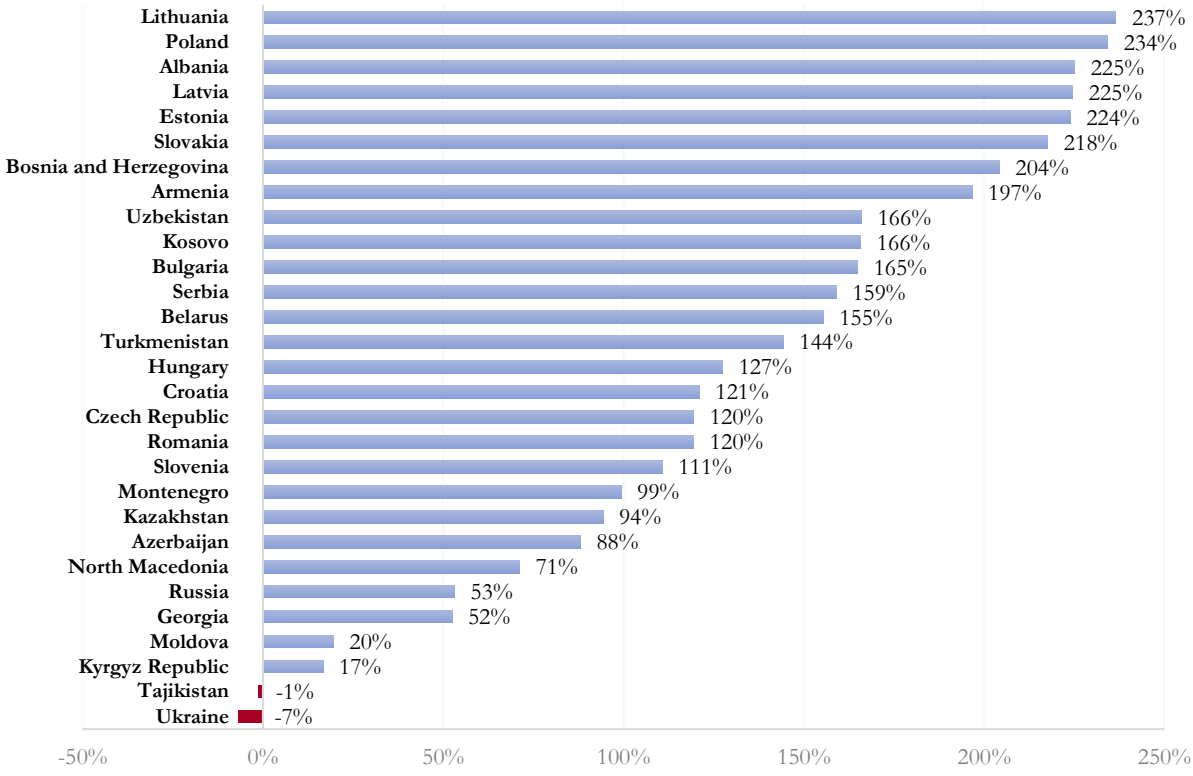
history may matter for a specific reason: the rise of national institutions that underlie law and order, the running of the economy, and the regulation of business.

The third hypothesis is that post-1989 institutional choices, in particular the adoption of a strong parliamentarian system of government in the early transition, are associated with more economic freedom. This hypothesis, proposed by Frye (1997) and Roberts (2010), moves away from historical determinism. The shape of the political system adopted after communism may be correlated with subsequent institutional choices.

4 Income Growth

To show differences across the post-communist world, we first document the income per capita growth (at purchasing power parity). We use the standard World Bank data (Figure 1).

Figure 1: Percentage Change in GDP Per Capita (ppp) since transition



Average incomes in Eastern Europe have shot up two and a half times per person in purchasing-power-parity, to $32,000. Slovenians are the richest at $38,450 in 2019. The only dips in incomes took place in the early years of transition (1990–95) and during the eurozone crisis (2008–10).

Tajikistan and Ukraine experienced an actual fall in incomes. Moldova and the Kyrgyz Republic recorded small improvements, 20 and 17 percent, respectively. The three Baltic nations had incomes triple in the post-communist period.

5 Living Standards (Correlates of Income Growth)

Over the past 30 years, living standards in most of the transition countries have increased substantially for most people—post-communist citizens have seen a vast jump in car purchases, travel abroad, and university education, among other gains.

