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## *Do Borders Matter? Soviet Economic Reform after the Coup*

MOST ANALYSTS were surprised to see the Soviet empire collapsing under the weight of its own inefficiency. As usual, this inefficiency was foreseen by the remarkable John Maynard Keynes, who in 1934 wrote, I have not touched on the real strength of Communism. On the surface Communism enormously overestimates the significance of the economic problem. The economic problem is not too difficult to solve. If you will leave that to me, I will look after it. . . . Offered to us as a means of improving the economic situation, [communism] is an insult to our intelligence. But offered as a means of making the economic situation *worse*, that is its subtle, its almost irresistible, attraction.<sup>1</sup>

There is little doubt that the irresistibly inefficient communist era is over, but the shape of the new regime is unclear. In this paper, we reflect on what difference a shift in power from the center to the republics will

Our work on the Soviet transition to the market was sponsored by the Economic Reform and Integration Project of the International Institute for Applied Systems Analysis in Laxenburg, Austria. The views expressed here are solely those of the authors, and not those of the institute. Material has been drawn from Peck and Richardson (1991).

1. "Mr. Keynes Replies to Shaw," *New Statesman and Nation*, November 10, 1934, p. 654.

make. In short, do borders—meaning the locus of political authority as well as geographical size—matter for economic growth or for economic reform?

### **The Economics of Borders**

Most economic analysis takes political structures as given and asks about the role of economic policies within the given boundaries. Virtually all the proposals on economic reform in socialist economies examine the appropriate pace of privatization, price liberalization, and the opening of the economy, but none asks about the advantages of different forms of political devolution. Even our own reform plan, prepared for the Soviet Union before the August coup, tiptoed around the redistribution of political power, as did most of the other plans, such as the joint report of the International Monetary Fund, World Bank, Organization for Economic Cooperation and Development, and European Bank for Reconstruction and Development.<sup>2</sup>

#### *The Boundary Irrelevance Proposition*

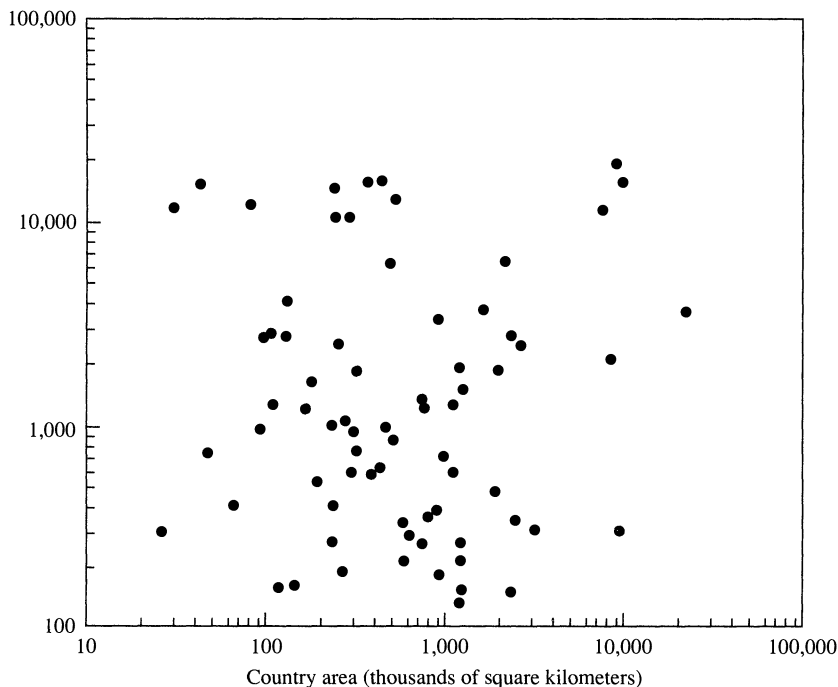
According to the neoclassical theory of political boundaries, the exact form of the boundaries between nations is intrinsically unimportant for long-run economic performance. The precise proposition is that the average income in a region is, to a first approximation, unaffected by the placement of boundary lines in that region. From an analytical point of view, this proposition rests on standard neoclassical analysis and applies strictly to a nonmonetary economy characterized by perfect competition, private ownership of all commodities, free trade, and no income redistribution by the government. In other words, if we examine a standard general equilibrium model with free trade, the outcome (in terms of prices, incomes, and outputs) is independent of whether the different commodities are identified as American, Soviet, Russian, or Kirgiz.

