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Postwar Russian Economic Growth: Not a Riddle*

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Abstract

In a recent article Steven Rosefielde has argued that (1) according to the best available statistics the postwar growth of Russia under the command system was surprisingly good (2) economic theory requires that nonmarket systems must fail by comparison with market economies (3) the statistics are therefore at fault: they “lied and were misconstrued” by western “statistically oriented comparativists”. I suggest that proposition (1) misreads the facts while (2) misreads the theory; therefore, (3) must fall. I find no riddle in Russian economic growth.

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Postwar Russian Economic Growth: Not a Riddle

In a recent article Steven Rosefielde (2003) has advanced three propositions. He suggests that according to the best available statistics the postwar growth of the Russian economy under the command system was surprisingly good; in fact, he argues that it was *too good*. The standard for this judgement is economic theory, which holds that nonmarket systems must fail by comparison with market economies; Rosefielde associates specifically this view with the “Washington consensus”. He concludes that it is the statistics that are at fault: they “lied and were misconstrued” by western “statistically oriented comparativists” in a way that was unduly favourable to the command system.

In this comment I argue that Rosefielde has misread both the facts and the theory. There is no riddle in the statistics. His conclusion, therefore, must fall.

The Statistics: Soviet and Russian Economic Growth

Rosefielde begins by setting forth “an authoritative statistical profile” of real GDP growth of the Russian economy from 1961 to 1990, which he sets beside existing CIA real growth measures of Soviet economic performance. In the course of his remarks he evaluates this profile as “inferior to Japan’s post-war record, and the potential suggested by Russian’s relative backwardness” but “modestly better than America’s and Europe’s performance over a similar time span, and astonishingly superior to anything that could have been expected according to the dictums of liberal market theory often called the ‘Washington Consensus’.” It is this, the divergence between the best available statistics and theoretical expectations, that leads Rosefielde to conclude that the statistics lied.

I have no doubt that Rosefielde and I are at one on the following: we should reject bad statistics, that is those that have been severely corrupted by fabrication and distortion. Russian and Soviet statistical sources present us with many bad figures that both of us will find unacceptable. Some figures, however, may be less bad and the question is what we should do with those. Many observers, including myself, have argued that if we are careful to define and understand them we can do something with them. This was the philosophy of the “Bergson school” and the CIA. In contrast Rosefielde has argued that the figures are *all* corrupted beyond redemption. In particular he finds that the strenuous attempts of the CIA and others to correct for hidden inflation were inadequate and were perhaps doomed to fail.¹ When the best figures have been cleansed to the greatest possible extent, he argues, the story that they tell is still one that we should reject because it remains at odds with the prior expectations of the economic theory of market and non-market systems.

This raises two issues. First, has Rosefielde read all the figures, and read them correctly? I will argue that the best figures, properly selected and contextualised, tell a story of Russian and Soviet economic performance that is not unduly favourable to the command system. Secondly, if the figures and the theory remain at odds, why conclude that the figures are wrong rather than rethink the theory? I will argue that the figures merely support some useful extensions to economic ideas that are already rather widely accepted.

Rosefielde claims that, if a new “authoritative statistical profile” is to be believed, the Russian economy outperformed both America and Europe from the 1960s through the 1980s. This claim appears to be wrong or incomplete. To support it Rosefielde reports four alternative GDP series for Russia but I will consider only the most modest of them: his “variant D”, a chain index of total output aggregated with current

composition weights, and adjusted to the maximum extent possible for hidden inflation in subseries. He describes variant D as “a ‘fuzzy’ lower bound assuming that the quality of some Russian goods improved.” Then, if it is indeed the lower bound on what may be measured statistically when all but the least corrupt figures have been purged, its plausibility is a strong test of the degree of corruption of Soviet and Russian statistics in general.

Variant D is not, however, the lower bound it claims to be. Table 1 compares variant D with CIA series for real GDP at factor costs of 1970 and 1982.² Since the Russian population grew more slowly over the period than the USSR population by approximately half a percent, and given the advantage of the Soviet command system in mobilisation that we both acknowledge, comparisons should be based on figures for GDP per head rather in aggregate. When all figures are adjusted for population and measured over comparable periods we see that the CIA was able to identify and remove substantially more statistical distortion than Rosefielde.