From 1993 (the first year with comprehensive statistics by the United Nations Economic Commission for Europe) to 2018, for example, the average among the post-communist states went from one passenger car for every 10 people to one car for every 2.5, higher than the rate in Belgium. In Lithuania, Slovenia, and Poland, there are now more cars per person than in the United Kingdom or France. The number of phone lines per capita grew twice as fast as elsewhere, edging past Latin America. By 2018, cell phone subscriptions per person, at 1.48, had overtaken Western Europe.

Life expectancy increased by 6.5 years on average during the past 30 years in Eastern Europe, by 5 years in the Balkans, and by nearly 5 years in the former Soviet Union. Turkmenistan has the lowest life expectancy of the 29 countries, at 68 years; in Slovenia the average life expectancy was 81 years in 2019, putting it at par with France. The advances are comparable to the global rise in life expectancy, which shot up by 5½ years in the past 30 years. The stress of transition may be partly accountable for the disparity in the former Soviet Union.

Poland, the Czech Republic, Slovakia, Hungary, and Slovenia experienced what medical researchers have described as "probably the most rapid decrease in coronary heart disease ever observed," because of the substitution of vegetable oils for animal fats (Zatonski, Campos, and Willett 2008, p. 4). Improvements in the former Soviet Union are smaller. Russia's life expectancy rose by 3 years over the period, while registering steep declines in the mid- 1990s and again in 1998–2000, during the Russian financial crisis. Still, in seven of the nine former Soviet republics that publish such statistics, consumption of fruits and vegetables shot up; Ukrainians, for instance, ate 58 percent more vegetables in 2011 than in 1991, and 47 percent more fruit (Shleifer and Treisman, 2014).

The biggest gains were in reducing infant mortality, which fell by three-quarters throughout the post-communist region. By 2015 Slovenia had lower infant mortality than France. Turkmenistan, the worst performer, cut infant mortality from 90 deaths per 1,000 births to fewer than 35 by 2018. This is by far the most successful measure of post-communist transformation. To put this success in perspective, communist countries made substantial progress in reducing infant mortality between 1970 and 1989 as well (Kelly, 2016); but the actual number of infant deaths per thousand births in several of these countries—especially in Central Asia, Romania, and the former Yugoslavia—was significantly higher than in Western Europe. It is only in the post-communist period that the countries have matched Western standards.

These improvements in living standards suggest that the actual income growth at purchasing power parity may be higher than suggested in the World Bank data. Measuring the initial level of income posits a significant challenge, at prices in communist countries were all centrally administered. Still, the data point to an overall improvement in income, with divergence in the 30 years of transition.

6 Effects of History and Early Decisions on Income Growth

We propose two historical hypotheses to explain the divergent paths of income growth in the post-communist region: the 5th century religious divide between the eastern and western Roman Empire, and the more recent (14th to 19th century) imperial history that split the region into three competing empires. These hypotheses take two separate stabs at a single issue: the long-term religious, cultural, and geographic divide in Europe. In this regard the Habsburg Empire can be thought of as a successor of the western Roman Empire, with the Ottoman and to a lesser degree the Russian empire as successors to the Byzantine empire.

6.1 The 5th Century Religious Divide

That religion determines peoples' attitudes is by now a well-established fact in social science. Max Weber's (1905) studied religion as an independent variable that influences economic outcomes. Religion can influence personal beliefs that reinforce particular social traits and values.

In the context of Eastern Europe, however, some scholars go even further to suggest that the spread of communism was made possible by the prevailing Eastern Orthodox religion. Nikolai Berdyaev, one of the premier Russian philosophers in the early 20th century, argued that communism is a successor of Orthodoxy. As he explains, "The best type of communist, that is to say, the man who is completely in the grip of the service of an idea and capable of enormous sacrifices and disinterested enthusiasm, is a possibility only as the result of the Orthodox Christian training of the human spirit, of the remaking of the natural man by the Orthodox Christian spirit" (Berdyaev 1937, p. 170). Orthodoxy remains the prevalent religion in a number of post-communist countries – Armenia, Belarus, Bulgaria, Georgia, North Macedonia, Moldova, Montenegro, Romania, Russia, Serbia, and Ukraine.

Another literature links Islam and economic development (e.g., Benhenda 2011). La Porta and others (1999) find that countries with high proportions of Muslims exhibit inferior government performance.