We know of no test of the proposition that borders are irrelevant, but a simple one would be to examine the effect of national size on per capita

2. See International Monetary Fund and others (1990, 1991).

**Figure 1. Irrelevance of Borders: Country Size and 1987 Income**

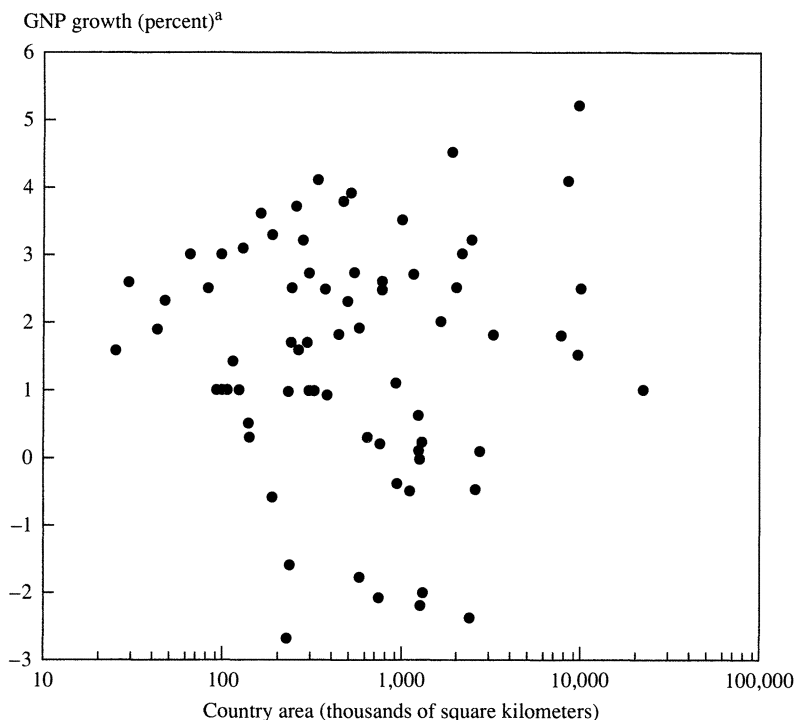
Per capita income (1987 U.S. dollars)



Source: World Bank, *World Development Report 1990*; Central Intelligence Agency, *World Factbook 1990*; and adjustments by authors reflecting recent data in Akerlof and others (1991) and Nordhaus (1990).

output and on economic growth. Suppose that national boundaries are randomly drawn, or drawn relative to some characteristic only partly economic, such as the marriage patterns of the Hapsburgs. Further assume that the tendency of migration to equalize economic performance is incomplete. We could then examine the causal relationship between a nation's area and its economic performance.

The two figures show the relationship between country size and per capita gross national product in 1987 (figure 1) and between country size and the growth of per capita GNP from 1965 to 1987 (figure 2). The data set we use contains 74 countries—all the countries contained in the World Bank's compilation of countries, augmented with data from Eastern European countries. The major omission in this data set is countries with a population of less than one million.

**Figure 2. Irrelevance of Borders: Country Size and Income Growth**

Source: See figure 1.

a. GNP growth is the annual growth of per capita GNP between 1965 and 1987.

The clear message of both figures is that the breadth of boundaries has no clear association either with recent growth rates or with longer-term growth as represented by the terminal level of per capita income. Formal cross-sectional regression analysis of the relation can be expressed,

$$Y = c_1 - 0.049A, \quad R^2 = 0.003; \\ (0.107)$$

$$g = c_2 - 0.083A, \quad R^2 = 0.006; \\ (0.129)$$

where  $Y$  is the log of per capita GNP in 1987 American dollars,  $A$  denotes the log of country area in thousands of square kilometers,  $g$  is the growth in per capita GNP from 1965 to 1987, and  $c_1$  and  $c_2$  are constants. There

is clearly more to borders than the size of countries, but it is striking how little relationship there is between size and performance.

In reality, economics is more complicated than the competitive, free trade, nonmonetary, general equilibrium model suggests. Realistic features—trade barriers, fiscal and monetary policies, and government regulations—will lend importance to borders. For example, trade barriers are a clear exception to the border-irrelevance proposition, for they act, in effect, as “negative railroads” by introducing private transportation costs among nations. Government stabilization policies also violate the border-irrelevance proposition when there are strong nonlinearities in the response of the larger aggregates to differing national policies. In addition, we know that there are economies of scale in a common currency—a feature that many Western Europeans today believe to be an important reason for European integration.

The most important economic consequence of boundaries, however, lies in their effect on government monopolies (where monopoly is used in the broad sense of monopoly on collective choices). It is often said that within the United States the states are laboratories for experiments. In the same vein, multiple nation-states allow for constructive competition among them on alternative ways of organizing industry, privatizing inefficient state enterprises, conducting monetary and fiscal policies, testing incomes policies, running manpower policies, along with many other features of a modern welfare state.

Moving outside of economics proper, the border-irrelevance proposition also will be violated if people or nations begin to care about their borders or about the resources on the other side of them. Almost every international conflict has started with a dispute over territory. In this sense borders are definitely relevant, and, as the Kuwaitis and Iraqis most recently learned, such disputes can bear the seeds of economic catastrophe. Proliferation of nations also allows proliferation of armies and, perhaps the most worrisome side of the Soviet breakup, potential proliferation of nuclear arsenals.