Table 1. Real Growth of Gross Domestic Product Per Head: Russia, USSR, USA, and Western Europe, 1961 to 1990 (per cent per year)

	1961-70	1961-80	1961-90
Russia from Rosefielde, variant D	4.3	3.4	2.4
USSR from CIA (1982)	3.8	3.0	...
USSR from CIA (1990)	3.5	2.5	...
USA from Maddison (1992)	3.1	2.6	2.5
Western Europe from Maddison (1992)	3.7	3.1	2.7

Sources: Russia, variant D: chain Laspeyres index aggregated with current composition weights, adjusted for hidden inflation in subseries, from Rosefielde (2003), 470, further adjusted for Russian population from Goskomstat (1998), 32-3, converted to a mid-year basis. USSR: GNP by sector of origin at 1970 factor cost from CIA (1982), 53-4, and at 1982 factor cost from CIA (1990), 54, both adjusted for USSR population from Maddison (1995), 110-11. USA and Western Europe (Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden, Switzerland, and United Kingdom): GDP per head in 1990 Geary-Khamis dollars from Maddison (1995), 228.

Rosefielde proposes that economic growth in the United States and Europe should be the standard of plausibility for Soviet and Russian growth rates but provides no figures. Table 1 further compares Rosefielde and the CIA for GDP per head of Russia and the USSR with Maddison on the United States and western Europe. The table confirms that on the statistical measure of variant D Russia outperformed Europe and America up to 1980. But on the updated CIA measure of GNP at 1982 factor costs the USSR was falling behind the United States from 1970 and behind Europe continually throughout. Its statistical performance was mediocre, not surprisingly good.

Another standard of comparison is similarly revealing. Consider the performance of market economies that began from income levels similar to the Soviet Union in 1961 and therefore faced similar opportunities for catch-up growth. Maddison (1995) fixes the Soviet Union’s GDP per head in that year at \$4,088, measured in Geary Khamis units of 1990. If we look for other countries that had a income level in 1961 at the Soviet level plus or minus 15 per cent we find three in Europe: Greece, Spain, and Ireland. Over the period to 1980 all three outperformed the Soviet Union with annual growth rates of GDP per head of 5.2, 5.0, and 3.1 per cent respectively. Looking to Asia we find Japan, which outperformed them all with 6.0 per cent; in South America we find the only market economy to fall below Soviet standards from

a comparable starting point, that of troubled Chile which turned in only 1.4 per cent. This evidence supports an evaluation of Soviet economic growth as a story of slow growth and missed opportunities, not of perplexing buoyancy.

A more favourable story might emerge, however, if we started the clock earlier, since on most western measures Soviet peacetime economic performance was relatively buoyant from the 1920s through the 1970s.

The Theory: Markets Versus Command

The rate and profile of Soviet economic growth have provided economists with a number of lasting riddles, but the fact of economic growth in a command system should not, in my view, be counted as one of them. It is just a fact.

The reason for this is that the Soviet command system was designed for growth, unlike market systems which tend not to be designed at all. It is true that market economies have long historical experience of government interventions of one kind or another that were designed to foster growth but there is little evidence that such interventions have had much effect on growth rates, even in east Asia (Noland and Pack, 2003). The Soviet command system, in contrast, was called into existence to underpin capital accumulation for industrialisation and resulted in a pattern of resource allocation clearly distinct from that characteristic of market economies (Kornai, 1992). As Rosefielde correctly points out such a growth effort should eventually be vulnerable to diminishing returns. Given the difficulties with capital-labour substitution that some, though not all commentators have identified in command systems, Soviet returns to accumulation might be expected to diminish sooner than in a market context. Still, the starting point for Soviet economic growth in the 1920s was a largely agrarian economy with a GDP per head of no more than one fifth of the United States (Maddison, 1995); the associated scope for fresh accumulation was wide enough that one might reasonably expect several decades to pass before the limits were inevitably reached. Moreover, the Soviet growth process experienced several traumatic episodes of disinvestment or capital loss, the worst of them being collectivisation and World War II. Each of these, by temporarily reversing the accumulation process, put diminishing returns still further off into the future. By 1960 the Soviet economy had not yet fully recovered to the prewar growth path, and was still some 10 per cent below it (Harrison, 1998); indeed a direct implication is that some of the differential growth that both Rosefielde and the CIA have found in the data as late as the 1960s may still be attributed to continuing postwar recovery.

