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Source: *World Politics*, Vol. 54, No. 3 (Apr., 2002), pp. 308-337

Published by: Cambridge University Press

Stable URL: <http://www.jstor.org/stable/25054190>

Accessed: 18/12/2009 09:12

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THE PERILS OF POLARIZATION

Economic Performance in the Postcommunist World

By TIMOTHY FRYE*

TWO visions of the politics of economic reform dominate the literature. The most widespread approach relies on the logic of the J-curve,¹ which holds that the central dilemma of reform is temporal: reforms promise to generate large economic gains in the future but can be achieved only by imposing painful reforms today. To overcome resistance from groups losing from reform in the short term, such as labor, pensioners, and state-sector employees, governments need to concentrate power in executives who are ideologically committed to reform, backed by international financial organizations, and insulated from popular pressure. Although many have criticized this view recently, it still guides many academic and policy debates on economic reform.²

A second view holds particular relevance for the postcommunist world. Argued most persuasively by Joel Hellman, the "partial reform" view is that the main obstacles to economic transformation are the early winners from distortions in the transition economy who then use their

* I would like to thank Andrew Barnes, David Bearce, Carles Boix, Valerie Bunce, Greg Caldeira, Joel Hellman, Marcus Kurtz, Ed Mansfield, Anthony Mughan, Phil Roeder, Kira Sanbonmatsu, Kevin Sweeney, Kuba Zielinski, and three anonymous reviewers for excellent comments. Previous versions of this essay were presented at the Davis Center for Russian Studies at Harvard University, the annual meeting of the American Political Science Association, Cambridge, Mass., February 2001, and the annual meeting of the American Association for the Advancement of Slavic Studies, Washington, D.C., November 2001.

¹ Przeworski, *Democracy and the Market: Political and Economic Reforms in Eastern Europe and Latin America* (New York: Cambridge University Press, 1991). Przeworski cogently describes the logic of the J-curve but does not endorse this view. John Williamson, "In Search of a Manual for Technopols," in John Williamson, ed., *The Political Economy of Policy Reform* (Washington D.C.: Institute for International Economics, 1994); Joan Nelson, "Introduction: The Politics of Economic Adjustment in Developing Countries," in Joan Nelson, ed., *Economic Crisis and Policy Choice: The Politics of Adjustment in the Third World* (Princeton: Princeton University Press, 1990); Stephan Haggard, *Pathways from the Periphery: The Politics of Growth in Newly Industrializing Countries* (Ithaca, N.Y.: Cornell University Press, 1990).

² Most prominently, see Joseph Stiglitz, "Whither Socialism? Ten Years of the Transition" (Manuscript, World Bank, Washington, D.C., 1999); Adam Przeworski, ed., *Sustainable Democracy* (New York: Cambridge University Press, 1995).

gains to block further reform.³ According to this view, in the short term economic reform tends to produce concentrated benefits for well-positioned interest groups while dispersing the costs of transformation throughout the rest of society. The greatest threat to economic reform comes therefore from a narrow group of industrial managers, bankers, and natural resource tycoons bent on capturing the state for their personal benefit. This view suggests that robust political competition and diverse governing coalitions are essential to prevent the early winners from taking control of the state and sidetracking further reform.

This article advocates an alternative approach. It treats economic performance as a reflection of the political struggle between ex-communist and anticommunist factions engaged in a war of attrition over economic and political resources.⁴ Specifically, political polarization between ex-communist and anticommunist factions has had a devastating effect on economic growth. Where these competing political factions have had roughly equal power and continue to struggle over the economic rules of the game—as in Bulgaria or Ukraine—economic growth has been slow. Where either ex-communist or anticommunist factions have dominated the political scene—as in Estonia or Uzbekistan—economic performance has been considerably better.

Political polarization has shaped economic outcomes in two ways. First, it has heightened uncertainty about future economic conditions because businesses expect a potential turnover in government to bring sharp swings in policy. Facing this possibility, businesses have shied away from productive long-term investments, preferring instead asset-stripping, intensive lobbying of state officials and highly profitable but semilegal business deals. More broadly, political polarization has made it difficult for governments to make credible commitments to respect existing and future property rights.

Second, political polarization has led to a war of attrition in which ex-communist and anticommunist factions have failed to agree on coherent measures to address the economic crisis. In the polarized countries, anticommunist factions have attempted some version of neoliberal reforms, and traditional ex-communist factions have attempted some version of gradual reform, but neither has been able to impose its preferred policy. The resulting war of attrition has led to incoherent policy and slow growth.

³ Hellman, "Winners Take All: The Politics of Partial Reform in Postcommunist Transitions," *World Politics* 50 (January 1998).

⁴ Alberto Alesina and Allen Drazen, "Why Are Stabilizations Delayed?" *American Economic Review* 81 (December 1991).

Based on an analysis of economic growth in twenty-five postcommunist countries during the period 1990–98, I present three findings. First, political polarization has hindered economic growth, controlling for a range of factors. Second, economic growth in polarized countries has followed the electoral calendar: as elections approach in such countries, the odds of a change in economic policy increase and growth rates plummet. In nonpolarized countries, by contrast, the effect of elections on growth is absent. Third, political polarization is associated with greater policy volatility, a finding that is consistent with the argument. These findings have implications for studies of the postcommunist transformation, the political business cycle, and the politics of economic reform more generally.

This article differs from existing literature on the politics of economic reform in the postcommunist world in three respects. First, it measures economic growth rather than economic liberalization.⁵ Liberalization is an important component of transformation but is not an end in itself. Second, while many works rely on cross-sectional analysis or focus on a subset of years within the last decade, this article takes full advantage of available data and pools that data over a ten-year time period.⁶ Finally, scholars have developed an impressive body of literature explaining outcomes in particular countries, but these works often lack a comparative perspective.⁷

In Section I, I develop the argument. In Section II, I conduct a quantitative analysis of the effects of political polarization and the electoral calendar on economic growth. In Section III, I examine the impact of political polarization on policy volatility. Section IV concludes.

⁵ Hellman (fn. 3); M. Steven Fish, "The Determinants of Economic Reform in the Post-Communist World," *East European Politics and Society* 12 (Winter 1998); Jeffrey S. Kopstein and David A. Reilly, "Geographic Diffusion and the Transformation of the Postcommunist World," *World Politics* 53 (October 2000).

⁶ Anders Aslund, Peter Boone, and Simon Johnson, "How to Stabilize: Lessons from Post-Communist Countries," *Brookings Papers on Economic Activity*, no. 1 (1996); Fish (fn. 5); Stanley Fischer, Ratna Sahay, and Carlos Vegh, "Stabilization and Growth in Transition Economies: The Early Experience," *Journal of Economic Perspectives* 10 (Spring 1996); Kopstein and Reilly (fn. 5); Olivier Blanchard, *The Economics of Post-Communist Transition* (Oxford: Oxford University Press, 1997).

⁷ Jeffrey Sachs, *Poland's Jump to a Market Economy* (Cambridge: MIT Press, 1995); Anders Aslund, *How Russia Became a Market Economy* (Washington, D.C.: Brookings Institution, 1995); Laszlo Bruszt and David Stark, *Post-Socialist Pathways: Transforming Politics and Property in East Central Europe* (Cambridge: Cambridge University Press, 1997); David Bartlett, *The Political Economy of Dual Transitions: Market Reform and Democratization in Hungary* (Ann Arbor: University of Michigan Press, 1997); Andrei Shleifer and Daniel Treisman, *Without a Map: Political Tactics and Economic Reform in Russia* (Cambridge: MIT Press, 2000).

I. THE POLITICAL ROOTS OF ECONOMIC PERFORMANCE

Few issues in comparative politics have received more attention over the last fifteen years than the politics of economic reform. The wave of neoliberal reforms that swept Latin America, Western Europe, Africa, and eventually the postcommunist world sparked renewed interest in the impact of politics on economic performance. The postcommunist countries, with their diverse institutional arrangements and economic outcomes, offer a rich environment for exploring the topic. Indeed, despite the homogenizing effects of Soviet-style socialism and economic globalization, the differences in economic performance across postcommunist countries are striking.⁸ According to the European Bank for Reconstruction and Development, the size of the economy in Hungary increased by 2.5 percent annually from 1992 to 1998; in Moldova it fell by 8.5 per year during the same period—a contraction of historic proportions.⁹ Many countries have defied predictions. Given Ukraine's proximity to Europe, its large market, educated workforce, and balance of agriculture and industry, Deutsche Bank rated it the Soviet republic with the greatest economic potential in 1990. But Ukraine saw vast economic decline over the subsequent decade.¹⁰ Meanwhile, Poland, the economic basket case of the 1980s, emerged as a regional economic power in the 1990s.

