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# Catching Up And Falling Behind: Four Puzzles After Two Decades Of Post-Communist Transformation

### Abstract

After more than two decades since the exit from Communism, no former communist country has been completely successful in catching up with the technological frontier countries. However, they divide into two groups: those which decreased the GDP gap with frontier countries since 1989-1990, and those which failed to do so. One may ask: What were the decisive causal conditions for their progress or failure in convergence? Were they the early implementation of Washington consensus style market reforms; their neighbourhood with advanced affluent countries; peaceful transition; accession to the EU; endowment with natural resources; state sovereignty before postcommunism; or interactions between these factors (or others)? Because of the small N, statistical analysis is not an appropriate tool for testing these hypotheses. Hence this paper uses qualitative comparative analysis to identify four explanatory puzzles of the catching-up growth performance of the postcommunist countries.

**Keywords:** post-communism, catching up growth, qualitative comparative analysis, market reforms, location, EU membership, war, natural resources, statehood

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### **1. Introduction**

The aim of this contribution is to compare the vertical mobility of the former communist countries during the first two decades of post-communist transformation and explore the causes their variation by means of qualitative comparative analysis. By vertical mobility I mean progress in the convergence (or catching up) with affluent technological frontier countries, which World System analysis describes as the capitalist world system (CWS) core countries (Wallerstein 2000; 2004). According to the belief popular during the time of the "extraordinary politics" (Balcerowicz 1995, pp. 265–273) in the early 1990s, market reforms were supposed to enable former post-communist countries to join the club of affluent countries during the span of one generation or so. This belief helped to endure the hardships of "shock therapy", but it was not fulfilled in any former communist country. Even if complete convergence with CWS core countries in only two or three decades was too high an expectation, some progress in convergence can be considered as a necessary condition for describing post-communist transformation as economically successful.

In the next (second) section, I present my measure of the economic success of post-communist transformation ("American standard"), then describe the data and explain the selection of the cases and of the time frame. This section closes with the division of the cases set into two subsets, one of them encompassing the "failures" and another the "successes" of post-communist transformation. Such a dichotomic construction of the outcome variable is a technical necessity for the application of the crisp sets qualitative comparative analysis (csQCA), which I use in this contribution. The third section discusses the selection of explanatory conditions, and the fourth section identifies four puzzles of post-communist transformation, which must be resolved in order to improve generalized explanations of the success and failure of the catching up post-communist development. The paper closes with a list of the puzzles and with a discussion of these puzzles.

## 2. Background, data and cases

Convergence or catching up with advanced Western countries is a consensual long-run national development goal in all former communist countries. To measure the progress towards this goal, public opinion makers and analysts in the new EU member states most frequently use the index of gross domestic product (GDP) per capita at purchasing power parity (PPP), in percentage of the EU average (since 2014, the EU-28). The EU average as a benchmark works rather well in measuring the convergence progress since 2004, which was the accession year for most of formerly communist countries, which became EU members. However it has serious drawbacks if applied to all post-communist countries or if the comparison intends to cover the entire period since the demise of communism.

Firstly, many former communist countries (e.g. former Soviet Union republics, now independent states in Central Asia) do not aspire and/or do not have real chances to become members of EU. Therefore the Eurostat GDP data covers only a part of the formerly communist countries. Secondly, although for new EU member countries Eurostat provides cross-country and cross-time comparable data (in purchasing power standards; PPS), it does so only for the time since the mid-1990s. Thirdly, with every new (relatively poor) member joining, the "EU mean standard" benchmark value sinks. For example, if Ukraine and/or Turkey join the EU, many countries which have accessed EU in 2004 will converge with the EU during just one year.

Therefore, I prefer the "American standard" to assess the progress in convergence. Such measurement involves the comparison of the GDP per capita at PPP of a specific country with that of the US (US=100 %) at two points of time. Convergence progress means decreasing the GDP gap with the US, while lack of such progress means that this gap has increased or remains unchanged. To apply the "EU mean standard", it is necessary to calculate the EU GDP per capita mean value at PPP, which is a very complicated procedure not only because of changes in the EU composition, but also due to the increasing internal heterogeneity of the EU in terms of size and levels of development of individual members. To measure the convergence with the US it is enough to compare relative changes of GDP per capita at PPP in the US with those in the country of interest during a specified period, or the mean annual growth rates in both countries. Under this proposed operationalization, to converge or "catch up" simply means growing more rapidly than the US. Thus the economic success of post-communist transformation means the reduction or closing of the GDP gap with the US, while failure encompasses the increase of this gap or its remaining unchanged.