### *The Breakup of the Austro-Hungarian Empire*

In this century many empires have fallen apart—the far-flung British empire, the only somewhat smaller French one, the mini-empires of the Netherlands, Portugal, and Italy. Both Germany and Russia have crum-

bled or been dismembered twice. It is the dissolution of the Austro-Hungarian empire in 1919, however, that provides the closest parallel to the likely events in the Soviet Union. Like the USSR, it was composed of diverse nationalities, encompassing present-day Austria, Hungary, the Czech and Slovak Federal Republic, and parts of Poland, Yugoslavia, Romania, Ukraine, and Italy. Also like the USSR, this empire was a single economic unit of adjacent territories with a single currency. Austria-Hungary had a hub-and-spoke transportation system with Vienna and Budapest serving as hubs, as Moscow and St. Petersburg do in the Soviet Union. The breakup itself took only a few months, following the end of World War I, with a speed that may be comparable to that of the Soviet Union.

With nationalism a strong force, independence balkanized the free trade area of the Austro-Hungarian empire. Tariffs, exchange controls, and separate currencies were soon established, with damaging results:

Austria was left with sufficient spinning mills and finishing works, but too few looms. At the same time Czechoslovakia, where the weaving mills were located, gave protection to an infant spinning industry, and so cut off the natural outlet for Austrian yarn. Austria's famous tanneries lost their sources of skins and tanning materials; her Alpine iron works their coal—about half of the old coal fields having gone to Czechoslovakia and Poland. Czechoslovakia contained a high proportion of the old Austrian industries, but not a population large enough to absorb their products. Hungary's great flour mills lost both their sources of supply and the markets for their products.<sup>3</sup>

Before the breakup, the empire was doing well. Between 1870 and 1913, it boasted an annual growth rate of real per capita GNP lower only than those of Germany, Sweden, and Denmark in Europe and well above those of the United Kingdom and France.<sup>4</sup> By contrast, during the interwar period an independent Austria languished; its real GNP in 1937 was 9 percent below its 1913 level. Hungary and Czechoslovakia had annual growth rates of per capita GNP between 1913 and 1937 that were two-thirds that of the empire.<sup>5</sup> It is chilling to note that all five countries associated with remnants of the Austro-Hungarian empire had major inflations. The table shows the percent increase in prices in the post-World War I period:<sup>6</sup>

3. Mitrany (1936, pp. 172–73).

4. Good (1984, p. 238).

5. The figures were calculated from data in Mitchell (1980, pp. 819, 820, and 822).

6. Lewis (1949, pp. 23, 32).

<i>Country</i>	<i>Price increase</i>
Austria	1,400,000
Hungary	2,300,000
Yugoslavia	990
Romania	4,100
Poland	250,000,000

The problem was not the breakup of the empire per se but the dissolution of the large free trade area and the loss of control over banking and fiscal institutions. Clearly, one can have a free trade area without an empire. That is perhaps what Keynes had in mind in 1919 when he proposed a free trade union for Europe so that

some part of the loss of organization and economic efficiency may be retrieved, which must otherwise result from the innumerable new political frontiers now created between greedy, jealous, immature, and economically incomplete nationalist States. Economic frontiers were tolerable so long as an immense territory was included in a few great Empires; but they will not be tolerable when the Empires of Germany, Austria-Hungary, Russia, and Turkey have been partitioned between some twenty independent authorities.<sup>7</sup>

### **Reform Proposals before the Coup Attempt**

Along with a number of other economists, we three endeavored, starting in December 1989, to put together a reform proposal for the Soviet Union.<sup>8</sup> The unraveling of its empire after the coup of August 1991 means that economic reform will now come primarily from the republics. This raises the question of how the shift from the union to the republics changes our reform plan and other union-directed plans. As a preliminary to that inquiry, we restate the five major elements of the reform plan we submitted to the union government.

—*Deregulate prices.* Firms must be permitted to set prices freely at profit-maximizing levels. This will bring goods out of the shadows of the second economy and will mean goods are sold in the front of the store rather than illegally out the back door. Moreover, price deregulation will eliminate the need for most enterprise subsidies, since firms will no

7. Keynes (1920, p. 266).

8. See Peck and others (1991). The group was organized by the International Institute for Applied Systems Analysis in Laxenburg, Austria.

longer be able to point to an irrational price system as justification for state assistance. This will contribute significantly to eliminating the state budget deficit. Enterprise subsidies were estimated at 132 billion rubles in 1989, 13.5 percent of gross domestic product and about one-and-one-half times the estimated budget deficit of 8.5 percent of GDP. It is this budget deficit, financed primarily by money creation, that has led to an uncontrolled growth of the money supply. The resultant “ruble overhang”—large cash and bank balances in the hands of households and enterprises—has frightened Soviet reformers away from price deregulation, since they see deregulation as threatening hyperinflation. But an uncontrolled growth of money and prices is possible only with a large and growing budget deficit, something that freeing prices by eliminating the need for enterprise subsidies would make less likely.