The literature on the politics of economic reform points to a range of factors that may influence economic performance. The J-curve view suggests that presidential power and elite partisanship are central to economic performance. By insulating strong executives who are committed to reform and backed by the international community, countries may withstand pressure to change policy exerted by groups bearing the short-term costs of reform. In contrast, the partial reform view emphasizes the importance of democracy and dispersed political power for economic performance. These features make it difficult for the short-term winners from distortions in the transitional economy to capture the state and derail reforms. Others have pointed to state spending, in-

⁸ Valerie Bunce, "The Political Economy of Post-Socialism," *Slavic Review* 58 (Winter 1999).

⁹ See Appendix 1 for descriptive statistics on polarization and growth. The EBRD's *Transition Report 1999* notes laconically that growth rates in the region "can lack precision." It also notes that some countries incorporate estimates of the size of the informal economy into their growth rates. The growth data presented here are likely the best available and have been widely used. European Bank for Reconstruction and Development, *Transition Report* (London: EBRD, 1999), 188. In the quantitative analysis, I introduce a correction to the growth data that attempts to account for the size of the informal economy. See fn. 60.

¹⁰ Gertrude Schroeder, "Economic Transformation in the Post-Soviet Republics," in Bartłomiej Kaminski, ed., *Economic Transition in Russia and the New States of Eurasia* (Armonk, N.Y.: M. E. Sharpe, 1997).

stitutional legacies, geography, and ties to international organizations, such as the European Union and the IMF, as important determinants of economic performance in transition societies.

I adopt a different approach in which I analyze how the balance of political power in postcommunist countries affects economic performance. More specifically, I argue that political polarization exacerbates the distributional effects and credible commitment problem of economic transformation and leads to slower growth. Before developing the argument, I briefly discuss my treatment of political polarization.

Scholars have used the term "political polarization" in many ways.¹¹ Conceptually, as used in this article, the two major political factions in polarized political systems are ex-communist and anticommunist factions. Leaders of the former have typically held responsible positions within the state apparatus or communist party, have been largely committed to supporting a dominant state sector, have campaigned with the backing of the ex-communist party, and have emphasized the positive side of communist policy prior to 1989. In contrast, the leaders of anticommunist parties have either left or never held positions in the communist party prior to 1989, have been highly critical of the activities of the communist party prior to 1989, have run against the largest ex-communist party, and have favored a dominant role for the private sector. This cleavage is particularly important because it reflects divergent views over the structure of the economy. For example, during the past decade in Russia, the traditional ex-communist party, the Communist Party of the Russian Federation, promised continued state ownership of land and a leading role for the state in finance and heavy industry; the anticommunists led by President Yeltsin promised a massive restructuring of the economy based on private property, liberalized prices, and curtailed state subsidies for industry.¹² Not only do these

¹¹ Giovanni Sartori defines a polarized party system by the ideological distance between parties, but such precise measures are unavailable in the postcommunist world. Others measure polarization using indices of social cleavages, such as ethnic fractionalization. These indices assume that cleavages are politically salient, but many cleavages do not translate into political movements. The salience of the ex-communist/anticommunist cleavage in the postcommunist cases seems to be quite high. Other types of cleavages, such as ethnic divisions, also do not translate readily into economic policy. For example, nationalist rhetoric aside, Prime Minister Mečiar continued the construction of a market economy in Slovakia. Sartori, *Parties and Party Systems* (New York: Cambridge University Press, 1976); William Easterly and Ross Levine, "Africa's Growth Tragedy: Policies and Ethnic Divisions," *Quarterly Journal of Economics* 82 (November 1997); Philip Keefer and Stephen Knack, "Polarization, Politics, and Property Rights" (Manuscript, World Bank, Washington, D.C., 2000). For a critique of these indices, see David Laitin and Daniel Posner, "The Implications of Constructivism for Constructing Ethnic Fractionalization Indices," *APSA-CP Newsletter for the Organized Section in Comparative Politics of the APSA* 12 (Winter 2001).

¹² Gennady Zyuganov, *My Russia: The Political Autobiography of Gennady Zyuganov*, ed. Vadim Medish (Armonk, N.Y.: M. E. Sharpe, 1997), pt. 4; Aslund (fn. 7).

competing platforms have little in common, but they also produce different winners and losers.

Not all ex-communist parties fall into the "traditional" category. John Ishiyama and others have argued that the Hungarian, Polish, Lithuanian, and Slovenian ex-communist parties are far more committed to market-oriented reforms than are other ex-communist parties in the region.¹³ These parties adopted economic platforms roughly akin to European social-democratic parties and often faced competition from more left-wing ex-communist factions. Given their histories, however, these parties lacked credibility, particularly with private business. Here I treat these reform-oriented ex-communist parties in two ways. Initially, I treat them as distinct from "traditional" ex-communist parties. I then place them in one group with other ex-communist parties.

My treatment of political polarization is similar to that of Stephan Haggard and Robert Kaufman, who use antisystem parties, which they describe as "left and populist parties that have historically mobilized around anti-capitalist or anti-oligarchic protests," as indicators of polarization. This depiction rings true for traditional ex-communist parties.¹⁴ Political polarization as used here may bring sharp swings in policy. In addition, however, it raises the possibility of change in the underlying structural features of the economy.

THE WAR OF ATTRITION

Political polarization tends to undermine economic performance in at least two ways. Alberto Alesina and Allen Drazen argue that in politically polarized settings it is difficult for politicians to agree on economic policies that promote social welfare but impose distributional costs on specific groups.¹⁵ The costs of transformation may be paid in a variety of ways: by levying taxes on capital, by sacking state workers, or by ending subsidies to loss-making sectors. The key is that each group prefers that some other group pay these costs. Where these costs are to be divided among competing political groups that have very different policy preferences and where these groups do not know who will concede the political battle by agreeing to pay the costs of transforming the

¹³ Ishiyama creates three categories of communist successor parties—standpatter, liberal, and democratic reformist—based on their policy positions in three areas: the economy, the communist past, and the value of democratic competition. Ishiyama, "Communist Parties in Transition: Structures, Leaders, and Processes of Democratization in Eastern Europe," *Comparative Politics* 27 (January 1995); idem, "The Sickle or the Rose: Previous Regime Types and the Evolution of Ex-Communist Parties," *Comparative Political Studies* 30 (June 1997).

¹⁴ Haggard and Kaufman, *The Political Economy of Democratic Transitions* (Princeton: Princeton University Press, 1995), 167.

¹⁵ Alesina and Drazen (fn. 4).

economy, political stalemate (a war of attrition) is likely to ensue. During this stalemate both parties seek to shift the costs of the new policy to their political opponents, a situation that inhibits the introduction of coherent economic policies necessary to promote growth.¹⁶

Consider a country with two groups: one earns revenue from capital and the other from labor.¹⁷ Although both will benefit by transforming the economy, each prefers that the other group bear the distributional costs associated with transformation. The capital-oriented faction prefers to end the soft-budget constraint, liberalize prices, and open industry to foreign trade. The labor-oriented faction prefers a gradual reform with elements of protection, significant taxes on the private sector, and redistribution to workers to cushion the costs of transformation. Where political polarization prevents agreement over the distribution of these costs, it is exceedingly difficult to introduce coherent policies that promise to improve the economy. In a highly polarized setting each group expects the other to concede first and a costly war of attrition ensues.

Only when one faction wins the political struggle—for example after an election marginalizes the loser—should we expect coherent government policy, a productive response by the private sector, and improved economic performance.¹⁸ The consolidation of political forces around a roughly similar policy ends the war of attrition and allows the winners to shift the costs of transformation onto the losers. Ending the war of attrition quickly is essential for the adoption of coherent policies and the resumption of growth.

The logic of a war of attrition has special bite in a postcommunist setting. Given the scope of economic change, the potential gains for winners and costs for losers are especially high. In addition, because political institutions in transition economies are often in flux, the early winners

¹⁶ Alberto Alesina and Howard Rosenthal, *Partisan Politics, Divided Government and the Economy* (New York: Cambridge University Press, 1995); Morris Fiorina, *Divided Government* (Boston: Alwyn Bacon, 1996).

¹⁷ More formally, two players bargain over an asset and choose to fight or not fight. If neither fights, each receives 0. Fighting is costly so each player must pay a cost, c , and the winner receives a prize, w . Each is uncertain about the costs the other side can bear. As long as $w > 0 > c$, each party prefers to fight and receive $w - c$, rather than not fight. Given these incentives, each chooses to fight in hopes of shifting the costs of transformation to their opponents. The result is a war of attrition.

		Player 1	
		Not Fight	Fight
Player 2	Not Fight	0,0	$-c, w - c$
	Fight	$w - c, -c$	$-c, -c$

¹⁸ Alesina and Drazen (fn. 4).

have an incentive to delay political consolidation around one political faction until they have amassed great wealth. Once having done so, they can shape political institutions to lock in their economic gains.¹⁹

CREDIBLE COMMITMENT

In addition to exacerbating the war of attrition, political polarization increases the probability of sharp changes in economic policy and thereby undermines confidence in the government's ability to make a credible commitment to property rights over time.²⁰ Potential transfers of political power are often decisive moments in polarized political systems because all groups expect great swings in economic policy. Losers can quickly become winners and vice versa. At a minimum, these changes may bring about rapid changes in policy. At a maximum, they may lead to structural changes in the economy. In either case, political polarization increases uncertainty and leads firms to discount their expected returns on investment and to lobby the state as an insurance policy against political change.