Rosefielde and I are thus on common ground in accepting that the results of this growth could not have satisfied consumers as well as the same growth achieved in a market system. A well functioning market system may be expected to combine growth with efficiency; in contrast a command system must have comparately low efficiency, since a dictator cannot choose for his subjects more efficiently than they can choose for themselves. Thus he and I agree, with Abram Bergson, that Soviet prices did not measure utilities. At issue is whether, after adjustment for indirect taxes and subsidies, Soviet prices were formed in such a way as approximately to follow the trend of direct costs; if so, Bergson (1961) argued, an index of Soviet GDP that stripped out hidden inflation could at least measure the change in the potential of the economy to provide for consumer welfare even though the potential was never currently realised.

In favour of this were a number of arguments including, for example, the observation that over the very long run Soviet prices were adjusted in such a way as to reveal the same negative correlation of price and quantity change as in most market economies. After much debate Rosefielde's fundamental objection to this methodology is still not clear. Indeed, he himself describes it as seemingly "unassailable until the Soviet Union's collapse caused old doubts to resurface." In

other words Rosefielde's criticism of Soviet GNP as a measure of growth does not contain anything *new*; it merely restates a longstanding, ideologically based belief that command systems cannot grow and that, if they appear to do so, it is only the illusion of growth.

I have called this belief "ideologically based", but Rosefielde claims that it is rooted in economic theory. In support of this interpretation Rosefielde invokes the Washington consensus. The latter, he claims, "tirelessly warns that minor restrictions on free enterprise may have dire consequences. Yet the figures suggest that the post-war growth penalty for abolishing private ownership, business and entrepreneurship entirely and suppressing the rule of law is barely perceptible. This should have profoundly perplexed liberals, even though the Soviet Union's ultimate demise accorded with their principles."

What was the Washington consensus? John Williamson (1990) called it into existence to establish the minimum set of stabilisation policies that ought to be implemented as a condition for debt relief in Latin America, so it could be thought of as a widely accepted policy expression of the economic theory of the time. It aimed to prescribe for stabilisation rather than long term growth and Williamson (2002) has himself recently noted that the growth outcomes of trying to implement it in some Latin American countries were sometimes disappointing. In some cases it was taken too far, in others not far enough. Even when properly applied it sometimes turned out that something was missing; Williamson has noted that he left out the "second-generation reforms", involving the strengthening of institutions, that [are] necessary to allow full advantage to be taken of the first-generation reforms."

Strong institutions are perhaps necessary for market-economy success because they lower transaction costs. One thinks of well defined rights and obligations of ownership and contract, including the rights of traditional communities and small producers, together with transparency and competition in markets, so that market agents do not have to know one another personally to trust each other. These are conditions for a full range of markets to exist and to function well. In their absence the expected gains from reallocation, effort, and accumulation are too vulnerable to theft or confiscation and too low to compensate for risky outcomes; as a result transactions are hindered and resources are retained in low productivity uses or not exploited at all.

But markets are not the only way of organising transactions, and institutions that are otherwise strong may organise transactions otherwise. In the Soviet case we see a command system that ordered transactions and enabled accumulation effectively, though not efficiently on a consumer welfare standard, and for many years though not indefinitely. The command system did organise economic growth; in the absence of markets it forced transactions. It supplied some collective goods, including some elements of the rule of law. It did not exclude corruption but forced agents to recycle the proceeds of corruption into growth (Harrison and Kim, 2002). In some respects it conformed surprisingly well to western standards of rational allocation (Rosefielde, 1974).

To privilege economic beliefs over realities seems wrong. By invoking the Washington consensus Rosefielde has used it as a "thought-economizing device" or ideology (Naim, 2000) and he has overgeneralised from it. He has missed something that happened to be left out of the practical requirements of policy reform in Latin America two decades ago, that has also turned out to be very important in understanding the nature of transition from command to the market.

Economic Growth Under the Command System

To generalise, the economic growth of the Soviet command system is not a riddle if we take into account three factors (1) the catch-up opportunities of a relatively

backward starting point (2) the mobilisation capacity of the command system and (3) the nature of technical progress from the nineteenth to the twentieth century.