To assess convergence progress I use the World Development Indicators (WDI) database, compiled and regularly updated (presently up to six times during a year) by the experts of World Bank. As of 2015, it provides 1343 data series for 249 countries, some of them starting in 1960. However, for most countries that were parts of Soviet Union and Yugoslavia, the data starts with 1990, which thus imposes itself as the base year. The few exceptions are the former Yugoslavia republics with transitional political identities during first

post-communist decade – their data series start at later dates.<sup>1</sup> To maximise the comparability, they are dropped from the case population. The year 2014 is the latest date for which the most recent (as of July 2015) WDI release provides the data about in the GDP per capita at PPP (in 2011 international \$).

However, there are several difficult problems with the choice of 2014 as the endpoint of the time period. The absence of data points for 2014 in the data series of some countries is only minor problem, which can be solved by choosing 2013 as the end year. The major problem is created by the efforts of the World Bank experts to update WDI. They convert (deflate) nominal GDP into real GDP, changing the benchmark year every five years, with 2005 and 2011 used in the most recent updates. Disappointingly, these changes are accompanied by the disappearance of datapoints for former years for some countries. These data gaps may remain unfilled for years, as happened with the GDP per capita at PPP values for the 1990-1994 periods in the data series for Croatia and Estonia. They disappeared in the 2012 July WDI release and still remain empty as of now, i.e. in July 2015. The 2014 December release is the last WDI version, providing the GDP per capita values for Slovenia in 1990-1994. The disappearance of data points for Lithuania 1990-2004 in the most recent update (July 2015) is no less inconvenient.

These and other minor gaps in the most recent releases of WDI databases reduce the population of post-communist countries, depriving the researcher of many crucially interesting cases. Comparing available releases of WDI, I came to the conclusion that the WDI 2012 May release provides most encompassing picture of the growth performance of the former communist countries during the first two decades of transformation. Most data series in this release end in 2010, providing the possibility to compare the convergence performance during the first two post-communist decades. These decades encompass the transformation recession in the early 1990s, the boom years in early 2000s, and the 2008-2009 crisis. In addition, in 2010 most post-communist countries were already recovering from the crisis, so 2010 as a closing point may provide an optimal observation point for the objective assessment of the economic successes or failures of post-communist transformation during the two decades since the exit from communism.

<sup>&</sup>lt;sup>1</sup> Reflecting the fact that Bosnia and Herzegowina split into three parts during the civil war (1992-1995), and is still not a fully integral state. Kosovo was under Serbian sovereignty at this time.

Nr.	Country	1990	2010	2010 % (1990=100)	Catching up	
1	Albania	3,910	7,658	196.9	1	
2	Armenia	2,938	4,901	166.8	1	
3	Azerbaijan	4,754	8,913	187.3	1	
4	Belarus	6,434	12,494	194.2	1	
5	Bulgaria	7,529	11,490	152.7	1	
6	China	1,101	6,816	619.6	1	
7	Croatia	13,387	16,128	120.5	0	
8	Czech Republic	16,367	22,575	138.0	1	
9	Estonia	10,146	16,561	163.2	1	
10	Georgia	6,138	4,552	74.2	0	
11	Hungary	13,120	16,958	129.3	0	
12	Kazakhstan	7,089	10,916	154.0	1	
13	Kyrgyzstan	2,524	2,008	79.6	0	
14	Laos	937	2,288	244.2	1	
15	Latvia	10,109	12,948	128.1	0	
16	Lithuania	12,500	15,534	124.3	0	
17	Macedonia	8,523	9,192	107.9	0	
18	Moldova	4,583	2,790	60.9	0	
19	Mongolia	2,435	3,620	148.7	1	
20	Poland	8,182	17,352	212.1	1	
21	Romania	7,853	10,921	139.1	1	
22	Russia	12,626	14,183	112.3	0	
23	Serbia	11,602	9,598	82.7	0	
24	Slovakia	12,693	20,164	158.6	0	
25	Slovenia	16,455	25,048	152.2	1	
26	Tajikistan	2,961	1,940	65.5	0	
27	Turkmenistan	3,749	7,422	198.0	1	
28	Ukraine	8,063	6,029	74.8	0	
29	USA	31,899	42,297	132.6	N/A	
30	Uzbekistan	2,002	2,786	139.2	1	
31	Vietnam	905	2,875	317.7	1	