McCleary and Barro (2006) establish that economic growth is inversely related to Muslim adherence. Nine post-communist countries profess Islam as their main religion: Albania, Azerbaijan, Bosnia and Herzegovina, Kazakhstan, Kosovo, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

The former communist bloc can be divided into three groups: a Catholic-Protestant group in Central Europe and the Baltics (9 countries); an Orthodox group in Eastern Europe and the Caucasus (11 countries); and a Muslim group in parts of the former Yugoslavia, the Caucasus, and all of Central Asia (9 countries).

Djankov and Nikolova (2018) test this hypothesis globally, using the World Values Survey and the Life in Transition survey data collected by the European Bank for Reconstruction and Development for post-communist economies. They show that Eastern Orthodox believers are less happy compared to those of Catholic and Protestant faith. They also find that relative to Catholics, Protestants and non-believers, those of Eastern Orthodox religion have less social capital and prefer old ideas and safe jobs. In addition, Orthodoxy is associated with left-leaning political preferences and stronger support for government involvement in the economy. Compared to non-believers and Orthodox adherents, Catholics and Protestants are less likely to agree that government ownership is a good thing, and Protestants are less likely to agree that getting rich can only happen at the expense of others.

6.2 The 19th Century Empires

The second explanation for the divergence in post-communist income growth is the countries' more recent political history. Three large empires ruled over the post-communist world between the 14th and 19th centuries: the Habsburg (Austro-Hungarian) Empire, the Russian Empire, and the Ottoman Empire.

The Habsburgs ruled over a federation of territories of the Holy Roman Empire. The capital was Vienna (except in 1583–1611, when it was moved to Prague). From 1804 to 1867 the Habsburg Monarchy was formally unified as the Austrian Empire, and from 1867 to 1918 as the Austro- Hungarian Empire (Becker et al. 2016). Six post-communist countries have distinct Habsburg lineage: Croatia, the Czech Republic, Hungary,

Poland, Slovakia, and Slovenia. The pull toward Europe in these countries was clearly seen in the first wave of European Union entry, when the Central European countries joined as a group in 2004, followed by Croatia in 2013.

The Russian Empire existed from the 16th century until its overthrow by the February Revolution in 1917, when it morphed into the Soviet Union. In its heyday, its borders encompassed 14 present-day countries: Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, the Kyrgyz Republic, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

The Ottoman Empire was founded in 1299 by Oghuz Turks under Osman I in north-western Anatolia. After conquests in the Balkans by Murad I in 1362–89, the Ottoman sultanate was transformed into a transcontinental empire. Nine post-communist countries were under Ottoman power at various times: Albania, Armenia, Bosnia and Herzegovina, Bulgaria, Kosovo, North Macedonia, Montenegro, Romania, and Serbia.

Study of the patterns of movement toward economic freedom according to imperial lineage reveals that it is broadly similar across empires (Djankov and Hauck, 2016). Countries formerly in the Ottoman Empire moved toward economic freedom almost as strongly as those of the former Austro-Hungarian Empire, while countries that belonged to the Russian Empire tended to open their economies more slowly.

6.3 Democratic Accountability

Political institution choices at the start of the post-communist transition are thought to have influenced economic evolution (Huntington, 1991). We use two measures: (1) strength of presidential systems compared to parliamentary ones developed by Frye (1997) to reflect this evolution, and (2) the Polity IV Score which captures regime authority. Strong parliamentary systems reduced risks of ethnic domination and created checks and balances in political decision-making. The previous literature suggests that presidential systems may be better at promoting economic reforms (Hellman 1998).

Since the early years of transition, countries have undergone changes in this dimension: Armenia, Croatia, and Georgia have gone from strong presidential to parliamentarian systems, while Belarus and Ukraine have gone the other way. Russia has had both a weak presidential system (until 1993) and then a strong one. In 2020, President Putin proposed a constitutional change to divulge more powers to the parliament, again weakening the presidential system. Bulgaria has gone from selection of the president by parliament to direct presidential elections.

Presidential powers correlate with less economic freedom and a lower ranking on the ease of doing business, but the differences are statistically marginal. The Hellman hypothesis is not corroborated by the data (Djankov and Hauck, 2016).

