The Soviet Union after 1945: Economic Recovery and Political Repression

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Abstract

Salient features of the Soviet Union after World War II include rapid economic recovery and the consolidation of Stalin's rule. Both economic recovery and political consolidation are explained in large part by temporary factors arising from the war. Rapid postwar growth is attributed to the scope arising from a combination of preceding shocks that included the war itself but also stretched back into the prewar years. Political-economy considerations link Stalin's capacity to organizing recovery while delaying reforms to the quality of repression, based on his exploitation of the war as a source of new information about the citizens over whom he ruled.

JEL Codes: E1, N4, P2

First draft: December 11, 2006. This version: April 14, 2010.

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The story of the Soviet Union's postwar years appears almost as remarkable as the story of the war. The USSR came to victory in 1945 only after first coming close to total defeat. In 1945 the Red Army occupied Tallinn, Riga, Vilnius, Warsaw, Berlin, Vienna, Prague, Budapest, and Sofia, but behind the army the country lay in ruins. Its people had suffered 25 million premature deaths. The survivors were profoundly weary. Many hoped for reconciliation and relaxation.

Despite this, in the years immediately following, the Soviet economy and polity returned quickly to their previous form. There was renewed political and economic mobilization. Economic resilience was reflected in rapid Soviet postwar economic recovery. Political resilience can be seen in Stalin's rapid consolidation of the political system: there would be no reforms for a decade. The rigid hierarchies of party and state control were not loosened up, but were reinforced while their frontiers were pushed outward to the shores of the Baltic and into central Europe.

What gave the Stalinist political economy its postwar resurgence? I will place the Soviet recovery in a broader European context. The result is a puzzle: across most of Europe there was a clear association between postwar prosperity and economic and social reforms, but not in the Soviet Union. A closer look at Soviet postwar institutions in the late 1940s suggests that if anything they were more centralized, militarized, secretive, and punitive than in the late 1930s. The rapid Soviet economic recovery from World War II becomes less surprising when we take into account the Soviet economy's very large backlog of unexploited potential, not all of it due to the war. Institutions are still important, though, because ineffective institutions can mean that unexploited potential is never realized. In one respect, unchanged Soviet institutions could operate more efficiently than before: the war gave Stalin new information about his enemies, and he could exploit this temporarily to improve the quality of repression. To summarize, a large backlog of unexploited economic potential and more efficient repression were two sources of postwar Soviet economic resilience, but their common feature was that they were both temporary.

1945 in Perspective

On the eastern front, World War II was devastating. In four years, fought mostly on Soviet territory, the war killed one in eight Soviet citizens, and destroyed one third of their national wealth. The country was full of displaced people and torn families. Industry was struggling to restore peacetime production. In comparison, Russia's seven-year Great War and Civil War of 1914 to 1921 were only somewhat less devastating. Also fought mostly on Russian territory, the Great War and Civil War killed around one in ten citizens of the former Empire through fighting, disease, and starvation.² Through the 1920s, the Bolshevik leaders struggled to get the economy back to square one – the level of 1913. In this sense, the Soviet Union was itself a project of postwar reconstruction.³ In 1929, when Stalin launched his Great

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Breakthrough to forced-march industrialization and the all-out collectivization of peasant farms, the Soviet economy was probably still lagging behind the prewar benchmark of output per head of the population.⁴

Although the human losses from World War II were on a wider scale, Soviet recovery after 1945 was also more rapid. The economy was in far better shape than in 1921. Both wars were followed by harvest failure and regional famine, but the famine of 1946 killed a fraction of the numbers that died of hunger at the end of the Civil War.⁵ Average Soviet incomes climbed back to their prewar (1938) level as early as 1948. After the Civil War, in contrast, it took seven to ten years of peace for average Soviet incomes to struggle back to the 1913 level.

In the Soviet Union, as elsewhere, the restoration of pre-World War II output turned out to be the prelude to a prolonged postwar acceleration of growth that persisted long after this moment. Across Europe, there was a "Golden Age" of economic growth and rising living standards that continued through the 1950s and 1960s.⁶ Despite restricted East-West trade, heavier burdens of defence and investment, and a lower average starting point, Soviet consumers also experienced gains comparable with those of Western Europeans.