Table 1. GDP per capita at PPP (in 2011 international \$) growth performance in 1990-2010

Source: WDI 2012 May release. N/A (not applicable) applies for the US, which is the benchmark country.

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Table 1 provides the GDP per capita at PPP data excerpt from the 2012 May release of WDI. The value 1 in the last column indicates that GDP per capita of a country did increase more than that of US in 1990-2010 (132.6%, 1990=100%), implying a reduction of the GDP gap or progress in convergence.<sup>2</sup> The value 0 in this column indicates that the distance separating country from the World Champion increased or remained unchanged. The data set includes China, Vietnam and Laos, which some public opinion makers still consider as communist. However, with working market economies and booming private enterprise they are capitalist countries if measured by the Marxist and Weberian ideas of capitalism, and so they can be considered as cases of (maybe incomplete) post-communist transformation (cf. Norkus 2012, pp. 42-49).

## 3. Explanatory conditions and some findings

In this section I explore the explanatory power of six variables, which are most frequently referred to as conditions of economically successful postcommunist transformation in the transition studies and by influential public opinion makers (see Table 2). They can be rather compellingly dichotomized, which is important for the application of the non-standard techniques of the data analysis – crisp set qualitative comparative analysis (csQCA). The standard technique of the statistical test of causal hypotheses in the macroeconomic research is statistical regression analysis. The obstacle to application of the standard technique – regression analysis – is the rather small N size (N=30). The country-years as cases is an easy way to circumvent this obstacle technically, but this solution is exposed to the (in)famous "Galton's problem" (Ross and Homer 1976; Schaefer 1974; Schweizer 1987). These predicaments are part of the reasons for using the alternative data analysis technique – qualitative comparative analysis (QCA).<sup>3</sup>

The obvious first candidate in the list of relevant conditions of successful catching up growth are early market reforms (variable "market"). Given the time frame of present analysis, I will classify those countries which implemented all basic market reforms by the end of first post-communist decade (around 2000)

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 $<sup>^2</sup>$  Actually, in many former post-communist countries the GDP per capita in 2010 was below the 1990 level.

<sup>&</sup>lt;sup>3</sup> For instance, see Ragin 1987; 2000; 2008; Rihoux and Ragin 2009; Caramani 2009; Schneider and Wagemann 2012; Berg-Schlosser 2012; Thiem and Duşa 2013; Norkus and Morkevičius 2011.

as "early reformers" (coded by 1). This would leave another decade for these reforms to deliver fruit. For presentation of the reasons for the codings of the specific countries with respect to this variable, see Norkus 2012, pp 77-88.

The next candidate for inclusion into the list of causal conditions favouring the success of catching up is the neighbourhood of an advanced affluent (CWS core) country (Lankina and Getachew 2006). I will code the variable "neigh" with 1 for the post-communist countries which have a land or sea border (no further than some 100 miles) with such countries. Therefore, Albania (sea border with Italy) and Estonia (sea border with Finland) are coded 1 alongside with the Slovenia, Hungary, Czech Republic, and Poland. However, because of its huge size Russia is coded with 0, even though it borders Finland and Norway by land, and the U.S. and Japan by sea. For the same reason, China is coded 0, although it has sea border with Taiwan, which is just another China by the official definition of Taiwan itself.