7 Testing the Three Hypotheses

We compare the percentage change in income per capita (PPP adjusted), across the post-communist bloc. The entire dataset used in this analysis is available in Appendix Table A1. The correlation table between the variables of interest (Table 1) reveal some expected patterns – a positive correlation between Catholic/Protestant countries and those with Austro-Hungarian imperial history, and a negative correlation between power of the president and Catholic/Protestant countries, in line with similar findings (Djankov and Hauck, 2016). The relationship between the dummy on predominantly Muslim countries and the Polity score confirms La Porta et al. (1999) in terms of their governing structure.

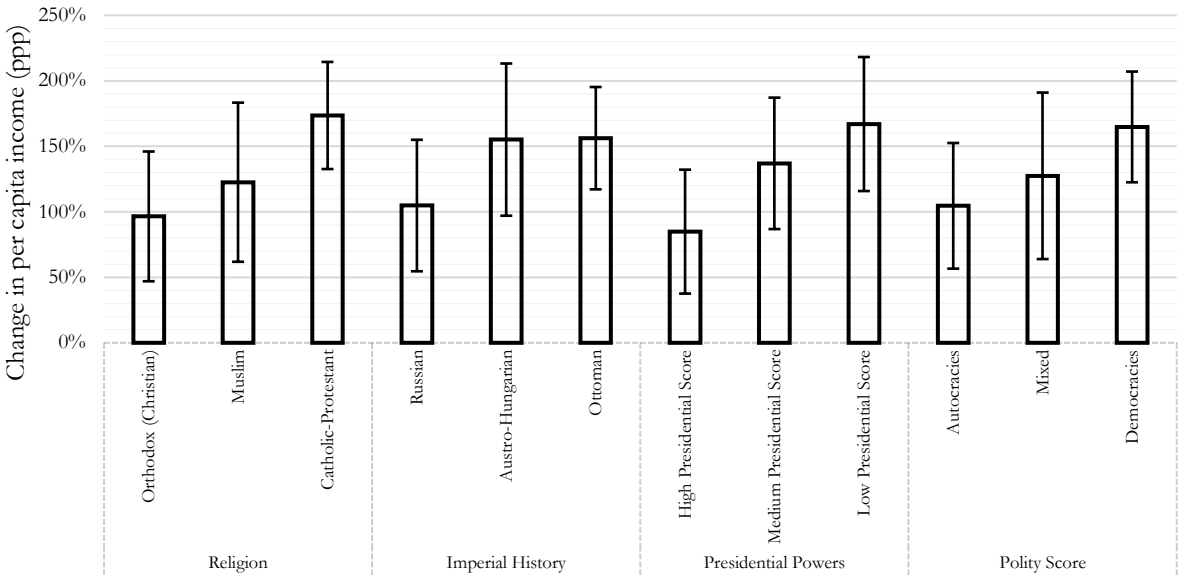
Table 1: Correlation among main variables of interest

Variable	Change in per capita income (ppp)	Catholic-Protestant	Orthodox (Christian)	Islam	Austro-Hungarian	Ottoman	Russian	Presidential Powers
Change in per capita income (ppp)	1							
Catholic-Protestant	0.42	1						
Orthodox (Christian)	-0.35	-0.53	1					
Islam	-0.08	-0.49	-0.49	1				
Austro-Hungarian	0.17	**0.70***	-0.37	-0.34	1			
Ottoman	0.23	-0.33	0.30	0.03	-0.34	1		
Russian	-0.35	-0.27	0.03	0.25	-0.49	**-0.65***	1	
Presidential Powers	-0.43	**-0.62***	0.26	0.37	-0.37	0.04	0.26	1
Polity Score	0.22	0.47	0.16	**-0.65***	0.32	0.11	-0.36	**-0.62***

*Note: * indicates correlation coefficient at 5 percent Bonferroni-adjusted significance level.*

To test the religious divide first, note that all predominantly Catholic countries are in eastern Europe, while the distribution of Orthodoxy and Islam exists in former Soviet Republics and the Balkans (Figure 2). The only statistically significant result – by comparing means – across the religious split is the slower growth of orthodox nations. Catholic nations on the other hand grew by 172 percent. Muslim nations averaged at about two-thirds of the income levels of Orthodox countries in 1990, but that gap has been reduced to three-quarters of the income levels of Orthodox countries in 2019. While the growth of Muslim nations was higher than Orthodox countries, the difference of mean growth is statistically insignificant.