Weak judicial institutions that offer few protections against incursions by the state in a polarized postcommunist environment increase the size of potential swings in policy. Incoming governments can change property rights using creeping renationalizations, manipulations of tax policy, reassignments of property rights to political supporters, and threats to incarcerate their rivals.²¹ And they have done so. Because incoming governments cannot credibly commit to respect the property rights of their rivals in a polarized setting, the latter have little incentive to make long-term investments. Moreover, even the supporters of the current government recognize that their opportunities for favorable treatment by state officials will last only so long as their allies are in power, so they, too, have weak incentives to invest. Think of a businessperson in polarized Russia who is considering making an investment after the introduction of an economic reform program. Facing

¹⁹ Hellman (fn. 3); Timothy Frye, "Presidents, Parliaments and Democracy: Insights from the Post-communist World," in Andrew Reynolds, ed., *The Architecture of Democracy: Constitutional Design, Conflict Management, and Democracy* (New York: Oxford University Press, 2002).

²⁰ Alberto Alesina and Guido Tabellini, "A Positive Theory of Fiscal Deficits and Government Debt," *Review of Economic Studies* 57 (July 1990); Jakub Svensson, "Investment, Property Rights, and Political Instability: Theory and Evidence," *European Economic Review* 42, no. 7 (1998).

²¹ One anecdote highlights this dynamic. A Russian oligarch recounted to a journalist that in early February 1996 at the Davos meetings of the World Economic Forum, George Soros told him: "Boys, your time is over. You've had a few good years but now your time is up." His [Soros's] argument was that the communists were definitely going to win. We Russian businessmen, he said, should be careful that we managed to get to our jets in time and not lose our lives." Chrystia Freeland, *The Sale of the Century: Russia's Wild Ride from Communism to Capitalism* (New York: Random House, 2000), 192.

the probability that the current government may give way to a government with far different preferences that will put any such investment at risk, he or she will be reluctant to invest.²²

In contrast, think of a businessperson in nonpolarized Slovenia who can invest with the confidence that economic policy will not change dramatically, regardless of changes in the political environment.²³ This confidence is central to investment decisions in particular and support for economic reform more generally.²⁴

The effects of political polarization are likely to be especially strong prior to elections. As elections approach, the probability of a large swing in policy increases, making it especially difficult for the government to convince the private sector to invest in productive activities. Heightened uncertainty over future economic policy may lead businesses to park their funds abroad until the election results are in. Politicians may seek to promote growth in an election year, but their ability to actually generate a progrowth response from the private sector in a polarized setting will be limited. In polarized political systems, we therefore expect economic growth to be highest in the years farthest from an election and lowest in election years.²⁵

In sum, we should find that political polarization leads to slower rates of economic growth, that growth in polarized political systems is inversely related to the time to the next election, and that political polarization leads to more volatile policy.

Particular cases suggest the plausibility of the argument. In polarized Bulgaria the ex-communist Bulgarian Socialist Party and the anticommunist United Democratic Front, the two leading factions in the country over the last decade, have proposed very different economic reforms. Neither, however, has gained sufficient political power to sustain an economic policy over time such that it could impose the costs of transformation on the other, so each faction has instead used its time in

²² On Russia, see Aslund (fn. 7); Vladimir Mau, *Russian Economic Reforms as Seen by an Insider: Success or Failure?* (London: Chatham House, 2000); Jerry Hough, *The Logic of Economic Reform in Russia* (Washington, D.C.: Brookings Institution, 2001).

²³ On Slovenia, see Sabrina Petra Ramet, "Slovenia's Road to Democracy," *Europe-Asia Studies* 45, no. 5 (1993); Joze Mencinger, "The Slovene Economy," *Nationalities Papers* 21 (Spring 1993); Jeffrey D. Sachs and Boris Pleskovic, "Political Independence and Economic Reform in Slovenia," in Olivier Blanchard, Kenneth A. Froot, and Jeffrey D. Sachs, eds., *The Transition in Eastern Europe*, vol. 1, *Country Studies* (Chicago: University of Chicago Press, 1994).

²⁴ Przeworski (fn. 1).

²⁵ For a treatment of the political business cycle in Russia, see Daniel Treisman and Vladimir Gimpelson, "Political Business Cycles and Russian Elections, or the Manipulations of Chudar," *British Journal of Political Science* 31 (April 2001). See also Timothy Frye and Edward Mansfield, "Timing is Everything: Elections and Trade Liberalization in the Post-Communist World" (Manuscript, Ohio State University and University of Pennsylvania, November 2001).

TABLE 1
THE CASES AT A GLANCE

<i>Polarized Countries^a</i>	<i>Nonpolarized Countries</i>
<i>Average Growth Rate -7.9% (1.1)</i>	<i>Average Growth Rate -1.2% (.71)</i>
Albania	Armenia
Belarus	Azerbaijan
Bulgaria	Croatia
Kyrgyzstan	Czech Republic
Moldova	Estonia
Romania	Hungary
Russia	Kazakhstan
Ukraine	Latvia
	Lithuania
	Macedonia
	Poland
	Slovakia
	Slovenia
	Tajikistan
	Turkmenistan
	Uzbekistan

N = 249; T = 4.65; standard deviation in parentheses

^aThese countries have had polarized political systems for at least half the years in the sample.

office to redistribute economic resources to its own supporters rather than to promote growth. Consequently, growth has been weak. Indeed, a few large industrial conglomerates, such as MultiGroup, have weakened the economy by looting the state.²⁶ By contrast, in nonpolarized countries, such as Estonia and Uzbekistan, anticommunist and ex-communist factions, respectively, have dominated politics and quickly imposed the economic costs of transformation on their opponents.²⁷ Political uncertainty about economic policy has been much lower in these countries, and economic performance much better.

Some quantitative evidence is also consistent with the argument. In Table 1, I divide the cases into countries that had polarized political sys-

²⁶ On Bulgaria, see John D. Bell, "Post-Communist Bulgaria?" in Karen Dawisha and Bruce Parrot, eds., *Politics, Power, and the Struggle for Democracy in South-Eastern Europe* (New York: Cambridge University Press, 1997); John Bristow, *The Bulgarian Economy in Transition* (Cheltenham, U.K.: Edward Elgar, 1996); Venelin Ganey, "The Dorian Gray Effect: Winners as State Breakers in Postcommunism," *Communist and Post-Communist Studies* 34 (January 2001).

²⁷ On Uzbekistan, see Gerald M. Easter, "Preference for Presidentialism: Postcommunist Regime Change in Russia and the NIS," *World Politics* 49 (January 1997); Asad Alam and Arup Bannerji, "Uzbekistan and Kazakhstan: A Tale of Two Transition Paths" (Manuscript, World Bank, Washington, D.C., 2000); on Estonia, see Ole Norgaard and Lars Johannsen, *The Baltic States after Independence* (Northampton, Mass.: Edward Elgar, 1999); Terry Cox and Bob Mason, *Social and Economic Transformation in East Central Europe* (Cheltenham, U.K.: Edward Elgar, 1999).

tems for at least half the period under study and those that did not. I then compare the rates of economic growth for these two groups.²⁸ Averaging growth rates and polarization over time forfeits information because many countries are polarized for only part of the decade. Nonetheless, average annual economic growth was -7.8 percent in the polarized countries and -1.2 percent in the nonpolarized countries. If we count countries with reform communist factions as polarized, these figures were -5.9 percent for the polarized countries and -2.2 percent for the nonpolarized countries. In either case, these differences are statistically significant at the .05 level. Thus, there are grounds to investigate the relationship between polarization and growth more closely.

II. QUANTITATIVE ANALYSIS

To assess the arguments, I estimate the following model, which includes variables for political polarization and factors often cited as determinants of growth.

$$\begin{aligned} GDPGrow_{it} = & \beta_0 + \beta_1 Polarization_{it} + \beta_2 Democracy_{it} \\ & + \beta_3 GovernmentSpending_{it} + \beta_4 Openness_{i(t-1)} \\ & + \beta_5 GDPperCapita_{i(t-1)} + \beta_6 War_{it} + \beta_7 LogInflation_{i(t-1)} \\ & + \beta_8 GDPGrow_{i(t-1)} + \Sigma(\beta_9 Country_{it}) + \Sigma(\beta_{10} Year_{it}) + e_{it} \quad (1) \end{aligned}$$

The dependent variable, $GDPGrow_{it}$, is the real rate of year-to-year change in GDP in country i in year t measured in 1998 U.S. dollars. The average real rate of annual economic growth in GDP in the countries under study is -3.8 percent. Scholars have measured economic performance in many ways, but as Luiz Carlos Bresser-Perreira, Jose Maria Maravall, and Adam Przeworski note: "The ultimate economic criterion for evaluating the success of reforms can only be whether a country resumed growth at stable and moderate levels of inflation."²⁹

The main independent variable of interest is political polarization. $Polarization_{it}$ measures the seat share of the largest ex-communist (anticommunist) faction when an anticommunist (ex-communist) holds the executive. For example, in Bulgaria in 1994 the anticommunist Union of Democratic Forces won 29 percent of the seats and formed the largest party opposed to the prime minister from the ex-communist Bulgarian Socialist Party. Thus, its polarization score was 29.