Countries with "good" neighbours in Europe had the best chances of access to EU. However, there are post-communist countries neighbouring advanced EU countries (e.g. Albania) which are still not EU members. On the other hand, some new members of EU do not border affluent advanced countries (Latvia, Lithuania, Slovakia, Bulgaria, Romania). So the neighbourhood of a rich advanced country and EU membership are two different causal conditions. I code the variable "eumem" (EU membership) with 1 if a post-communist country joined EU in 2004 (Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia) or 2007 (Bulgaria and Romania). With respect to the two last cases there may doubts about the relevance of only three membership years. However, according to recent research on "Europeanization", there are strong "anticipation effects" (Campos et al. 2013, pp. 18-23) on growth during the accession process (as soon as the international business community becomes convinced that upcoming EU membership is a sure thing). Other authors explain the positive growth impact of upcoming EU membership by the institutional reforms undertaken while harmonizing national legislation with the acquis communitaire - the body of law common to all EU countries (e. g. Karmazinaite et al. 2014, pp. 83-84).

The next candidate for inclusion into the list of the most causally powerful conditions for the variation in the economic success of post-communist transformation is endowment with natural resources (variable "endow"). If a country is richly endowed with marketable natural resources (oil, gas, minerals etc.), receiving natural resources income (rent), it is coded with 1, and otherwise with 0. According to newly established wisdom, "oil rent" is a mixed blessing, causing military conflicts, "Dutch disease" or the establishment and survival of authoritarian regimes (Colgan 2013; Luong and Weinthal 2006; Ploeg and Venables 2012; Ross 2015; Wick and Bulte 2009). However, the same authors

emphasize that this is not an unavoidable outcome, but depends on other interacting conditions. So one may ask: What do the lessons of post-communism teach about this intensely discussed topic?

There are no such discussions about the positive versus negative impact on catching up impact of the next condition. This is the variable "war"– Was a country involved in an interstate or intrastate (civil) war, including large scale ethnic violence? If this was the case during the two decades examined, the variable is coded with 1, and otherwise with 0. In contrast to the variables "market" and "eumem", timing is not an issue, because war can not only complicate the exit from communism but also destroy its achievements at every later time, no matter how modest they were.<sup>4</sup> I code with 1 all former Yugoslavia republics included into my population of cases, with the exception for Slovenia. Although this country fought the Ten-Day independence war (27.06-07.07.1991) against the Yugoslavian federal army, this war did not bring about significant destruction due to its short duration and the low intensity of military action (Cox 2005, pp. 79-82).

Importantly, the list of post-communist countries ravaged by wars does not includes any country which was at least nominally sovereign under communism. This invites us to consider the status of sovereign states with internationally recognized borders before the exit from communism (variable "indep") as an important asset, and the absence of such status as a liability during the first decades of post-communist transformation. This pre-communist independence can be considered as a condition favouring the catch-up with CWS core countries because polities without such a status faced the challenge of a triple – and sometimes fourfold – transition (nation building, state making, market reforms, democratic transition), while independent states had to cope only with the challenges of market reforms and of democratization (Kuzio 2001; Offe 1991). So I code all post-communist countries which were internationally recognized states at the time of the exit from communism with 1, and by 0 the countries which had no such status.

The data from Table 2 were processed using TOSMANA software (Cronqvist 2011). Table 3 is the configuration table, where rows contain countries with similar initial conditions for catching up growth. Four configurations are contradictory (rows with C in final column), with similar initial conditions leading to different outcomes (some countries are catching up, and the rest are not). As a matter of fact they are most interesting for the case-oriented causal analysis of the variations in the outcomes of post-communist transformation. I will discuss them separately in the next section, skipping the causal patterns in the non-contradictory configurations.

 $<sup>^4</sup>$  The Russian-Ukrainian "hybrid war" is beyond the temporal scope of my analysis, so Ukraine is coded with 0.