Table 1. War Damage and Reconstruction in Europe: years and percent per year, annual average

	Prewar year when GDP per head fell below 1945	Postwar year when GDP per head exceeded 1938	Annual growth, per cent, 1945 to year when GDP per head exceeded 1938
Netherlands	1869	1948	27%
France	1895	1949	18%
Austria	c. 1860	1950	17%
Denmark	1928	1946	14%
Italy	1904	1950	13%
Greece	c. 1870	1956	10%
Norway	1935	1946	9%
Soviet Union	1935	1948	8%
Finland	1937	1946	7%
Belgium	1921	1948	5%
Germany	1936	1954	2%

Source: Calculated from Angus Maddison "Statistics on World Population, GDP and Per Capita GDP, 1-2006 AD" (updated March 2009), available from http://www.ggdc.net/maddison/. For the Soviet Union, GDP per head in 1945 is assumed the same as in 1946. In six countries not shown in the table, average wartime incomes did not fall below the prewar level: the United Kingdom, and neutral Portugal, Spain, Sweden, Switzerland, and Ireland.

One would scarcely have predicted the rapid recovery of the Soviet economy after 1945 from the dismal precedent of the1920s; it becomes less remarkable in the contemporary European context. Table 1 places the USSR in this setting. For each country, the first column measures the depth of the wartime shock by considering how far back one would have to go to find a year that was worse than 1945, measured by average incomes. (A defect of this measure is that it is influenced by the rapidity of prewar growth.) The second column measures the speed of recovery by the year in which incomes returned to 1938, taken as the prewar benchmark. The third column measures the rate of expansion from 1945 to the recovery benchmark. In the face of various difficulties our source omits Soviet GDP per head in 1945, but the harvest failure of 1946 and other difficulties of Soviet reconversion to peacetime production make it realistic to assume that Soviet GDP per head in 1945 was around the same level as in 1946.

Table 1 shows that, by the standards of other European countries, the Soviet economy of 1945 was not especially depressed. Its growth had been knocked back by ten years; some other countries had lost decades. Soviet recovery was swift, but some others were swifter. Having lost half a century or more, Austria, France, and the Netherlands experienced double-digit growth during their recoveries.

Table 2. Political Regime and Economic Development in Europe Across World War II: numbers of countries

	With GDP per head:		
	Above median	Median or below	
Polity 2 index, 1938:			
Above zero	9	2	
Zero or below	2	9	
Polity 2 index, 1950:			
Above zero	11	3	
Zero or below	1	10	

Notes: Countries are Albania (1950 only), Austria (1950 only), Belgium, Bulgaria, Czechoslovakia (1950 only), Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, USSR, Yugoslavia, Spain, Sweden, Switzerland, Turkey, and UK. The Polity 2 index subtracts autocracy scores from democracy scores, and also fixes standardized scores, to create a composite index of the political regime suitable for time series analysis, with values ranging from +10 (strongly democratic) to -10 (strongly autocratic).

Source: Jari Eloranta and Mark Harrison, "War and Disintegration, 1914-1945," in *Unifying the European Experience: An Economic History of Modern Europe*, vol. 2: 1870-2000 (edited by Stephen Broadberry and Kevin O'Rourke), in preparation for publication by Cambridge University Press.

The consolidation of Stalin's rule was also broadly representative of continental trends. The war against the dictators made surprisingly little difference to Europe's constitutional makeup. As Table 2 shows, by the end of the Great Depression, democracy (indicated by a positive "Polity 2" score) was confined to the rich margins of Western Europe; virtually every poor country on the continent had fallen under

more or less authoritarian rule. By 1950, a few of the hotel guests had changed rooms. West Germany and Italy were now democracies, for example, while Poland and Czechoslovakia had become one-party states. In net terms the distribution was more or less unchanged. The gross turnover was largely a product of military defeat. Since the Soviet Union had survived the war undefeated, its political continuity does not look out of line.

If Soviet economic recovery and political continuity were unexceptional, what then is there to explain? The puzzles appear only when we look more closely at the fine grain of these things. For one thing, the determinants of rapid recovery across Europe varied from West to East. In Western Europe, common commitments to market institutions and the sharing of American resources through Marshall aid are acknowledged as important catalysts for recovery. These conditions did not apply across Eastern Europe, and specifically not in the Soviet Union.

The grain of postwar political transitions is also confusing. Because they lost the war, and because of which other countries beat them, some countries passed directly from fascism to democracy, from fascism to communism, or from democracy to communism. The only other European country to join in the war and survive with its constitution intact was the United Kingdom. Despite winning the war, the UK saw the electoral defeat of its war leader and a passage from liberal to social democracy. In fact, every European country that was caught up in the war underwent significant economic, social, or political change immediately afterwards – except the Soviet Union.