²⁸ Here I treat a polarized country as having at least 20 percent of the seats held by a traditional ex-communist (anticommunist) party when the executive is held by an anticommunist (ex-communist) in a given year.

²⁹ Bresser-Perreira, Maravall, and Przeworski, *Economic Reforms in New Democracies: A Social-Democratic Approach* (New York: Cambridge University Press, 1993).

Studies from other regions have produced little consensus on whether regime type influences economic growth, but there is strong sentiment that economic performance has gone hand in hand with democracy in the postcommunist world.³⁰ This is consistent with the partial reform view that democracies should perform better than other countries. *Democracy_{it}* takes a value of 1 for each year that Freedom House rates a country as "free," that is, a 1 or 2 on its 7-point scale of political rights; otherwise it takes a value of 0.³¹

High levels of government spending may cushion the distributional effects of free markets and thereby promote growth.³² Similarly, endogenous growth theorists argue that targeted government spending may generate growth.³³ However, high levels of government spending may also give rulers more resources to pursue personal wealth at the expense of economic performance. *GovernmentSpending_{it}* is the ratio of government spending as a percentage of gross domestic product.³⁴

Openness to the world economy is often cited as critical to economic growth.³⁵ To capture this notion, the statistical model includes an annual index of external liberalization compiled by World Bank economists and country experts. *Openness_{it(t-1)}* ranges from 0 for a completely autarkic economic system to 100 for an economic system fully open to foreign trade.³⁶

I include a dummy variable, *War_{it}*, that equals 1 for each year that a country is involved in a war. I control for the wealth of each country by including the gross domestic product per capita, *GDPperCapita_{it(t-1)}*.

³⁰ Karen L. Remmer, "Democracy and Economic Crisis: The Latin American Experience," *World Politics* 42 (April 1990); Joan M. Nelson, "The Politics of Economic Transformation: Is the Third World Experience Relevant in Eastern Europe?" *World Politics* 45 (April 1993); Aslund, Boone, and Johnson (fn. 6); Hellman (fn. 3).

³¹ This threshold, although a convention, is nonetheless somewhat arbitrary. I estimate model 1 after redefining the threshold for democracy as (a) 3 and lower, (b) 4 and lower. Doing so does not alter the results. Data are available at Freedom House, Annual Survey of Freedom Country Scores, 1972/73–1998/99 (www.freedomhouse.org). Similar results are obtained using updated POLITY III scores for democracy, which are then treated as a dummy variable with the technique advocated by Keith Jagers and Ted Robert Gurr; Jagers and Gurr, "Tracking Democracy's Third Wave with the Polity III Data," *Journal of Peace Research* 32 (November 1995).

³² Bresser-Pereira, Maravall, and Przeworski (fn. 29). That government spending as a portion of GDP is relatively high indicates nothing about the content or beneficiaries of that spending.

³³ Philippe Aghion and Peter Howitt, *Endogenous Growth Theory* (Cambridge: MIT Press, 1998).

³⁴ EBRD (fn. 9).

³⁵ Jeffrey D. Sachs and Andrew Warner, "Economic Reform and the Process of Global Integration," *Brookings Papers on Economic Activity* 1, no. 1 (1995); Robert Barro, *Determinants of Economic Growth* (Cambridge: MIT Press, 1997); Jeffrey A. Frankel and David Romer, "Does Trade Cause Growth?" *American Economic Review* 89 (June 1999).

³⁶ Aslund, Boone, and Johnson (fn. 6) argue that economic performance in the former Soviet republics may differ from that in other states in the region due to "different underlying structural factors, such as the greater reliance on military-industrial production, a longer history of communism, greater reliance on trade within the communist bloc, and membership in the ruble zone when control over money creation disintegrated."

One might expect wealthier economies to exhibit stronger performance.³⁷ Alternatively, a neoclassical approach to growth would predict that poorer countries would exhibit higher rates of growth.³⁸ I also included a lagged value of the dependent variable, $GDPGrow_{i(t-1)}$, to account for temporal dependence in the data.³⁹

The sample includes twenty-five postcommunist countries during the period 1990–98.⁴⁰ After pooling these data, I report an ordinary least squares (OLS) model for the annual rate of economic growth.⁴¹ Because the sample has fewer than 250 observations and the data are arranged in a panel, statistical tests are based on a heteroskedasticity consistent covariance matrix (HCCM) as suggested recently by J. Scott Long and Laurie Ervin.⁴²

To control for unmeasured exogenous economic conditions, I also include dummy variables for each year. This is important, as countries in the region were exposed to similar exogenous shocks from the international economy. To control for unmeasured factors specific to individual countries, such as institutional legacies and the composition of the economy, I also add a dummy variable for each country. Including fixed-effect dummy variables reduces concerns for omitted variable bias and thereby gives greater confidence in the results. These fixed effects are not reported but are available from the author. The economic variables in the model are lagged by a year to reduce the likelihood of reverse causation.

RESULTS

Results from model 1 in Table 2 are consistent with the argument. Controlling for a range of factors, $Polarization_{it}$ is negatively and signif-

³⁷ Aghion and Howitt (fn. 33).

³⁸ Barro (fn. 35).

³⁹ Christopher Achen critiques this strategy for addressing temporal dependence, on the grounds that the lagged endogenous variable may substantially deflate the impact of other independent variables. The results of the argument are stronger when the lagged dependent variable is dropped. Achen, "Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables" (Paper presented at the annual meeting of the Political Methodology Section of the American Political Science Association, Los Angeles, July 2000).

⁴⁰ The former Soviet countries enter the data set in 1992 after the fall of the Soviet Union.

⁴¹ Because the units outnumber the years in the data by more than 2:1, I do not employ the correction suggested by Nathaniel Beck and Jonathan Katz; Beck and Katz, "What to Do (and Not to Do) with Time-Series-Cross-Section Data in Comparative Politics," *American Political Science Review* 89 (September 1995).

⁴² Long and Ervin show that in samples of fewer than 250 observations Ordinary Least Squares (OLS) regression may produce inconsistent standard errors. They propose a correction that is more appropriate for small samples. Results from this analysis are slightly stronger when opting for the more traditional approach of using robust standard errors with clustering on country. I am thankful to an anonymous reviewer for alerting me to this article. Long and Ervin, "Using Heteroscedasticity Consistent Standard Errors in the Linear Regression Model," *American Statistician* 54 (August 2000).

TABLE 2
POLARIZATION AND GROWTH^a

<i>Model</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Polarization continuous	-.26** (.12)				
Polarization continuous All CP		-.23** (.10)			
Polarization dummy			-7.36** (2.73)		-9.66** (3.07)
Polarization dummy all CP				-4.31** (2.17)	
Democracy	1.98 (2.28)	1.98 (2.25)	2.47 (2.33)	2.22 (2.29)	2.69 (2.32)
Government spending	.03 (.11)	.03 (.11)	.07 (.11)	-.03 (.10)	-.06 (.10)
Openness	1.48 (5.75)	.52 (5.70)	2.61 (5.12)	1.83 (5.32)	3.06 (5.06)
GDP per capita	-.0047** (.0017)	-.0046** (.0017)	-.0038** (.0015)	-.0041** (.0016)	-.0040** (.0015)
War	-6.86* (4.11)	-6.85* (4.73)	-7.86** (3.69)	-7.52* (4.1)	-7.81** (3.54)
Inflation (log)	-1.41** (.60)	-1.59** (.64)	-1.28** (.55)	-1.52** (.62)	-1.28** (.55)
GDP Grow Lag	.22** (.09)	.22** (.10)	.17* (.10)	.23** (.11)	.15 (.10)
Time to election					-.31 (.69)
Time to election* polarization					2.11* (1.21)
Constant	18.31** (7.94)	16.96** (7.57)	20.08** (7.79)	15.76** (7.34)	20.01** (7.60)
N	183	184	184	184	184
R ²	.71	.71	.72	.72	.73

*p<.10; **p<.05; ***p<.01

^aFixed effects for countries and years are included in the analysis but are not reported. Dependent variable is the real rate of annual change in GDP in U.S. \$1998.

icantly related to economic growth.⁴³ A ten-point rise in the polarization index yields a 2.6 percent decrease in growth, indicating that the results are fairly large, as well as statistically significant.