Nr.	Country	market	neigh	eumem	endow	war	indep	catch
1	Albania	0	1	0	0	0	1	1
2	Armenia	0	0	0	0	1	0	1
3	Azerbaijan	0	0	0	1	1	0	1
4	Belarus	0	0	0	0	0	0	1
5	Bulgaria	0	0	1	0	0	1	1
6	China	0	0	0	0	0	1	1
7	Croatia	0	0	0	0	1	0	0
8	Czech Republic	1	1	1	0	0	1	1
9	Estonia	1	1	1	0	0	0	1
10	Georgia	0	0	0	0	1	0	0
11	Hungary	1	1	1	0	0	1	0
12	Kazakhstan	0	0	0	1	0	0	1
13	Kyrgyzstan	0	0	0	0	1	0	0
14	Laos	0	0	0	1	0	1	1
15	Latvia	1	0	1	0	0	0	0
16	Lithuania	1	0	1	0	0	0	0
17	Macedonia	0	0	0	0	1	0	0
18	Moldova	0	0	0	0	1	0	0
19	Mongolia	0	0	0	1	0	1	1
20	Poland	1	1	1	0	0	1	1
21	Romania	0	0	1	0	0	1	1
22	Russia	0	0	0	1	1	1	0
23	Serbia	0	0	0	0	1	0	0
24	Slovakia	1	0	1	0	0	0	1
25	Slovenia	1	1	1	0	0	0	1
26	Tajikistan	0	0	0	0	1	0	0
27	Turkmenistan	0	0	0	1	0	0	1
28	Ukraine	0	0	0	0	0	0	0
29	Uzbekistan	0	0	0	1	0	0	1
30	Vietnam	0	0	0	0	0	1	1

Table 2. Explanatory conditions of the catching up development in the post-communist world

Source: own elaboration.

Country	market	neigh	eumem	endow	war	indep	catch
Albania	0	1	0	0	0	1	1
Armenia, Croatia, Georgia, Kyrgyzstan, Macedonia, Moldova, Serbia, Tajikistan	0	0	0	0	1	0	С
Azerbaijan	0	0	0	1	1	0	1
Belarus, Ukraine	0	0	0	0	0	0	С
Bulgaria, Romania	0	0	1	0	0	1	1
China, Vietnam	0	0	0	0	0	1	1
Czech Republic, Hungary, Poland	1	1	1	0	0	1	С
Estonia, Slovenia	1	1	1	0	0	0	1
Kazakhstan, Turkmenista, Uzbekistan	0	0	0	1	0	0	1
Laos, Mongolia	0	0	0	1	0	1	1
Latvia, Lithuania, Slovakia	1	0	1	0	0	0	С
Russia	0	0	0	1	1	1	0

 Table 3. Configuration table of the conditions of the catching-up post-communist growth.

 Created with Tosmana Version 1.3.2.<sup>5</sup>

Source: own elaboration.

While the main reason for skipping them is due to space limitations, an additional substantial reason is that contradictory configurations cover the majority (17 out of 30) of the observed configurations. This means that patterns covering only completely consistent configurations can explain only 43.3% of total N, leaving beyond their scope those cases which may matter most for readers of this contribution: Poland, Czech Republic, Hungary, Slovakia, Latvia, and Lithuania. So long as contradictory configurations remain unresolved, the generalizations over the non-contradictory configurations that are derived by the Boolean minimization (this is the core procedure of QCA) are of minor value.

Therefore in the next part of this paper I focus on the inconsistent configurations. Importantly, without the resolution of these inconsistencies Boolean minimization can contribute to the explanation of the positive outcomes, but not to that of the negative outcomes, because there is only one non-contradictory configuration with a negative outcome, which covers only one case (Russia). For only one configuration, Boolean minimization is just not applicable. In the entire population, there are 12 failures of post-communist transformation, which make up 40% of the total case population. The explanation of only one case out of 12 (8.3% of total failures) is a very poor record, and the analysis of contradictory configurations is the only way to improve it.

<sup>&</sup>lt;sup>5</sup> Letter C in the last column refers to contradictory configurations.

# 4. Puzzles of the catching up development: discussion of contradictory configurations

The discovery of "middle range" generalizations the is only one among the several purposes for which QCA can be used. Another one is the identification of problems for research of the case study type, which focuses on the "abnormal" (deviant, crucial or extreme cases). In terms of the improvement of the explanatory power (total coverage of the solution), the resolution of the contradiction in the first configuration (see Table 3) may be the most promising. This configuration or Boolean product (market\_ref × neighbo × eumemb × endowm × WAR × indep\_st), covers eight cases, or 26.6% of N.<sup>6</sup> All countries covered by this configuration are former republics of Yugoslavia and the Soviet Union and did suffer from inter-state or civil wars. As expected, most of them failed to reduce the GDP per capita gap with the U.S. However, one cannot say that war precludes the catching up development. There are two exceptions: Armenia and Azerbaijan, which fought each other in the Nagorno-Karabakh war in 1992-1994.