Figure 2: Average Percentage Change in GDP Per Capita (ppp) by Religion, Imperial History, Presidential Powers, and Polity Score



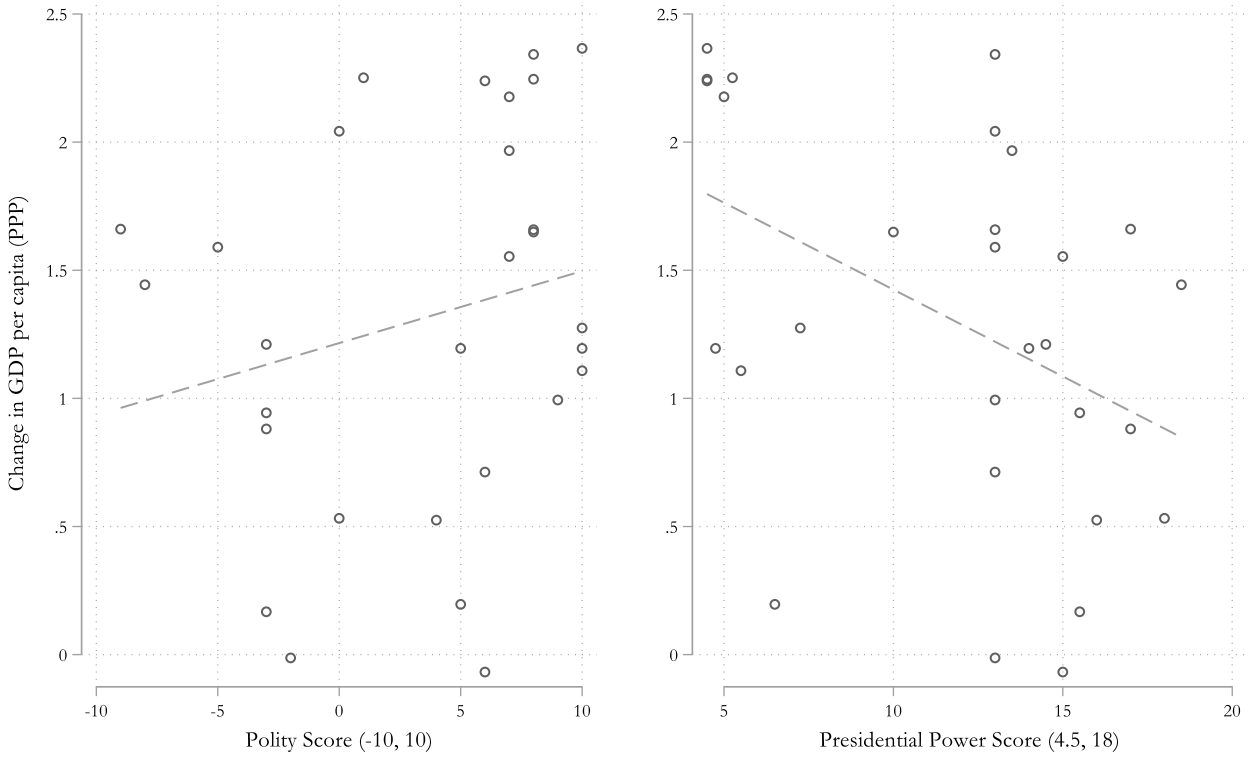
Imperial history does not explain the divergence in income growth for the 30 years of transition. While countries that were part of the Ottoman and Austro-Hungarian Empires grew by about 150 percent each during the transition period, and countries that used be part of the Russian Empire had incomes double, the differences are not statistically significant.

The final hypothesis on early choices of political power explains some of the divergences in income growth. To examine this hypothesis, we use two proxies. First, we use Treisman (2007) score on presidential power to generate three equally-sized groups: low (4.5 – 10) presidential power, medium (10.5 – 14.5) presidential power, and highly concentrated (15 – 18.5) presidential power. Second, we use the Polity IV database on democratic accountability as a robustness check.

Countries where the political system is dominated by a powerful president have grown significantly less (Figure 2), averaging at 85 percent growth in 30 years, relative to 137 percent and 167 percent for countries with medium and low presidential powers, respectively. Using t-tests, we show that this difference is statistically significant. For example, each of the three countries with the weakest presidency – Latvia, Lithuania, and

Estonia, grew at more than 220 percent in 30 years. In contrast, the country with the strongest presidency, Turkmenistan grew at 144 percent, closely followed by Russia with a growth of 53 percent.