The wealth of a country, as proxied by *GDPperCapita*_{*i(t-1)*}, is negatively associated with growth, a result that supports neoclassical models of growth. A 10 percent increase in wealth decreases the rate of growth by 2 percent. War and high inflation are also negatively related to economic growth. *Democracy*_{*i*} is unrelated to economic growth once proper controls are introduced. Economic openness is positively related to growth, but the coefficient is insignificant, as indicated by *Openness*_{*i(t-1)*}. *GovernmentSpending*_{*i*} is positively associated with growth but is not significant. As expected, the coefficient on the lagged endogenous variable, *GDPGrow*_{*i(t-1)*}, is positive and significant but not very large, indicating that growth is fairly volatile in this period.

In the preceding analysis, I have included only the "traditional" ex-communist parties in the measure of polarization.⁴⁴ In model 2 I adopt a more expansive definition of polarization by including the four "reformed" ex-communist parties as well. Adopting this broader definition has little impact on the substantive significance of polarization.

Model 3 presents the results using a dummy variable for polarization relying on the logic that once an opposition movement reaches a certain threshold, it becomes a viable alternative to the ruling party, while those below this threshold do not. In model 3 polarization takes a value of 1, when either an anticommunist controls the executive and the largest traditional ex-communist party holds at least 20 percent of seats in parliament; or where a traditional ex-communist controls the executive and the largest anticommunist parties control at least 20 percent of the seats in parliament, and 0 otherwise. Such parties are almost always the largest opposition party and, particularly with the help of other parties, are well placed to frustrate attempts to impose the costs of transformation primarily on their supporters.⁴⁵ Results from model 3 indicate that the average annual rate of growth in polarized countries is 7.3 percent lower than in nonpolarized countries.

To test the robustness of this indicator, I also included all ex-communist parties that held more than 20 percent of the seats in parliament or held control of the executive. This measure does not distinguish be-

⁴³ Dropping this threshold to 15 percent does not alter the results presented in columns 3 and 4 in Table 2. The polarization measure retains its sign and significance with this new coding.

⁴⁴ Ishiyama (fn. 13).

⁴⁵ Haggard and Kaufman (fn. 14) consider a party system polarized if an antisystem or anticapitalist party has 15 percent of the seats in parliament.

tween reformed and traditional ex-communist parties. Model 4 in Table 2 illustrates that the results are robust to a range of plausible codings of polarization. As expected, the impact of the dummy variable using the more expansive treatment of polarization is somewhat weaker—growth in polarized countries is 4.3 percent lower than in other countries—but *Polarization_{it}* retains its statistical significance. In this analysis the inclusion of the four reformed communist parties had a mild ameliorative effect on growth when compared to previous models. Nonetheless, this recoding does not dramatically change the results.

THE ELECTORAL CALENDAR, POLITICAL POLARIZATION, AND GROWTH

Model 5 examines the impact of the electoral calendar in polarized and nonpolarized settings by including an interaction term, *TimeToElections_{it}*Polarization_{it}*, that multiplies the number of years until the next national election by 1 if the political system is polarized and by 0 otherwise.⁴⁶ As elections approach in a polarized setting and uncertainty increases about the course of future policy, one would expect politicians and businesses to be more likely to engage in economic opportunism than in strategies to promote growth.

The significant and negative coefficient on the variable *Polarization_{it}* in model 5 suggests that in election years (when time to elections is 0), economic growth is particularly low in polarized countries. The positive and significant coefficient on the interaction term *TimeToElection_{it}*Polarization_{it}* indicates that in a polarized setting the farther a country is from an election, the higher the growth rate.⁴⁷ Consider a normal four-year electoral cycle. In polarized countries, economic growth declines on average by 3.3 percent three years prior to an election, by 5.4 percent two years prior to an election, by 7.5 percent in the year preceding an election, and by 9.6 percent in election years. Thus, in polarized countries economic growth is highest in years farthest from an election and declines as the election approaches. It is not surprising that the electoral cycle has little effect on economic growth in the nonpolarized countries, as indicated by the statistically insignificant coefficient on *TimeToElection_{it}*.

The results of this analysis demonstrate that the electoral calendar has a large effect on growth in polarized countries; they also suggest

⁴⁶ National elections here include parliamentary elections in a parliamentary system and presidential elections in a presidential system.

⁴⁷ Declining growth rates in parliamentary systems may hasten calls for an election, thus suggesting the potential endogeneity of growth and elections. However, it is notable that declining growth seems to have no effect on elections in nonpolarized countries.

that growth is reduced because of the potential swings in policy that surround elections in such countries. Most important, they provide further confirmation of the argument.

POTENTIAL OMITTED VARIABLES

Since there is little consensus on the proper specification for growth models, I also address concerns for omitted variables that may influence economic performance.⁴⁸ Consistent with the J-curve view, I include variables for presidential power and elite partisanship. To measure presidential power, I use Matthew Shugart and John Carey's scale of presidential power as adapted slightly for the postcommunist cases by Frye, Hellman, and Tucker.⁴⁹ Given the difficulty of measuring elite partisanship, I created two variables. The first measures the percentage of seats held by the largest ex-communist party.⁵⁰ The second probes the partisanship of the head of government—a president in a presidential system and a prime minister in a parliamentary system—by creating the variable *ElitePartisanship_{it}*, which is based on the executive's career prior to 1989 and his relationship with the ex-communist party.⁵¹

Consistent with the partial reform argument, I added *Fragmentation_{it}*, which adapts for the postcommunist cases Noriel Roubini and Jeffrey D. Sachs's measure of the extent to which partisan actors can block policy change.⁵² This variable has been used by Hellman and the EBRD and measures the number of political factions and institutional players whose assent is needed to make a change in policy.⁵³

⁴⁸ As Ross Levine and David Renelt note: "There does not exist a consensus theoretical framework to guide empirical work on growth, and existing models do not completely specify the variables that should be held constant while conducting statistical inference on the relationship between growth and the primary variables of interest." See Levine and Renelt, "A Sensitivity Analysis of Cross-Country Growth Regressions," *American Economic Review* 82 (September 1992), 943; Nazrul Islam, "Growth Empirics: A Panel Data Approach," *Quarterly Journal of Economics* 110 (November 1995).

⁴⁹ Shugart and Carey, *Presidents and Assemblies: Constitutional Design and Electoral Dynamics* (New York: Cambridge University Press, 1992); Timothy Frye, Joshua Tucker, and Joel Hellman, "Data-Base on Political Institutions in the Post-Communist World" (Data set, Columbus, Ohio, 2001). Herbert Kitschelt and Edward Malesky offer a conditional theory of the effects of presidential power on economic performance in the postcommunist world. They argue that countries with weak economic prospects choose strong presidencies, and thus the effect of presidential power is conditional upon initial prospects. Testing the argument would seem to require a model different from the one proposed here. See Kitschelt and Malesky, "Constitutional Design and Post-Communist Economic Reform" (Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, April 2000).

⁵⁰ For a discussion of elite policy preferences based on their political base, see Barbara Geddes, "Douglass C. North and Institutional Change in Contemporary Developing Countries," in James E. Alt, Margaret Levi, and Elinor Ostrom, eds., *Competition and Cooperation: Conversations with Nobelists about Economics and Political Science* (New York: Russell Sage Foundation, 1999).

⁵¹ For more detail on the definition of these and other variables, see Appendixes 2 and 3.

⁵² Roubini and Sachs, "Government Spending and Budget Deficits in the Industrial Countries," *Economic Policy* 8 (April 1989); and idem, "Political and Economic Determinants of Budget Deficits in the Industrial Democracies," *European Economic Review* 33 (1989).

⁵³ Hellman (fn. 3); EBRD (fn. 9).

I included variables that account for the influence of the International Monetary Fund, the European Union, and geographic proximity to Western Europe.⁵⁴ I also included other variables that scholars have attributed to long-run economic growth, such as the percentage of the GDP produced in agriculture, levels of education, the size of the population, life expectancy, and initial GDP per capita circa 1989.⁵⁵ Adding these variables does not change the results in any substantive fashion: none of these variables achieved statistical significance or changed the significance level of the polarization measure. Indeed, the results are essentially unchanged from the base model.

ROBUSTNESS CHECKS

I assessed the robustness of the results in several ways. I dropped each country from the analysis one at a time and reestimated the model to determine whether the results depended on a single case. I then split the sample into two five-year periods to see whether the results were driven by rapid declines early in the decade.⁵⁶ Neither of these changes affected the sign or significance of the variables of interest.⁵⁷

I also ran the results dropping the fixed effects for countries, for years, then for both countries and years, and report the results on lines 1, 2, and 3, respectively, of Table 3.⁵⁸ Doing so only strengthened the results for the polarization measure. In each of these specifications, the only variable that changes sign or significance is openness, which becomes positive and significant in each model. Thus, the impact of openness is sensitive to the inclusion of fixed effects. When I dropped the country-specific fixed effects, I added a dummy variable for membership in the former Soviet Union.⁵⁹ The coefficient on FSU_{it} was

⁵⁴ The International Monetary Fund 2000 (www.imf.org/external/np/tre/tad/); Randall Stone, *Lending Credibility: The International Monetary Fund and the Post-Communist Transition* (Princeton: Princeton University Press, 2002).