The Postwar Soviet Political Economy

The Soviet Union was the only warlike power to emerge from the war with its prewar regime intact and, if anything, reinforced. In the postwar years Stalin's rule remained harsh and intransigent, Stalin becoming less active only because of age. Managing the legacy of wartime conflict at home, Stalin preferred vengeance over reconciliation. While the Germans retreated he selected entire national minorities suspected of collaboration for mass exile. The renegade Vlasov officers were executed and the men imprisoned. No one returned from forced labour in Germany or from prisoner-of-war camp without being "filtered" by the NKVD. Those party members that survived German occupation had to account for their wartime conduct and show that they had resisted actively, if they were to avoid discrimination and repression.

As for the economic system, it is implausible to suppose that it was entirely unchanged by the war, and natural to ask whether the lessons and innovations arising from the war made some contribution to postwar recovery. The problem is, however, that Soviet economic institutions of the late 1940s differed from those of the late 1930s only in ways that exaggerated their previous defects.

The postwar economy was more militarized than before. In 1941 a surprise attack had devastated the country. After 1945 the Soviet economy carried a permanently heavier military burden in order to be ready for the next war, which was likely to be nuclear, within days or hours. Since the Soviet economy remained smaller than that of its likely adversaries, this meant a burden heavier in proportion

to GDP than that carried by the United States, for example. After a difficult demobilisation, the Soviet defence industry began to grow again with major boosts from programs for atomic weapons, rockets, jets, and radar. The outbreak of the Korean War saw a return to the mass production of conventional weapons.

The dispersal of the population into the remote interior of the Urals and Siberia, conducted before the war by mass deportations and the metastasis of the Gulag archipelago, was continued by wartime evacuation. Until World War II, the Soviet defence industry was concentrated in the established industrial regions of the European USSR. Wartime evacuation shifted its centre of gravity hundreds of kilometres to the east. After the war, many defence factories were kept back from the return to the west, and remained in their wartime locations. New atomic and missile industry complexes were added to them, the construction work often being subcontracted to the forced labourers of the Gulag. The result was a proliferation of closed, secret "mono-towns," often in bleak, inhospitable locations. The militarization of the interior was matched by the garrisoning of the borders. Stalin waged a protracted war of occupation in order to reabsorb the Baltic region and Eastern Poland. Beyond the borders, Eastern Europe was politically and economically sovietized. As a process of the Europe was politically and economically sovietized.

It has been reasonably suggested that, amid the disruptions of war, soldiers, regional leaders, managers, and farmers must have learned how to direct their activities with greater self-reliance, more independently of the centre's instructions. 15 Did such wartime experiences not carry over into the postwar period? Possibly, yes; but, to the extent that they did, this legacy was firmly rejected as soon as possible. "Normal" centralization of the economy, temporarily disrupted by invasion and war mobilization, was restored well before the war ended; in fact, wartime planning for the postwar period was one of the instruments that reinstated the prewar command system. 16 From 1946, Stalin embarked on a blunt reassertion of the party's authority over management, the regions, and cultural life. ¹⁷ The legal priority of state over private property was reinforced and its enforcement became more punitive. 18 Wartime tendencies to creeping privatization on the collective farm were sharply reversed. 19 Stalin kept in place the uniquely harsh regimentation of civilian workers introduced just before and during the war; the scale and scope of forced labour were expanded, despite growing concerns about the damage being done to the economy and society.²⁰ Secretiveness rose to new heights.²¹ The first test of whether the Soviet Union had learned to manage its resources more humanely in a crisis, and delegate decisions more effectively, came with the harvest failure of 1946. The outcome was a regional famine in which one and a half million people died.²² On the positive side, perhaps it is "only" one and a half million; as already mentioned, this figure was a marked improvement on 1921.

Finally, the war selected a new generation of leaders that would eventually provide Stalin's successors. All of them — Bulganin, Khrushchev, Malenkov, Mikoian, and others — had dipped their hands in the blood of Stalin's victims, not all with enthusiasm. Some of them would eventually would face up to the necessity of reform, but the steps that seemed to them, at the time, like giant leaps of faith and courage were timid and faltering by "normal" standards. While scholars have

scoured the decade of late Stalinism for precursors and standard-bearers of reform, it is astonishing how thin the evidence remains, and how heartless are the "heroes" that emerge: Lavrentii Beriia, Stalin's wartime security chief, who came to see the forced labour system of the Gulag as damaging and wanted to scale it down; and Nikolai Voznesenskii, Stalin's wartime economic planner, who was interested in the merits of rules over discretion in making policy.²³

To summarize, the Soviet economy faced the tasks of postwar reconstruction with economic institutions that, if not completely unchanged by the war, were changed in all significant respects for the worse. This makes explanation of the speed of postwar recovery more difficult.