—*Corporatize state enterprises.* Although privatization is the ultimate goal, it is hard to imagine how the 46,000 large and medium-sized Soviet state enterprises could be sold off in a short period, though the 760,000 small-scale shops, service firms, and the like lend themselves to immediate privatization.<sup>9</sup> Even if the shares in the larger firms were given away to the entire population of a republic, these enterprises still will need to be managed in the interim by some organization. We recommend “corporatization”—establishing republican Property Management Agencies (PMAs) that would act as majority shareholders, exercising that control over managers necessary to maximize the long-run profits of the firm. Enterprises would be self-financing and managerially independent. PMAs could be established and the ownership of state assets transferred to them very quickly, say in a month. They might function in ways similar to Western mutual funds.

We think it important to have independent and self-financing enterprises in place to respond to price deregulation. Privatization, even of the simplest kind, is too slow to create such firms. In the Czech and Slovak Federal Republic, the coupon system of giving away shares to citizens involved an 18-month preparation time and encompassed only 1,500 firms. We stress, however, that privatization should be the ultimate goal and that corporatization is a first step in that process.

—*Stabilize government spending.* Given the ruble overhang created by past increases in the money supply, a one-time jump in prices upon

9. *Transition to the Market* (1990, p. 53).



deregulation is inevitable. Yet, if the budget deficit is eliminated or substantially reduced, this jump will not necessarily produce a hyperinflation. By eliminating enterprise subsidies, price deregulation will facilitate deficit stabilization, though there are other obvious candidates for expenditure cuts, such as military expenditures. A restrictive monetary policy is also important to establish the credibility of the ruble, thereby making it convertible both domestically and on international foreign exchange markets. And, with the exception of those unable to work, indexation of wages, incomes, and benefits should be avoided.

—*Moderate the costs of unemployment.* An effective reform plan will mean that many Soviet workers will lose their jobs. The end of enterprise subsidies will mean bankruptcy for some firms, and the workers of these enterprises will be forced to find other employment. A minimal unemployment compensation system is essential to support workers until they relocate.

—*Open the economy.* Some have argued that this measure can wait for a later stage of the transition period and that ruble convertibility is not essential at the start of the process. We disagree, because trade liberalization and price deregulation support one another. The existence of a large number of monopolies in the Soviet domestic market means that foreign competition will serve as the primary brake on price increases for many goods. Further, imports of relatively high quality should provide a work incentive for domestic workers, since rubles, albeit a lot of them, could purchase these goods.

These measures all support one another. They form a consistent plan, requiring the simultaneous adoption of all five. If taken up singly or over time, they will suffer the fate of the halfway reform measures of the past six years. Adopted quickly as an integrated plan, they give the best chance to stem the current economic decline and provide a basis for economic growth in the future.

These, then, were our proposals to a union government in 1990. Since then some significant changes have occurred. An unemployment compensation system has been established. Prices have been increased significantly by administrative action in April 1991, and 40 percent of goods were freed of central controls. But existing price controls continue to preclude a market system. The deficit has worsened to an estimated 20 percent of GDP and is financed by printing rubles. Viktor Gerashchenko, head of the central bank, has reported to President Mikhail Gor-

bachev that the "Soviet Union is standing on the brink of financial collapse."<sup>10</sup> Enterprises have become partially managerially independent by ignoring governmental directives but still lack the control an owner would exert and continue to collect state subsidies.

### **Economic Reform with Fuzzy Borders**

The above plan, devised between December 1989 and November 1990, largely sidestepped the thorny issues of political structure. Today, economic reformers must consider the issues of political and economic federalism. The question we consider in this section is how our earlier reform plan applies to the new situation with its different agglomerations or fragments of Soviet republics. Do borders matter for reform proposals?

#### *Reform in a Fragmented Union*

Whether economic reform is carried out by the union or by the various republics, it must include price deregulation. With the exception of natural monopolies, continued price regulation is simply inconsistent with enhanced economic efficiency, at any level of economic or political sovereignty. Indeed, price deregulation becomes even more necessary at the level of an individual republic if it is carried out in adjacent republics. Moreover, the case for transitional price controls, designed to protect domestic consumers and producers from a one-time shock upon price deregulation, is even weaker at the republican level, for these units are less likely to have the full range of supply possibilities available at the union level. For instance, holding the price of oil below its equilibrium level will not help a non-oil-producing republic like Armenia, since the Russian oil can be sold elsewhere at a higher price.