Figure 3: Relationship between change in GDP per capita (PPP) and Democratic Accountability



We repeat the analysis using the polity score which captures authority in governing institutions. The Polity Score captures regime authority spectrum on a 21-pont scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy). As with the Presidential Power score, we generate three equally-sized groups: authoritarian (-10 – 0), mixed (1 – 7), and free democracies (8 – 10). The results from this alternative measure of early choice of political institutions are consistent with the score of presidential power, whereby more authoritarian countries grew at a statistically significant lower rate.

The relationships between the two measures of democratic accountability and change in income are shown in Figure 3.

7.1 Testing Causality

The comparisons of means results are suggestive of a negative relationship between Orthodoxy and strong presidential powers on the one hand, and weak income growth on the other hand. To further explore these relationships, we perform standard regression analysis (Table 2).

Table 2: Regression Results. Dependent Variable: Percent Change in Per Capita Income (PPP)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Orthodox (Christian)	**-0.770****			-0.512		**-1.017****		**-0.719****		**-1.211*****
	(0.307)			(0.358)		**(0.439)**		**(0.319)**		**(0.395)**
Islam	-0.509			-0.209		-0.625		-0.313		-0.829*
	(0.315)			(0.383)		(0.450)		(0.427)		(0.477)
Ottoman Empire		0.0109			0.240	**0.890***			0.0486	**0.963***
		(0.379)			(0.371)	**(0.462)**			(0.390)	**(0.467)**
Russian Empire		-0.503			-0.217	0.260			-0.422	0.292
		(0.351)			(0.355)	(0.412)			(0.385)	(0.418)
Presidential Power			**-0.0678****	-0.0465	-0.0629**	-0.0291				
			(0.0273)	(0.0347)	(0.0293)	(0.0329)				
Polity Score							0.0281	0.0213	0.0141	0.00133
							(0.0241)	(0.0309)	(0.0260)	(0.0296)
Constant	1.735***	1.551***	2.103***	2.096***	2.075***	1.794***	1.216***	1.584***	1.452***	1.542***
	(0.217)	(0.293)	(0.343)	(0.343)	(0.367)	(0.375)	(0.159)	(0.310)	(0.349)	(0.333)
Observations	29	29	29	29	29	29	29	29	29	29
R-squared	0.200	0.123	0.186	0.254	0.260	0.410	0.048	0.215	0.133	0.390

*Note: Standard errors in parentheses. Catholic, and Austro-Hungarian Imperial history are omitted, therefore coefficients are relative to them. *** p<0.01, ** p<0.05, * p<0.1*

When testing the three hypotheses individually, only the coefficient on Orthodox and the coefficient on Presidential Power are significant (columns 1 and 3). These results coupled with the correlations indicate that Orthodox countries and countries with a strong presidency are growing at a significant lower pace. However, the coefficient on presidential powers does not remain statistically robust (columns 4 and 6).

We compare two different specifications to test the hypothesis on the institutional arrangement from the onset of the collapse of communism: (1) a score on the power of the presidency, and (2) the polity score which looks at democratic accountability.

When comparing all three hypotheses together (columns 6 and 10), we find that Orthodox countries are negatively diverging in terms of growth. Orthodox countries grew by about 100 percent less in the thirty-year span since the collapse of communism. The result is a symptom of the causes outlined by Djankov and Nikolova (2018) where Orthodox countries are relatively more reliant and supportive of government interventions in the economy.

In addition, the results show that countries that have succeeded the Ottoman Empire experienced higher growth in the past 30 years, albeit this result is significant only at the ten percent level.

8 Conclusions

In most of the post-communist states life has improved, as citizens enjoy higher living standards. Most countries have closed the income gap with the West, in some cases considerably.

Income growth has been significant in most countries. Some laggards – Tajikistan and Ukraine – remain. In trying to identify the reasons for these results, we show that history is a major determinant and that recent institutional choices only partially negate its effects. In particular, Orthodoxy and low levels of democratic accountability adversely affect the trajectory of income growth.

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Appendix A: Data

This paper uses a compilation of various data sources, ranging from income statistics to indices on political power.