The success of Azerbaijan can be explained by its rich natural resource endowments (oil and gas), which provided income (rents) that were more than sufficient to compensate for war losses and to finance a post-war military buildup. However, the relatively good performance of Armenia is real puzzle. Although this country was the war victor, it remains under economic blockade by Turkey and Azerbaijan. Landlocked by these hostile powers, and by the not much friendlier Georgia and Iran, it is in a rather adverse geographical position to communicate with the outer world. In order to keep Azerbaijan's revenge in check, and with no reliable allies, heavy military spending is a necessity (see Adalian 2010; World Bank 2002). So how does one explain that its catching up performance was not much worse than that of its adversary Azerbaijan (see Table 1)? Was it due to a strong entrepreneurial spirit, allegedly characteristic for the Armenian nation, Armenian diaspora investments, or something else that helped Armenia perform better than could be expected given the adverse conditions?

The configuration (market\_ref  $\times$  neighbo  $\times$  eumemb  $\times$  endowm  $\times$ war  $\times$  indep\_st), which covers two cases – Belarus and Ukraine – represents next puzzle. There is huge disparity in their growth performance: while Belarus nearly doubled its GDP per capita during its two post-communist decades, Ukraine did not even manage to attain its 1990 level (see Table 1). While the similarity in the growth performance between Armenia and Azerbaijan is

<sup>&</sup>lt;sup>6</sup> Variable names in capital letters refer to value 1, and those in lower case to value 0.

puzzling because of the huge advantages in the initial conditions favouring Azerbaijan, the disparity between Belarus and Ukraine is puzzling because of the similarity of the initial conditions of the post-communist development between the two countries. Both these former Soviet republics were populated by strongly russified Eastern Slavic populations, had similar historical destinies, and their economic structures were very similar. Perhaps Ukraine was even better endowed due to its favourable conditions for agricultural production and its greater share of industries with the potential to compete on the world market.

According to the most influential and frequently provided explanations, Belarus just profited from Russian subsidies: owing to political reasons, Russia sold oil and gas to Belarus below the world market prices and opened privileged access to its market for goods from Belarus which were not competitive on the world market. So the Belorussian "economic miracle" is either a myth or is built on very shaky foundations (see e.g. Wilson 2011). The problem with this explanation is that until the recent Maidan revolution in February 2014, Ukraine also benefited from Russian energy subsidies. A *prima facie* plausible explanation may be the differences in the post-communist political economies of these countries. While post-Soviet Ukraine may be considered as a textbook case of political oligarchic capitalism, Belarus' may serve as the ideal type of state capitalism (Norkus 2012: 119-132). While Russian subsidies to Ukraine ended in the pockets of Ukrainian oligarchs, those to Belarus were used more productively (Balmaceda 2013).

Another puzzle is the difference in the catching up performance between Hungary and the other Visegrád countries (Poland, the Czech Republic and Slovakia). The failure of Hungary is puzzling not only because of the similarity in the initial conditions of the post-communist development of these countries, but also because of the Hungarian record as the most advanced country in terms of market reforms during the late communist period. It was also very successful in its early attraction of foreign direct investments (see e.g. Walder 1995; Stark and Bruszt 1998; King 2001). Hungary's case is also important as an illustration of the perils in failure to maintain pace in the catching up development. The failure can have political consequences, destabilizing established postcommunist regimes. So why did Hungary perform worse in the catching up development than other Visegrád countries?

The last puzzle is the uneven pace of catching up in the Baltic States. While there were no remarkable differences in the initial conditions of postcommunist transformation (except the greater ethnic homogeneity of Lithuania), Estonia managed to build the reputation of a "star performer" in the postcommunist transformation already by the end of first post-communist decade (Laar 2002), while the record of Latvia and Lithuania was rather mediocre. The most obvious explanation of this difference for populations of Baltic countries is the geographic and cultural vicinity of Finland, which helped Estonia to win the inter-Baltic contest over FDI and in many other respects (Lauristin and Vihalemm 2009; Lauristin et al. 2011; Norkus 2012: 201-295). However, a systematic comparison of post-communist countries within the framework of QCA discloses similarities between Latvia and Lithuania on the one side, and Slovakia on another, which make the explanation by location too easily-applied. Slovakia, which shared similar initial conditions with Latvia and Lithuania, displayed a much more impressive catching up performance. Like Latvia and Lithuania, Slovakia has no direct border with any rich affluent capitalist country. So which causal condition(s) then decided upon this difference?