Property rights must be assigned at an early stage of the reform, at either the central or the republican level. Indeed, the collapse of the center may simplify reform measures by removing the union as an important claimant on the title to state enterprises. Nevertheless, it makes sense for a republic as well as for the union to corporatize state assets, remov-

10. Frances X. Clines, "A Bleak Economy Dims Soviet Hopes for a Free Market," *New York Times*, September 9, 1991, p. A1.

ing them from direct subordination to branch ministries at the union and republican levels. Privatization—which entails sorting out the claims of the workers, the management, local governments, the republican government, the union government, and perhaps even those whose property was expropriated decades ago—will be time consuming and difficult. Corporatizing state firms, however, will clarify the managerial hierarchy at any level of jurisdiction.

No effective economic reform is possible unless fiscal discipline is restored at all levels of government. As long as there is a single Soviet central bank and a common currency, investors will be reluctant to hold either republican or union debt, and the power to enforce this hard governmental budget constraint will rest entirely with Gosbank. The Yugoslavian crisis foreshadows the consequences of multiple central banks with a single currency. If there are independent republican central banks and republican currencies, each republic will need to avoid a deficit and an escalating money supply. Otherwise they will have the inflation and deteriorating exchange rate that the union has experienced.

It seems likely that the different resource bases of the union, republics, autonomous republics, and even oblasts will produce economic and political dislocations in the transition to a more decentralized political regime. The Russian republic has a great wealth of natural resources, including oil and natural gas, whereas some of the smaller central Asian republics have very little. The latter will thus have more limited tax bases and will be less able to protect their populations against the vicissitudes of the transition period. This consequence of the collapse may not seem fair to the poorer regions, but it does not change the basic fact that governmental budget deficits create inflation and not goods.

Finally, when compared with the former Soviet Union, the smaller republics have even more reason to be open to the world economy. Many products they previously acquired within the union will now become imports, making tariffs on them costly in the short run. The monopoly problems they face will be even more severe, making foreign competition especially useful in holding down domestic prices. The Russian republic, by contrast, may have market power in several commodities, particularly in natural resources. Russia might be tempted to exercise its market power through import or export tariffs or quotas, although on the whole this seems unwise given the need to align prices with realistic social costs.

In broad brush, then, the logic of economic reform holds at various levels of government. That should not be too surprising, though, for the standard prescriptions for ailing economies differ little between large and small countries.

### *The Monopoly Problem*

The next major concern we consider is that the industrial structure of the Soviet economy is extraordinarily centralized. Soviet planners have treated the union as one economic unit and have made their investment decisions on that basis for decades. The result is a geographically intertwined economy with substantial interrepublican trade. Table 1 shows the ratio of interrepublican exports to the net material product of the republics. All are dependent on other republics for their export markets, and the corresponding imports provide them with intermediate and final goods. The Russian republic is the least dependent on the others, reflecting its large population and geographical diversity. Surprisingly, although the degree of external openness of the Soviet Union is low, the internal interdependence of the republics is relatively high and reflects more than geographical propinquity. Interrepublican trade was 21 percent of Soviet GDP in 1988, whereas European Community trade, both among members and the rest of the world, was about 14 percent of GDP.<sup>11</sup>

Table 1 also shows the balance of trade among the republics. At domestic prices, trade is in rough balance for each of the republics. But the picture changes radically if the trade balances are restated in world prices: the Russian republic has a substantial positive balance; all but one of the remaining fourteen republics have a deficit. This dramatic change reflects a domestic price of oil that is only a fraction of the world price<sup>12</sup> and the position of Russia as the world's largest oil producer, with more than 90 percent of Soviet oil production.<sup>13</sup>

Borders definitely matter when it comes to republics collecting royalties on natural resources. Although oil is the product that is most underpriced and in which Russia is most dominant, the republic does well in

11. IMF and others (1991, vol. 1, pp. 193–94).

12. As of late August, gasoline in St. Petersburg was selling at 0.4 ruble a liter, equal to \$0.045 a gallon at the tourist exchange rate.

13. IMF and others (1991, vol. 1, p. 212).

**Table 1. Interrepublican Trade in the Soviet Union, 1987–88**

	<i>Exports, 1988 (percent of net material product)</i>	<i>Trade balance, 1987 (billions of rubles)</i>	
		<i>Valued at domestic prices</i>	<i>Valued at world prices</i>
USSR	29.3	...	...
RSFSR	18.0	3.6	28.5
Ukraine	39.1	1.6	–3.9
Belorussia	69.6	3.1	–2.2
Estonia	66.5	–0.2	–1.1
Latvia	64.1	–0.3	–1.4
Lithuania	60.9	–0.4	–3.3
Moldova	62.1	0.6	–1.5
Georgia	53.7	0.6	–1.5
Armenia	63.7	0.6	–0.3
Azerbaijan	58.7	2.0	0.2
Kazakhstan	30.9	–5.4	–6.6
Turkmenistan	50.7	–0.3	...
Uzbekistan	43.2	–3.9	–4.5
Tadzhikistan	41.8	–1.1	–1.4
Kirgizia	50.2	–0.5	–1.0

Source: International Monetary Fund and others (1991, vol. 1, pp. 225, 227).

other key resources, with 77 percent of the Soviet Union's natural gas, 55 percent of the coal, and 44 percent of the iron ore.<sup>14</sup>

The infrastructure of the Soviet Union is also designed for an interdependent economy. Railroads and airlines follow a hub-and-spoke pattern around Moscow and St. Petersburg. Telecommunications is the extreme example of centralization and interdependence: the international telephone transit center in Moscow, with a capacity of 800 outgoing calls at any one time, handles all the international calls of the present union.<sup>15</sup> Many Soviet institutions, from the university system to science establishments, have been organized primarily on an all-union basis.