⁵⁵ Martha DeMelo, Cevdet Denizer, and Alan Gelb, *From Plan to Market: Patterns of Transition*, World Bank Policy Research Paper (Washington, D.C., 1996); Vladimir Popov, "Shock Therapy versus Gradualism: The End of the Debate (Explaining the Magnitude of The Transformational Recession)," *Comparative Economic Studies* 42, no. 1 (2000).

⁵⁶ I had to drop the fixed effects for countries and years due to the small sample sizes in these estimations.

⁵⁷ Measures of corruption and institutional quality are not directly included in the model but are often correlated with the wealth of a country. In addition, polarization may foster corruption and weak institutions by heightening incentives to lobby to prevent changes in policy from affecting your firm.

⁵⁸ There is great debate about the inclusion of fixed effects—dummy variables for countries or years—in models such as this. Some argue that including fixed effects reduces the potential for omitted variable bias, while others argue that there is little theoretical basis to include fixed effects and that the cure is usually worse than the disease. See Symposium on Research Design and Methods in International Relations, *International Organization* 55 (Spring 2001).

⁵⁹ The dummy variable FSU_{it} is a rather crude indicator of the institutional legacy of a Soviet polity. Many aspects that set the former Soviet republics apart are captured in other variables, for example,

TABLE 3
ROBUSTNESS CHECKS^a

1. Polarization, continuous (without country-specific fixed effects)	-.16*** (.06)
2. Polarization, continuous (without year-specific fixed effects)	-.28** (.12)
3. Polarization, continuous (without either country or year fixed effects)	-.18*** (.05)
4. Polarization, continuous lagged (excluding reformed communist party lagged by a year)	-.23* (.12)
5. Polarization, all CP lagged (including reformed communist party lagged by one year)	-.15* (.09)
6. Polarization, moving average (average polarization for three previous years excluding reformed communist party)	-.57*** (.19)
7. Effect of lagged growth on polarization	-.004 (.088)

* $p < .10$; ** $p < .05$; *** $p < .01$

^a Entries 1–6 are OLS estimates for various measures of polarization with heteroskedasticity consistent standard errors in parentheses. The dependent variable is the real rate of year-on-year change in GDP in 1998 \$US. Note that the remaining variables in model 1 of Table 2 are included in these analyses, but to conserve space their parameter estimates are not presented. Entry 7 reports the effect of lagged growth on polarization including the independent variables in model 1 of Table 2.

negative and lay just beyond the bounds of significance ($p = .105$). Including FSU_{it} had no impact on the significance of polarization.⁶⁰

I then examined the possibility that slow growth leads to political polarization rather than vice versa. I lagged both of the continuous measures of polarization in equation 1 by one year and report the re-

GDP per capita, miles from Vienna, government spending, and so on. The effects of membership in the former Soviet Union should also be captured by the country-specific fixed effects. One problem with the FSU_{it} variable is that it is constant over time. A somewhat more refined measure includes a dummy variable for each year that countries are in the ruble zone. This variable is not significant when added to the base model.

⁶⁰ The size and significance of the results are essentially unchanged using a correction for growth rates that takes into account the size of the informal economy. Marcelo Selowsky and Ricardo Martin calculate growth rates after increasing the GDP by the fraction $x_{it}/3$ (for FSU countries) or $x_{it}/10$ (for other countries), where x_{it} = the share of private sector output in GDP. They take their estimates for the size of the informal economy from the EBRD's *Transition Report* (fn. 9). See Selowsky and Martin, "Policy Performance and Output Growth in the Transition Economies," *American Economic Review Papers and Proceedings* 87 (May 1997).

sults on lines 4 and 5 in Table 3. Doing so did not materially affect the results, as the coefficients on the lagged measures of polarization retain their significance. I also measured polarization by taking the average polarization score over the three previous years (year t , $t-1$, $t-2$). Again, this variable is significant, as is reported on line 6 of Table 3. That the lagged value of polarization is a fairly good predictor of growth rates is evidence that causation flows from polarization to growth.

In addition, I lagged the value of growth and placed it on the right-hand side of equation 1 and placed the polarization measures on the left hand-side of equation 1 and report the results on line 7 of Table 3. The insignificant coefficient on the lagged value of growth also suggests that growth is not causing polarization.⁶¹

Thus, there is strong empirical evidence that political polarization drives growth. This direction of causation is quite plausible. The polarization measure is taken from elections in years preceding the measures of economic growth. Moreover, the argument that bad economic performance necessarily leads to political polarization may be less appropriate for these cases. Susan Stokes argues that if voters in a transition economy believe that the economy must get worse before it gets better, then economic decline early in the transformation may indicate that current policy is on track.⁶² Thus, economic decline need not encourage voters to support extremist candidates. Beyond transition economies, some scholars, such as Samuel Huntington, argue that it is rapid growth that leads to polarization, rather than vice versa.⁶³ In sum, the roots of political polarization are complex and are not readily reduced to economic performance.

⁶¹ To address the possibility of reverse causation further, I conducted an instrumental variable/two-stage least-squares regression analysis by estimating the following system of equations:

$$\text{Polarization}_{it} = \beta_0 + \beta_1 \text{Population}_{it} + \beta_2 \text{ParliamentarySystem}_{it} + e_{it} \quad (1)$$

$$\begin{aligned} \text{GDPGrowth}_{it} = & \beta_0 + \beta_1 \text{GovernmentSpending}_{it(t-1)} + \beta_2 \text{GDPperCapita}_{it(t-1)} \\ & + \beta_3 \text{War}_{it(t-1)} + \beta_4 \text{GDPGrowth}_{it(t-1)} + \Sigma(\beta_5 \text{Country}_i) + \Sigma(\beta_6 \text{Year}_{it}) + e_{it} \end{aligned} \quad (2)$$

In the first stage I use a continuous variable for the size of the population and a dummy variable for the existence of a parliamentary regime as instruments for the continuous measure of polarization. In the second stage, I include variables commonly found in models of economic growth. The effect of political polarization on growth remains statistically significant in this analysis at the .10 level. Because (1) the number of cases is fairly small, (2) the determinants of growth and polarization are poorly understood, and (3) it is difficult to find proper instrumental variables, there is reason to be skeptical of this technique in this setting. Larry Bartels, "Instrumental Variables and 'Quasi-Instrumental' Variables," *American Journal of Political Science* 35 (August 1991); Peter Kennedy, *A Guide to Econometrics* (Cambridge: MIT Press, 1993).

⁶² Susan Stokes, "Public Opinion and Market Reforms: The Limits of Economic Voting," *Comparative Political Studies* 29 (October 1996).

⁶³ Samuel Huntington, *Political Order in Changing Societies* (New Haven: Yale University Press, 1968).

III. POLITICAL POLARIZATION AND POLICY VOLATILITY

The preceding analysis demonstrates that political polarization hindered economic growth in the cases at hand. In addition, in polarized countries economic growth declined with the approach of elections, a finding that is consistent with the view that political polarization affects growth by increasing the possibility of a change in policy. In this section, I examine some ancillary evidence that should be consistent with the argument. This analysis provides another means of testing the implications of the theory and offers an additional opportunity to identify the mechanisms that drive the argument.

Thus far, I have emphasized how political polarization intensifies the credible commitment problem by making large swings in policy more likely. According to this view, political polarization increases economic uncertainty and reduces incentives to engage in productive economic behavior, such as saving or investing. If this argument is correct, we should expect countries with more polarized political systems to have greater year-on-year volatility in the extent of economic liberalization. To assess this argument, I estimate the following equation:

$$\begin{aligned}
 PolicyVolatility_{it} = & \beta_0 + \beta_1 Polarization_{it} + \beta_2 Democracy_{it} \\
 & + \beta_3 GovernmentSpending_{it} + \beta_4 Oil_{it} \\
 & + \beta_5 GDPperCapita_{i(t-1)} + \beta_6 War_{it} + \beta_7 LogInflation_{i(t-1)} \\
 & + \beta_8 Openness_{i(t-1)} + \beta_9 Fragmentation_{it} \\
 & + \Sigma(\beta_{10} Country_{it}) \\
 & + \Sigma(\beta_{11} Year_{it}) + e_{it}.
 \end{aligned} \tag{2}$$

The dependent variable in equation 2, *PolicyVolatility_{it}*, is the absolute value of the percentage change in the World Bank Liberalization Index country *i* in year *t*. The index consists of three elements: the extent of liberalization in foreign trade, the extent of liberalization in internal prices, and the size of the private sector, as calculated annually by World Bank economists. It takes a value of 0 for an ideal-type command economy and 100 for an ideal-type free-market economy.⁶⁴ Because the dependent variable measures the absolute value of the percent change in the index, it includes both increases and decreases in economic liberalization.⁶⁵

⁶⁴ The Liberalization Index includes two clear policy elements, liberalization in foreign trade and domestic prices. It also includes the size of the private sector, which is harder to classify as a policy element. Nonetheless, the index does include progress in privatization, which is an important policy measure. In addition, reassertions of state control over property—which would affect the size of the private sector—have been common following transitions of political power in polarized countries. Thus, it is important to include the size of the private sector in this index.