Explaining Soviet Recovery

It would be a solution if we could persuade ourselves that "worse" was better: that the rapid Soviet postwar recovery should be simply credited to the command system, which mobilized resources all the more effectively with every increase in centralization and repression. When contemporary western observers tried to get perspective on Soviet postwar economic growth, and began to calculate just when the Soviet economy would overtake the United States, that is more or less what they concluded. A relatively sober assessment was that of Abram Bergson. Reviewing Soviet economic performance in the 1950s, Bergson emphasized "the political control over the rate of investment" as a feature of the Soviet system without an American counterpart, and concluded: "Khrushchev is seeking, as Stalin did, to 'overtake and surpass' the United States economically ... Khrushchev's plans for the future may often be overoptimistic, but they have some basis in fact." 24

An alternative approach sets the Soviet postwar recovery in a longer-run context. It starts with the observation that the scope for recovery is created by the depth of the adverse shock that precedes it. This view takes its inspiration from the Hungarian economist Ferenc Jánossy, who first proposed the idea that the great European postwar boom was largely a return to the "trendline" – the path marked out by extrapolating each country's prewar growth.²⁵ Slower growth in the 1960s, Jánossy argued, was merely the end of a prolonged postwar recovery phase. The failure to understand this point, he believed, had led policy makers in both socialist and market economies to make mistakes. Many believed that postwar recovery was already complete when the prewar level of output had been restored, or when damaged facilities had been rebuilt. These became pessimistic about subsequent growth prospects because they did not perceive the opportunities represented by the remaining gap between actual output and the trendline. By the 1950s the trendline, Jánossy believed, rising with the passage of time, was already well above the prewar maximum. Conversely, others supposed that the acceleration was a new permanent peacetime trend, and so fell into the trap of "new era" optimism. Consequently their long-range plans became overambitious; they failed to anticipate the inevitable slowdown when the trendline was finally regained, and then met it with an exaggerated sense of failure.

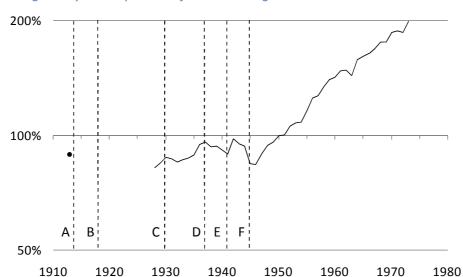


Chart 1. Soviet GDP per head, 1913 and 1928, and per worker, 1928 to 1973, showing six key dates: percent of 1950 on a logarithmic scale.

Key: A (1914) World War I. B (1918) Civil War. C (1930) Collectivization. D (1937) The Great Terror. E (1941) World War II. F (1945) Postwar period.

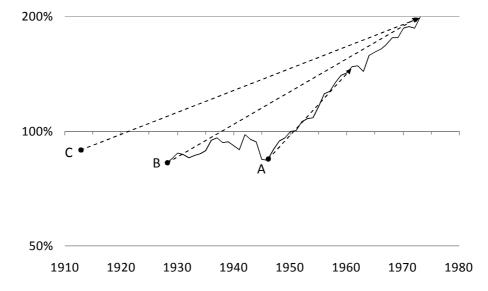
Sources: The series from 1928 to 1973 are from Mark Harrison, "Trends in Soviet Labour Productivity, 1928-1985: War, Postwar Recovery, and Slowdown," *European Review of Economic History* 2:2, pp. 171-200. To get a long view we must chain two sets of primary data, one for 1928 to 1966 based on the constant "adjusted" factor costs of 1937, and another for 1950 to 1985 based on adjusted factor costs of 1982. The two series are inconsistent, however. Inspection of the overlap in the series suggests a strong Gerschenkron effect, the change in weights from 1937 to 1982 reducing the growth rate of GDP by about a quarter. This suggests a way of adjusting the measured output of the early period, prior to the overlap, to late prices. The result is a series for the whole period, 1928 to 1985, based on a consistent standard of valuation. The data point for 1913 is found from the ratio of GDP per head in 1913 to 1928 in Maddison, "Statistics."

The argument is easily applied to Soviet data. It is an argument about productivity rather than living standards, so in Chart 1 we look at real Soviet GDP per worker. Our first observation is 1913. After a break, the observations resume in 1928 and then follow continuously to 1973, the year that ended the "Golden Age."