Soviet central planners consciously developed a monopolistic economy. This reflected both their view that competition was wasteful and a naive belief in the existence of economies of scale matched only by college freshmen and Lenin, who saw socialism as one giant factory. The

14. IMF and others (1991, vol. 1, pp. 212–13).

15. IMF and others (1991, vol. 3, p. 128). For reference, Yale University can handle 1,226 outgoing calls at one time.

**Table 2. Business Concentration, Soviet Union and the United States**  
Percent

<i>Market share</i>	<i>Soviet product groups: share of single largest producer, 1988</i>	<i>U.S. industries: share of four largest producers, 1982</i>
0-50	39.2	72.6
50-75	24.1	21.3
75-100	36.6	6.1

Sources: Peck and Richardson (1991, p. 65). The table shows the percentage of product groups and four-digit industries according to the shares of total output counted by the single largest and four largest producers, respectively. The Soviet column does not add to 100 because of rounding error.

result has been to make the Soviet economy the most concentrated of any large economy. Table 2 compares enterprise concentration in the Soviet Union to that in the United States. The difference is dramatic. In more than one-third of product groups, a *single* Soviet enterprise accounts for between 75 and 100 percent of total output; in only one-sixteenth of American four-digit industries do the *top four* companies account for a comparable percentage.

Such is the legacy the central planners have left for economic reform. The question here is, does the monopoly problem change if the union becomes fifteen republics? It may make little difference initially whether or not the republics are a free trade region among themselves. Consider the case of filter cigarettes, produced for all of the Soviet Union by a single enterprise in Armenia. With free trade, that enterprise can still extract monopoly profits from smokers throughout the Soviet Union. If the other republics impose tariffs on filter cigarettes, they may be able to capture some portion of the monopoly profits that would otherwise flow to the Armenian enterprise, but at the cost of raising prices to consumers.

The primary solution to the monopoly problem lies in the classical process by which monopoly profits in the long run attract competitors. It is at this point that the question of whether the present Soviet Union is a free trade area or not becomes crucial. Would a new Moldovan producer of filter cigarettes have a unionwide market of 288 million people or just the 4 million people in Moldova? Obviously a larger market would make entry more profitable. Of course, a new entrant might still be able to sell cigarettes unionwide despite tariff barriers, but these barriers would reduce the entrant's profitability.

One can expect competition from outside the Soviet Union to check the present monopolies, but firms located within the union boundaries are a more effective source of competition because they will have lower transportation costs and cultural barriers. This is so particularly if the union remains a free trade area. We conclude with the fundamental proposition that breaking up the present continental market through trade barriers will make monopoly not just a transitional problem but a persistent one.

Borders matter because monopoly matters. One-third of the immediate gain estimated by the EEC's Commission for Europe 1992 (1.6 percent of GDP) comes from competition effects on *x*-inefficiency, and the commission sees further long-term gains from the increased innovation that greater competition can promote.<sup>16</sup> The cost of monopoly must be many times that for the Soviet Union, given its very high level of enterprise concentration. In addition, monopoly shows up more in the poor product quality and the low level of innovation of Soviet enterprises than in their current production costs.

If the republics band together as a free trade area, the breakup of the union would not worsen the monopoly problem, though there is one caveat. One of the pre-coup reform plans, the Shatalin Plan, proposed an aggressive antitrust policy that now is likely to be implemented by the republics. The record in Europe, however, is that anticompetitive policies for export industries tend to be sanctioned on the logic that the exploitation of consumers abroad serves the national interest whereas milking domestic consumers (and voters) does not. Similarly, the Webb-Pomerene Act sanctions the formation of export cartels by U.S. firms that would be illegal domestically.

Republican antitrust policy, then, may be less vigorous than a union policy, particularly in the smaller republics. There is considerable controversy in academic circles as to how much of a difference antitrust policy can make to economic performance, but these debates are in the context of an established market economy. It seems likely antitrust policy will be more significant in an economy in which government policy has promoted monopoly for decades.