⁶⁵ See Appendix 1 for data on annual average changes in the World Bank Liberalization Index.

The main independent variable of interest is political polarization, which is measured with a dummy variable including the reformed communist parties. Polarized countries should experience greater year-on-year volatility in policy.

Countries with robust democracies may experience less policy volatility because democracies place stronger institutional constraints on policymakers than do autocracies. Autocrats likely have greater opportunities to introduce changes in policy outside of formal legal mechanisms. Similarly, countries whose political systems are marked by a large number of veto points may find it more difficult to make rapid changes in policy.⁶⁶ Accordingly, I include *Fragmentation_{it}*, which is a version of the scale of political fragmentation developed by Roubini and Sachs that has been modified for the postcommunist world.⁶⁷

In addition, countries at war or with high levels of inflation may experience greater policy volatility in response to these conditions. I therefore include *War_{it}* and *LogInflation_{it(t-1)}* in equation 2. The wealth of a country may also influence the volatility of policy. On the one hand, countries with high per capita GDP may have stronger institutions, such as courts, political parties, and bureaucracies, to check the ability of politicians to change policy quickly. On the other hand, wealthier countries may have greater control over resources and have greater capacity to change the course of policy. To capture the effect of a country's wealth on policy volatility, I include *GDPperCapita_{it(t-1)}*.

Countries with high levels of government spending may experience less policy volatility because the government has the resources to smooth the effects of the business cycle. Conversely, governments that spend freely may have more tools and greater capacity to change policy rapidly. I thus include a variable that measures the size of government spending as a percentage of GDP.

I also add a dummy variable for the four countries that rely heavily upon oil as a source of revenue. Countries whose economies depend on oil and gas may experience fluctuations due to changes in the international market for crude oil. Alternatively, the oil and gas sector may exert inordinate influence over the state, making changes from their preferred policy less likely to occur. Finally, openness to the world economy may also shape policy volatility as countries with liberal foreign trade regimes are more exposed to external shocks. It is also important to include *Openness_{it}*, because it is highly collinear with the

⁶⁶ George Tsebelis, "Decision-Making in Political Systems: Veto Players in Presidentialism, Parliamentarism, Multicameralism, and Multipartyism," *British Journal of Political Science* 25 (January 1995).

⁶⁷ Roubini and Sachs (fn. 52); Frye, Hellman, and Tucker (fn. 49).

TABLE 4
VOLATILITY OF ECONOMIC LIBERALIZATION*

<i>Model</i>	<i>t</i>
Polarization	.62* (.35)
Democracy	-.40 (.40)
Government spending	.02 (.01)
Oil	1.58 (.99)
GDP per capita	.0042** (.0021)
War	-.04 (.41)
Inflation (log)	.07 (.10)
Openness	.99 (2.07)
Fagmentation	.08 (.17)
Constant	.53 (1.79)
N	167
R ²	.53

*p<.10; **p<.05; ***p<.01

*Dependent variable is absolute value of annual change in World Bank Liberalization Index. Fixed effects for countries and years are included in the analysis but are not reported.

index of economic liberalization and therefore serves to control for the existing level of economic liberalization within a country. As before, I use OLS regression with the correction for heteroskedasticity consistent standard errors suggested by Long and Ervine.⁶⁸ I also employ year and country-specific fixed effects.

The results from Table 4 suggest that countries with polarized political systems experience greater year-on-year variation in the extent of economic liberalization. *Polarization_{it}* is both significant and positively related to the volatility of the World Bank Liberalization Index. On average, the policy volatility index is 62 percent higher in polarized coun-

⁶⁸ Long and Ervin (fn. 42).

tries. These results are significant at the .10 level with the more expansive measure of polarization as well.⁶⁹

Wealthier countries experience somewhat higher levels of policy volatility, but openness to the world economy is not significantly related to policy volatility. Nor is government spending, involvement in a war, inflation, or dependence on oil.⁷⁰ Similarly, the coefficients on *Democracy_{it}* and *Fragmentation_{it}* indicate that neither has a significant impact on policy volatility.⁷¹

Most importantly, political polarization is associated with increased policy volatility in the cases under study. These results are consistent with the argument that policy volatility is a mechanism by which political polarization affects economic growth. They also fit the conventional wisdom on the dynamics of economic liberalization in the region. In nonpolarized countries dominated by anticommunists, such as Estonia, swings in policy have been minimal after an initial jump early in the transformation. Government turnover has been frequent in Estonia, but as all the major political parties are committed to creating some form of a market economy with considerable scope for private property, subsequent changes in policy have been minimal.

In nonpolarized countries dominated by the ex-communists, such as Turkmenistan, annual changes in the World Bank Index have been minimal throughout the 1990s, as liberalization has proceeded fairly slowly. Similarly, according to the World Bank Index, nonpolarized Kazakhstan has made slow but steady progress toward a liberal economy.

By contrast, in polarized countries, such as Ukraine, Bulgaria, and Russia, liberalization has proceeded in fits and starts. In Ukraine the World Bank Liberalization Index fell sharply in 1993 after initial halting steps toward a more liberal economy. In Bulgaria the index fell in 1994 and 1995, after the election of the Bulgarian Socialist Party. In Russia the economic environment became far less liberal in 1998. Indeed, the only cases in which the World Bank Liberalization Index fell significantly in a given year have occurred in polarized political settings.⁷²

⁶⁹ Again the results are stronger using robust standard errors with clustering on country rather than the HCCM correction suggested by Long and Ervin (fn. 42).

⁷⁰ The relationship between oil and policy volatility is sensitive to the coding of polarization.

⁷¹ *Democracy_{it}* and *Fragmentation_{it}* are correlated at .45. Dropping either from the analysis individually does not change the results. These results are, however, sensitive to the coding of polarization.

⁷² The Liberalization Index experiences relatively few reversals. Nonetheless, these cases of backsliding seem to be important. Using the average year-on-year increase in the Liberalization Index—rather than the absolute value year-on-year change—as the dependent variable in the regression produces different results. For individual elements of the index, reversals occur ten times and take place in Russia, Ukraine, Romania, Bulgaria, Belarus, and Azerbaijan in years in which the political system is polarized.

The uncertainty of the policy environment in polarized countries has also been reflected in high levels of market volatility. In highly polarized Russia, for example, the market price for privatization vouchers fell by more than 25 percent following parliamentary elections in December 1993, in which reformist parties fared poorly.⁷³ In addition, the main index for the Russian equities market, the Russian Trading System, increased by more than one-third in the month following Yeltsin's first-round victory in the 1996 presidential elections.⁷⁴ In contrast, parliamentary elections in the Czech Republic in 1996 and 1998 caused only small ripples on the main equities market index, the PX-50. Thus, countries with polarized political systems seem to have especially volatile economic environments.

IV. IMPLICATIONS AND CONCLUSION

My evidence casts doubt on the two dominant approaches to the politics of economic reform. In contrast to the J-curve argument, I find that elite partisanship, the strength of the executive, and relations with the European Union and the IMF are not significantly related to economic growth. In contrast to the prescriptions motivated by the partial reform view, regime type and broad governing coalitions are also unrelated to growth. In addition, economic growth is unrelated to geography.⁷⁵

Observers of the postcommunist world have debated at length the roots of economic performance in the region. Poor economic performance is typically attributed either to rent seekers supported politically by large ex-communist parties or to liberal politicians who have imposed overly ambitious economic policies.⁷⁶ My work suggests that such analyses are useful but incomplete. It is the combination of both relatively strong ex-communist and anticommunist factions, each with sufficient power to prevent the other from implementing its version of the economic rules of the game that has undermined economic growth. Conversely, countries with dominant anticommunist or ex-communist political factions have produced better economic performance than their more polarized counterparts. Indeed, this argument suggests that

⁷³ Timothy Frye, "Russian Privatization and the Limits of Credible Commitment," in David Weimer, ed., *The Political Economy of Property Rights: Institutional Change and Credibility in the Reform of Centrally Planned Economies* (New York: Cambridge University Press, 1997).

⁷⁴ Timothy Frye, *Brokers and Bureaucrats: Building Market Institutions in Russia* (Ann Arbor: University of Michigan Press, 2000); Roderick Kiewiet and Mikhail Myagkov, "The Emergence of the Private Sector in Russia: A Financial Market Perspective," *Post-Soviet Affairs* 14 (January–April 1998).