GDP per Capita (PPP)

The income statistics comes from the World Bank World Development Indicators. The main variable of interest used for this analysis is GDP per capita, PPP adjusted. The measure is in constant dollars, with a base at 2011. Throughout the paper we refer to income growth since the collapse of communism – 1990, therefore whenever possible we use the 1990 measure of income per capita to calculate the change to 2019. However, the following exceptions exist.

Due to the Balkan wars that followed the collapse of Yugoslavia, the earliest measure of GDP per capita (PPP) for Bosnia and Herzegovina is 1997, while for Croatia, Serbia, and Slovenia is 1995. Kosovo's earliest measure is 2000, while for Montenegro the earliest figure is from 1997, after it's separation from Serbia.

The measures for Czech Republic and Slovakia begin in 1993, following the dissolution of Czechoslovakia. The earliest measures of GDP per capita (PPP) for Estonia, Latvia, and Lithuania come from 1995.

Presidential Power

The score on presidential power comes from Treisman (2007). The score ranges in this sample from 4.5 (least power to the presidency) to 18.5 (centralized power of the president). For the purposes of comparing the means, the following categories are created. low (4.5 – 10) presidential power, medium (10.5 – 14.5) presidential power, and highly concentrated (15 – 18.5) presidential power.

Polity Score

The Polity score captures this regime authority spectrum on a 21-pont scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy). It consists of six component measures that record key qualities of executive recruitment, constraints on executive authority and political competition. It also records changes in the institutionalized qualities of governing authority.

For the purposes of this paper, we use the variable **POLITY2** which is the revised combined polity score. This is a modified version of the **POLITY** variable in order to account for standardized authority scores across time. Note that for the comparisons in means of this paper, we use a classification of scores that is equally distributed across the three groups. They are authoritarian (-10 – 0), mixed (1 – 7), and free democracies (8 – 10).

This score is used to test the hypothesis on the importance of early on-set political institutions. Therefore, in most instances, this analysis uses the scores from 1991. However, few exceptions exist:

The measures for Czech Republic and Slovakia begin in 1993, following the dissolution of Czechoslovakia. Similarly the measure for Kosovo is from 2008, while for Montenegro is 2006.

Serbia got the score of Yugoslavia in the immediate aftermath of the collapse, while Russia the score of the USSR.

Table A1: Data Used for Analysis

Country	Dominant Religion	Imperial History	Presidential Power Score	Polity Score	Percent Change in per Capita Income (PPP)
Albania	Islam	Ottoman	5.25	1	225
Armenia	Orthodox (Christian)	Ottoman	13.5	7	197
Azerbaijan	Islam	Russian	17	-3	88
Belarus	Orthodox (Christian)	Russian	15	7	155
Bosnia and Herzegovina	Islam	Ottoman	13	0	204
Bulgaria	Orthodox (Christian)	Ottoman	10	8	165
Croatia	Catholic/Protestant	Austro-Hungarian	14.5	-3	121
Czech Republic	Catholic/Protestant	Austro-Hungarian	4.75	10	120
Estonia	Catholic/Protestant	Russian	4.5	6	224
Georgia	Orthodox (Christian)	Russian	16	4	53
Hungary	Catholic/Protestant	Austro-Hungarian	7.25	10	128
Kazakhstan	Islam	Russian	15.5	-3	94
Kosovo	Islam	Ottoman	13	8	166
Kyrgyz Rep	Islam	Russian	15.5	-3	17
Latvia	Catholic/Protestant	Russian	4.5	8	225
Lithuania	Catholic/Protestant	Russian	4.5	10	237
Moldova	Orthodox (Christian)	Russian	6.5	5	20
Montenegro	Orthodox (Christian)	Ottoman	13	9	99
North Macedonia	Orthodox (Christian)	Ottoman	13	6	71
Poland	Catholic/Protestant	Austro-Hungarian	13	8	234
Romania	Catholic/Protestant	Ottoman	14	5	120
Russia	Orthodox (Christian)	Russian	18	0	53
Serbia	Orthodox (Christian)	Ottoman	13	-5	159
Slovakia	Catholic/Protestant	Austro-Hungarian	5	7	218
Slovenia	Catholic/Protestant	Austro-Hungarian	5.5	10	111
Tajikistan	Islam	Russian	13	-2	-1
Turkmenistan	Islam	Russian	18.5	-8	144
Ukraine	Orthodox (Christian)	Russian	15	6	-7
Uzbekistan	Islam	Russian	17	-9	166