Antitrust policy provides one example of how borders may shape public policy. Larger governmental units may have less of a tendency to

16. Peck (1989, p. 279).

devise policies that help producers at the expense of consumers, simply because less of their production is exported. This may explain why the central authorities in the European Community are increasingly active in promulgating competition policy, developing product standards, and limiting the use of subsidies and tax concessions, often in opposition to national governments. Conversely, in the United States, states and localities are devoting increased levels of business subsidies and tax abatements to attracting firms.

### Marketization through Decentralization

In considering the role of political structures, we must also consider the role of political competition and emulation among different political jurisdictions. In the Soviet context, the possibility of devolution of power from the center to the republics was a central part of the Shatalin, or 500-Day, Plan.<sup>17</sup> Ironically, the Shatalin Plan foreshadowed a redistribution of power from the union to the republics that closely resembles the actual redistribution that appears to be taking place in the post-coup shakedown. It seems likely to us, particularly given the prominence of economic reformer Grigory Yavlinsky in the current union and in the Russian councils, that the 500-Day Plan will serve as a blueprint for reform.<sup>18</sup>

In analyzing the plan, most observers have held that the primary purpose was simply to transfer power and resources from the center to the republics. We wondered whether there was perhaps a more subtle purpose as well. In transferring power away from the central authorities, with their monopoly over pricing, allocation, and other economic decisions, it seems likely that the forces of competition would be strengthened. The reason behind this is a factor we call *marketization through political decentralization*.

Marketization through political decentralization means the tendency of governments to change arrangements by which outsiders can realize arbitrage profits from subsidies or other government programs. In the traditional Soviet-type system, there were heavy subsidies on foodstuffs

17. *Transition to the Market* (1990).

18. A preliminary version of the reform plan proposed by Yavlinsky and others appears to use the 500-Day Plan as a point of departure.



and energy. As long as the borders were closed and trade carefully controlled, the possibilities for arbitrage were limited. When borders opened up and the empire collapsed, the old system of subsidies on tradable goods was no longer viable. For example, after the departure of the Eastern European countries from the Stalinist system, the pressure to raise the prices on tradables was irresistible. Czech bread prices were raised to keep middlemen from buying bread in Prague to sell in Vienna.

We expect that the same forces will begin to operate once the republics become autonomous economic entities, even before their economies are completely privatized or prices deregulated. As republics become free to make their own decisions, they will be unwilling to provide tradable goods at a great discount to other republics when they can sell them for enormously scarce hard currencies on the world market. As one republic begins to revalue goods and try to sell at world prices, others will follow suit either out of pure economic interest or out of spite and revenge. This process will work more smoothly for standardized commodities (like oil) and will be accelerated to the extent that there is a functioning currency and external borders open to international trade.

We aver that the hypothesis of marketization through decentralization is largely a theoretical possibility, and we have no evidence that the authors of the 500-Day Plan actually had this in mind when they wrote their blueprint. Nevertheless, we can point to two pieces of recent evidence to suggest that it may be an important factor in speeding market forces. The first is the reaction of countries to the breakup of the Soviet empire in 1989–90. Shortly after the Eastern European countries regained their autonomy, they announced they would only accept hard currency for part of their exports; in response, the Soviet Union raised oil prices to Eastern European countries. A second example came in the tussle about grain and meat prices in 1990. Following the Ryzhkov government's announcement in May 1990 that increased agricultural procurement prices would take effect in January 1991, farmers began to withhold deliveries to the state in anticipation of the higher prices. Boris Yeltsin, who in mid-summer of 1990 became the president of the Russian parliament, announced in September 1990 that the Russian government would begin paying the higher prices immediately. This led to the desired deliveries by Russian farmers as well as by Ukrainian farmers. Ukrainian officials, unhappy that Russian stores were filling with Ukrainian chickens, then banned the export of meat from Ukraine. The

Russian government is then said to have banned the export of oil to Ukraine. At that point, the potential trade war forced the union government to introduce the new agricultural procurement prices for the entire nation ahead of schedule on October 1, 1990.<sup>19</sup>

Even without the disintegration of central economic authority, the Soviet Union faces mounting macroeconomic problems: the government budget deficit is unsustainably large, incomes are rising much more rapidly than output, there is open inflation estimated to exceed 100 percent in 1991, repressed inflation continues, and there is a flight from the ruble. If the projections of the decline in output are realized, the Soviet Union is heading into the equivalent of the Great Depression.

Although the breakup of empire may, as we just argued, be a healthy spur to the transition to the market, the macroeconomic path seems more perilous, particularly with respect to monetary management. Until recently, Soviet consumers had a strong faith in the stability of the ruble. With the recent inflation, the proliferation of local coupons and quasi-currency schemes, such as that in Ukraine, and the penetration of foreign currency,<sup>20</sup> the quality of the ruble as the standard of value is quickly eroding.

The monetary prospects are somewhat different for the central republics than for the peripheral ones. There will probably be a large ruble zone that will encompass Russia and, perhaps, Belorussia and Kazakhstan—call this the “central zone.” If only these three republics join the common currency zone, this will account for 61 percent of the USSR population and 70 percent of national output.<sup>21</sup> If Ukraine joins, these figures will be 79 percent and 86 percent, respectively.