⁷⁵ Fish (fn. 5); Kopstein and Reilly (fn. 5).

⁷⁶ Aslund (fn. 7); Stiglitz (fn. 2); Mau (fn. 22).

there is a need for more research into how the countries dominated by ex-communists have managed to avoid the prolonged economic declines that have marked more polarized countries.

This article contributes to the ongoing analysis of the relationship between democratization and economic performance in the postcommunist world. It calls into question the commonly held view that economic and political reform go hand in hand in these cases.⁷⁷ It is not democracy or autocracy per se that drives economic growth, but rather it is the balance of political power between the largest anticommunist parties and ex-communist parties that shapes economic performance.

It also complements two influential arguments about economic reform in the region. First, it builds on the work of Hellman by identifying the political conditions that may underpin the "partial reform equilibrium."⁷⁸ In polarized countries the short-term winners from economic reform have particularly strong incentives to lobby the state, if only to minimize the possibility of a large swing in policy. Indeed, the evidence presented here finds that countries with polarized political systems have been likely to fall into the "slow growth equilibrium" described by Hellman, while countries in which either ex-communists or anticommunists dominate have largely avoided this path.⁷⁹

In addition, it identifies the political conditions that lead reform-oriented politicians to adopt the strategies and tactics advocated by Shleifer and Treisman.⁸⁰ Reformist politicians facing strong opposition from ex-communist parties may favor co-optation, as Shleifer and Treisman argue occurred in Russia. In contrast, their counterparts in nonpolarized settings will eschew these tactical compromises because they can impose the costs of transformation on their opponents with little resistance.

Finally, this article also contributes to long-standing debates on the political business cycle.⁸¹ In the standard treatment of the political business cycle, incumbent politicians seek to inflate growth rates prior to elections to improve their chances of retaining office. Despite the

⁷⁷ Nelson (fn. 30); Aslund, Boone, and Johnson (fn. 6).

⁷⁸ Hellman (fn. 3).

⁷⁹ The polarized countries also experience higher increases in income inequality than do nonpolarized countries. Data from seventeen countries collected by Branko Milanovich reveal that the average increase in income inequality between 1988 and 1994 was 46 percent in polarized countries and 31 percent in the nonpolarized countries. See Milanovich, *Income, Inequality, and Poverty during the Transition* (Washington, D.C.: World Bank, 1998).

⁸⁰ Shleifer and Treisman (fn. 7).

⁸¹ E. B. Tufte, *Political Control of the Economy* (Princeton: Princeton University Press, 1978); Douglass Hibbs, Jr., *The American Political Economy: Macroeconomics and Electoral Politics* (Cambridge: Harvard University Press, 1987); Alesina and Rosenthal (fn. 16). The literature on the political business cycle is vast and has evolved significantly over the past twenty years. The discussion here is abridged.

theoretical advances in this literature, the empirical record of the political business cycle has been mixed.⁸² Indeed, I find that in the postcommunist world growth rates in polarized systems fall as elections approach, whereas in nonpolarized settings these electoral effects are absent. By focusing on the incentives of firms, the argument advanced here can account for this outcome: the heightened uncertainty that surrounds elections in a polarized setting weakens incentives to invest as elections approach, leading to lower growth in polarized settings.

Political polarization has slowed economic growth in the postcommunist world. In addition, in polarized countries growth rates have been highest in years that are most distant from an election and decline as elections approach. Thus, political polarization is a key mechanism that shapes economic behavior in the postcommunist world. Whether these insights travel beyond the postcommunist cases is an open question. Have political struggles between old and new regime factions generated similar levels of polarization in democratizing countries in Latin America or Africa? Has political polarization generated similar economic outcomes? These are questions for future inquiry.

⁸² James A. Alt and Alec Chrystal, *Political Economics* (Berkeley: University of California Press, 1983).

APPENDIX 1

<i>Country</i>	<i>Years of Polarization (Traditional Ex- Com Parties: 20% Threshold)</i>	<i>Years of Polarization (All Ex- Com Parties: 20% Threshold)</i>	<i>Average Polarization Continuous Measure</i>	<i>Average Annual Abs. Value Change in Liberalization Index</i>	<i>Average Annual GDP Growth, 1989-98</i>
Albania	1991-95 1997-98	1991-95 1997-98	20.3	.42	.29
Armenia			4.6	.59	-4.93
Azerbaijan	1991-92	1991-92	8.1	.72	-7.68
Belarus	1990-96	1990-96	18.0	.47	-1.49
Bulgaria	1990-98	1990-98	30.9	.76	-3.95
Croatia			11.8	.13	-2.16
Czech Rep.			4.4	.57	-.22
Estonia	1990-92	1990-92	12	.48	-2.94
Georgia	1990-92	1990-92	7.8	.73	-9.26
Hungary		1994-98	2.4	.17	-.31
			11.4 ^a		
Kazakhstan			0	.59	-4.67
Kyrgyzstan	1990-95	1990-95	35	.94	-3.91
Latvia	1990-93	1990-93	14.6	.58	-3.72
Lithuania		1993-96	3.1	.59	-3.8
			11.9 ^a		
Macedonia	1990-93	1990-93	15.7		-5.11
Moldova	1990-94, 1998	1990-94, 1998	20.9	.60	-9.12
Poland	1989	1989, 1993- 98	0 31.8 ^a	.29	1.8
Romania	1990-98	1990-98	20.8	.69	-3.04
Russia	1990-98	1990-98	25.5	.70	-6.26
Slovakia			4.9	.58	.34
Slovenia		1992-98	0	.15	.24
			19.3 ^a		
Tajikistan	1995-98	1995-98	0	.44	-8.17
Turkmenistan			0	.43	-8.17
Ukraine	1990-98	1990-98	19.8	.69	-8.9
Uzbekistan			0	.75	-.77
Mean			10.8 (13.0) ^a	.54	-3.80

^a This includes all ex-communist parties

APPENDIX 2: VARIABLES FROM ROBUSTNESS CHECKS NOT DEFINED IN TEXT

1. *Presidential power*. Based on Shugart and Carey (fn. 49), as adapted by Frye, Hellman, and Tucker (fn. 49).

2. *Fragmentation*. 0 if country *i* has a noncompetitive system of government, allowing elites to make policy with few institutional or partisan constraints (Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, and post-1996 Belarus); 1 if *i* has a single-party parliamentary government or a presidential government with majority support in the assembly (Lithuania in the mid-1990s; Ukraine under President Kravchuk; and Moldova under the Agrarian Democratic Party); 2 if *i* has a two-party or a divided presidential government (Russia, Kyrgyzstan, and Poland during the coalition government of the Democratic Left Alliance and the Peasant Party); 3 if *i* has a three-party government; and 4 if *i* has a government composed of four or more parties.

3. *Elite partisanship*. It is measured based on the occupational history and partisan base of the executive—the president in a presidential system and the prime minister in a parliamentary system. It takes a value of 1 for leaders who held a top position in the communist party prior to 1989 and retained that position after 1989 (for example, Karminov in Uzbekistan); 2 for a leader who held a lower-level party post in the communist era or held high office in the communist party but became the executive running as head of a reformed communist party (for example, Kwasniewski in Poland) or against an unreformed communist party (for example, Yeltsin in Russia); 3 is for executives who did not hold a party post in the communist era (for example, Klaus in the Czech Republic).

4. *% GDP from agriculture*. EBRD (fn. 9).

5. *Life expectancy*. EBRD (fn. 9).

6. *Size of the economy*. EBRD (fn. 9).

7. *Initial GDP circa 1989*. EBRD (fn. 9).

8. *Geographic proximity*. Miles from Vienna

9. *IMF*. 1 for each year under an IMF poverty reduction or structural adjustment agreement, and 0 otherwise.

10. *EU*. 0 if no formal relationship with the EU; 1 if applied for membership in the EU; 2 if it has signed an interim agreement; 3 if it has signed an association agreement with the EU in a given year.

APPENDIX 3
DESCRIPTIVE STATISTICS

	<i>Mean (SD)</i>	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>
Government spending	38.9 (11.4)	188	10	83
Democracy	.47 (.50)	206	0	1
Openness	.56 (.38)	250	0	100
War	.13 (.33)	250	0	1
Elite partisanship	2.1 (.92)	250	1	3
GDP per capita	4267 (2246)	249	1099	12906
Communist Party	43.45 (33.7)	246	0	100
European Union	.84 (.99)	250	0	3
FSU	.60 (.49)	250	0	1
Oil	.14 (35)	250	0	1
% GNP from agriculture	18.8 (13.7)	182	3.7	67.7
Presidential power	8.9 (5.46)	180	0	21
GDP	35204 (74159)	249	1152	495263
Fragmentation	1.86 (1.17)	205	0	4
IMF	.38 (.48)	250	0	1
GDPGrow	-3.82 (9.89)	249	-52.6	14.2