## 5. Conclusions

Going against canonic grains, I close with a list of questions for further research:

- 1. The Armenia versus Azerbaijan puzzle: How did the first country did display such catching-up growth despite the gruelling war with Azerbaijan in 1992-1994, heavy defence spending, and its absence of the resource income (rents) which fuelled the catching up growth of its foe?
- 2. The Belarus versus Ukraine puzzle: How does one explain the huge disparity in the catching up performance of these two former Soviet republics, which were very similar in terms of history, culture, economic and social structure at the time of the USSR's dissolution?
- 3. Hungary versus the other Visegrád countries puzzle: Why, despite the significant progress in the marketization of its economy already before the demise of communism, was Hungary's catching up performance worse than that of other Central European countries which bordered rich affluent 'old' EU members?
- 4. The Baltic puzzle: why two of three Baltic States Latvia and Lithuania did perform much worse in catching up than Estonia and the Visegrád country of Slovakia, which is most similar in the framework of the six chosen variables disclosing the most important explanatory dimensions of similarities and differences between the former communist countries?

There is an important constraint on any proposed answers to these puzzles. A proposed solution should not be *ad hoc*, i.e. apply to only one of the puzzles in question. With four such solutions, the number of initial conditions would expand to 10, and the number of theoretically possible configurations of initial conditions would grow to 1024. In light of such an expansion of the set of

explanatory conditions, there would not be any more contradictory configurations, but most (if not all) observable configurations would have only one instance. While such a solution may satisfy a historian with his or her "idiographic" leanings, this would be a rather disappointing outcome for social researchers because of their generalizing ambitions.

The best possible solution for four all puzzles would be only one additional explanatory condition, which would dissolve the contradictions in all four problematic configurations, allowing to differentiate between cases with positive and negative outcome. The next best solution would involve two new variables. A solution introducing three new variables would only be slightly better than the patchwork produced by four new variables.

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#### Streszczenie

## DOGANIANIE CZY POZOSTAWANIE W TYLE: CZTERY ZAGADKI PO DWÓCH DEKADACH TRANSFORMACJI POSTKOMUNISTYCZNEJ

Po ponad dwudziestu latach od upadku komunizmu, żaden z byłych krajów bloku komunistycznego nie był w stanie całkowicie dogonić krajów technologiczne przodujących. Jednak, kraje postkomunistyczne można podzielić na dwie grupy: te, którym udało się zmniejszyć lukę w produkcie krajowym brutto (PKB) w stosunku do krajów technologiczne przodujących, i te, którym nie udało się tego zrobić. Nasuwa się zatem pytanie, jakie uwarunkowania zadecydowały o powodzeniu lub niepowodzeniu konwergencji? Czy to było wczesne wdrożenie reform rynkowych w stylu Konsensusu waszyngtońskiego; Sąsiedztwo zaawansowanych gospodarczo krajów zamożnych; spokojny, pokojowy przebieg transformacji systemowej; przystąpienie do Unii Europejskiej, zasobność kraju w zasoby naturalne, skala suwerenności państwa przed transformacją lub interakcje między tymi czynnikami (lub inne czynniki)? Ze względu na małą liczebność próby (N), analiza statystyczna nie jest odpowiednim narzędziem do testowania tych hipotez. Dlatego w artykule zastosowano jakościową analizę porównawczą identyfikując cztery zagadki w wyjaśnianiu przyczyn powodzenia lub klęski wzrostu doganiającego w krajach postkomunistycznych.

*Słowa kluczowe:* postkomunizm, wzrost doganiający, jakościowa analiza porównawcza, reformy rynkowe, lokalizacja, członkostwo w UE, wojny, zasoby naturalne, państwowość