For the central zone, the monetary prescriptions are basically orthodox. Because the government has virtually no nonmonetary liabilities to the private sector, monetary control requires reducing the budget deficit

19. Bill Keller, “Malevolent Boomerang Rules Soviet Economy,” *New York Times*, October 22, 1990, p. A8; Åslund (1991, p. 38); Aven (1991, p. 203).

20. According to Soviet experts reporting in mid-1990, there was relatively little “dollarization” or use of hard currencies as either assets or means of transaction. We received unofficial estimates from banking experts of the dollar balances of the Soviet population being around \$0.4 billion. Estimates in the Shatalin Plan indicated that \$2 billion in hard currency was in circulation, which at the highly undervalued tourist exchange rate of 32 rubles to the dollar would be about two-thirds of M2. At a more realistic purchasing-power-parity exchange rate of 3 rubles to the dollar, the value of foreign currencies would appear to be modest.

21. IMF and others (1991, vol. 1, pp. 204, 214).

substantially. This is no easy task given the massive government budget imbalance in the Soviet Union today—the cash deficit is somewhere between 10 and 20 percent of GNP. Democracies without a strong and unified government are also not known for their iron budget discipline. In addition, because of the likelihood of substantial price increases when prices are liberalized, the government must be wary of the *Tanzi effect*, which occurs if the real value of taxes falls more sharply than the real value of spending when prices rise. Virtually all Western and Eastern reform plans recognize the need for budget discipline if monetary stability is to be achieved.

The more difficult decisions pertain to the “independent” republics: should they print their own currency rather than cast their lot with what they see as the worthless (and, not to be ignored, largely Russian) ruble? Although adopting one’s own national currency is no less seductive than having a national airline, it is a perilous course. These countries have no foreign exchange,<sup>22</sup> and they are likely to inherit substantial foreign indebtedness. It is instructive to note that many of the hyperinflations of this century have taken place in the remnants of decaying or dismantled empires. If the republics choose to issue their own currencies, they must establish the necessary confidence to attain monetary stability. Without balanced budgets or substantial hard currency reserves, it is hard to see how the new republics can establish confidence in new crowns (Estonia), lats’ (Latvia), and hryvnas (Ukraine).

A worrisome feature of the disintegrating empire is the need to coordinate the replacement of the “imperial ruble” with a new set of currencies. It seems likely that at least four new countries (the Baltics and Ukraine) and currencies will emerge quickly. These countries will need to fashion a monetary reform to replace the ruble holdings and financial assets and liabilities of their citizens and firms. If the monetary reforms are not coordinated, the potential for speculation is substantial as people send their rubles to the republics that appear to offer the best conversion. Republics that have retired their citizens’ rubles will be tempted to spend the rubles in the shrinking ruble zone, increasing the ruble overhang. The temptation to erect border controls will increase when republic A tries to spend its retired rubles to buy vodka in the stores of republic B before B’s currency reform. The last republic to reform will be holding

22. According to press reports, the Lithuanian government has enough foreign exchange to purchase just a few hours of its oil consumption.

the bag of worthless rubles. This sure recipe for hyperinflation seems to have occurred to Yeltsin, who on October 15, 1991, called for the creation of a new, blue, white, and Russian red ruble.<sup>23</sup>

The nightmare of a hyperinflation produced by uncoordinated monetary reforms suggests that reform of the currencies, coordinated among the republics, should be at the top of the economic agenda.

## Conclusion

Do borders matter? Of course they do. While the logic of economic reform is relatively robust to whether reforms are carried out by the union or the republics, political structures do matter for some aspects of governance. Economic activity is among the first casualties in inter-ethnic or interrepublican strife, as the recent events in Yugoslavia so starkly demonstrate. With approximately a hundred nationalities divided into fifteen union republics, twenty autonomous republics, eight autonomous oblasts, and ten autonomous okrugs, the Soviet Union has an awesome potential for strife and violence.

The major way that political structures are likely to affect economic performance is when they produce trade barriers, investor hesitancy in the face of uncertainty, and changes in laws and regulations as regimes change. But the intrinsic importance of borders is often overestimated. One is tempted to tell republican and union leaders that it does not much matter how governance structures are established as long as they are done so with determination. The lesson was well stated by Keynes in *The Economic Consequences of the Peace*:

In a regime of Free Trade and free economic intercourse it would be of little consequence that iron lay on one side of a political frontier, and labor, coal, and blast furnaces on the other. But as it is, men have devised ways to impoverish themselves and one another; and prefer collective animosities to individual happiness.<sup>24</sup>

23. Radio Free Europe/Radio Liberty, *Daily Report on the Soviet Union*, No. 193, October 16, 1991.

24. Keynes (1920, p. 99).