In the 1920s the Soviet economy and its industry were still organised largely on a peasant and artisan basis. From the 1870s onwards substantial gains became available in the world economy from reorganising industry on lines of mass production; Stalin's five-year plans realised these gains during the 1930s and 1940s. One condition for this is that the technology of information and communication had moved on from the nineteenth century, but the relative costs of information were still at a level intermediate between then and now; this gave a significant but temporary advantage to the hierarchical control of mass production systems (Broadberry and Ghosal, 2001).³

Since the middle of the twentieth century the main sources of growth in the west have arisen from flexible production and services. Information costs have declined by a factor of many thousands. The result has been to overturn the relative advantage of hierarchies in markets. Everywhere we see that markets today thrive on information while bureaucracies choke on it. This may help to explain the the command system's temporary advantage in accumulation up to the early 1970s, followed by its relative, then absolute failure (Harrison 2002).

To conclude, at one level we have an argument about facts. Can we use any of the statistical artefacts of the command system as data? In my view, yes. We live in an imperfect world that provides us with a stream of imperfect signals; while never forgetting the limits of our knowledge and understanding we must and should take what we can. At another level we have an argument about totalitarianism. It is sometimes said that the totalitarian system only sustained itself by creating and sustaining the illusion of normality; a statistical façade concealed the absence of law-governed institutions and economic growth. In my view there was some illusion but also some reality. The streets of Baghdad have recently provide new evidence that the cruellest tyrant can provide at least some collective goods. Under the old regime Iraqi citizens could expect to walk or travel safely to work as long as they kept their mouths shut. After the fall of the Baathist regime they could say what they liked but had to do so at home since street crime made it too dangerous to venture out. This does not overturn economic theory or threaten the Washington consensus. It is just a fact that our theories ought to be able to take into account.

Endnotes

¹ Rosefielde doubts the success of the CIA's attempts to correct for hidden inflation because "The agency's physical series indicate that spurious innovation is concentrated in machine building, while civilian consumer goods are implausibly distortion free." But this is not so; a comparison of CIA and Soviet official series, 1951 to 1987, suggests annual hidden inflation in the light and food industries of 1.1 and 0.7 per cent respectively, less than 5.6 per cent in machine building but not negligible over nearly 40 years. The Stalin period presents the "Moorsteen paradox" (Harrison, 2000): in the 1930s hidden inflation was greater in consumer goods than machinery. In this context Rosefielde cites me as a "charitable" witness to the lack of intentionality in hidden inflation (true); he writes that I contend that the problem was limited to Stalin's reign and was remedied by his successors (not true), and that I say "there is no direct evidence for 'simulated innovation' (unjustified price mark-ups) in 1928-1950" (half true: simulated innovation was only *one* element in inflationary mark-ups, and is directly evidenced only in the postwar period).

² Rosefielde casts doubt on the CIA figures as follows. He introduces Russian GDP growth in the form of "variant C", a "Laspeyres index computed by implicit deflation" that "corresponds with the official volume aggregate"; over the period 1961 to 1990 variant C "grew impressively at a compound rate of 4.7 % per annum". He matches this against the CIA (1982) series for GNP at 1970 factor costs which, over the period 1961-80, "yielded nearly identical results, 4.1% per annum, even though the territorial coverage ... and definitions ... do not precisely coincide". He infers the unreliability of the CIA series, from observing that variant C "is not taken seriously by most specialists because it cannot be replicated from official sub-series"; by extension the matching CIA series should not be taken seriously either. In fact the underlying figures do not match at all; the similarity is an accidental result of different coverage of space and time. The Russian population grew substantially more slowly than the non-Russian population of the USSR; we should expect, therefore, that the aggregate output of the Soviet economy grew more rapidly than for Russia alone. The CIA series omit the decade of nearly absolute stagnation from 1980 to 1990, which again should lead us to expect higher growth in the shorter Soviet series than in the longer Russian one. If we limit consideration to real growth per head over a strictly comparable time period, 1961 to 1980, the discrepancy between variant C and the CIA series is in fact rather large: 5.3% versus 3.0%. Thus the implausibility of variant C does not at all undermine the CIA figures; rather the CIA figures merely confirm the implausibility of variant C.

³ In a footnote Rosefielde points out that "potential technical progress could be faster in the goods authoritarians desire and consumers dis-prefer". In the present context a dictator might prefer to supply citizens with mass produced commodities because the command system had a lesser comparative disadvantage in the organisation of mass production, although under market allocation the citizens might prefer greater variety and less volume.

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