On the same chart we see six shocks. World War I (A) and the Civil War (B) together left Soviet incomes in 1928 still somewhat below the 1913 level; not all the ground had been made up when Stalin launched the country onto a course of forced rapid industrialization. The third shock (C) is the collectivization of agriculture launched at the end of 1929, which brought farm surpluses under state control at the cost of destroying millions of lives and a significant fraction of the country's agricultural and social capital. Under gathering war clouds the economy suffered a fourth shock when Stalin carried out his Great Terror (D) in 1937, which paralyzed industry and the economy. The economy had not recovered from the Great Terror, let alone collectivization and even the relatively distant traumas of 1914 to 1921 when Hitler attacked, bringing World War II (E) to the Soviet Union in 1941. Notably,

if we consider aggregate labour productivity, the war itself was not a negative disturbance. It was the two transitions, from peace to war, and then from war to peace again, that damaged productivity, and the transition to peace (F) in 1945 was more damaging than the preceding transition to war.

Chart 2. Soviet GDP per head, 1913 and 1928, and per worker, 1928 to 1973, showing alternative underlying trends: percent of 1950 on a logarithmic scale



Key: A (1946 to 1961): 3.8% per year. B (1928 to 1973): 2.0% per year. C (1913 to 1973): 1.3% per year.

Sources: as Chart 1.

How should we evaluate Soviet postwar recovery in this context? Chart 2 shows our options. A restricted focus on the 1940s and 1950s, that ignores what happened before and after, gives us (A) rapid recovery from 1946, merging into impressive peacetime growth through 1961, at an annual average growth rate of GDP per worker of 3.8 percent over 15 years.

Taking the data back to 1928 and forward to 1973 suggests a more cautious view: in 1941 the economy still had a hangover from 1937 and perhaps even a headache from 1930. The sources of Soviet rapid growth after 1946 are partly those of recovery from war, but in addition the economy was still catching up on an accumulated prewar backlog of unexploited opportunities. Associated with this view is a more prudent estimate (B) of the underlying trend of productivity growth: not 3.8 percent, but a mere 2.0 percent per year over the 45 years from 1928 to 1973.

But this may not be a long enough perspective. In 1928, the economy had not fully recovered from Russia's Great War and Revolution. Taking into account all the data available, including 1913, gives us a still more cautious figure of 1.3 percent annual growth as the Soviet productivity trend over 60 years – a trend that would *never* allow it to "catch up and overtake" Western Europe or the United States. Against that background, the rapid growth of the postwar years appears as a transient spurt that would inevitably exhaust itself within 30 years after the war.

In this perspective, the "resilience" of the postwar Soviet economy is explained by the size of the backlog of unrealized growth potential arising from preceding disasters. Because this backlog existed and was so large, the economy could spend thirty years making it up and, while it did so, put on the appearance of dynamism. However, the backlog alone does not explain what we see. Many countries have backlogs of unrealized potential that they never realize. When they fail in this way, institutions that are faulty or ineffective are often the cause: power is unrestrained, the rule of law is weak, enterprise and initiative are taxed or punished, and so on. Thus, we come back to institutions. I will point to another aspect of the war that renewed the temporary lease of the Soviet dictatorship and command system on life: the war dramatically improved the efficiency with which Stalin could manage his domestic enemies.

The Quality of Repression

As the war ended, millions of ordinary Soviet people were intoxicated with joy at the announcement of the victory and celebrated it wildly in city squares and village streets. Feeling that the war had shown the people to be deserving of their leaders' trust, many hoped that the enemy's defeat could be followed by relaxation and reconciliation. Later, Il'ia Ehrenburg recalled:

I firmly believed that after victory everything would suddenly change ... When I recall conversations at the front and at the rear, when I re-read letters, it is clear that everybody expected that once victory had been won, people would know real happiness. We realized, of course, that the country had been devastated, impoverished, that we would have to work hard, and we did not have fantasies about mountains of gold. But we believed that victory would bring justice, that human dignity would triumph.²⁸

Despite such hopes ten years would pass, and Stalin himself would leave the scene, before Khrushchev opened up social and historical discourse in a way that that was radical and shocking in contrast to the stuffy conformity of Stalinism, although pathetically limited by the standards of the wider world.

Research in Stalin's archives has made clear (not that there was much doubt) the murderous attributes of his regime. ²⁹ Stalin's rule was built on repression. Not repression alone, since repression must be implemented and those that carry it out must consent to do so. Nonetheless, repression was Stalin's primary instrument. The war saw a striking change in its quality. Before the war, terror was indiscriminate, sweeping up the loyal and disloyal alike. In contrast, postwar repression was selective, focused, and efficient.

The climax of prewar repression was the Great Terror. In 1937 Stalin set out to exterminate all his enemies, including those he designated as "objective" or "unconscious" enemies. 30 Under a public spotlight, show trials rid the party and state of thousands of servants, most of them innocent of any truly seditious action or even intention. Beneath the surface, secret executive mandates ordered the

deaths of hundreds of thousands that had found their way by one route or another into the files of the security organs.

The changing tenor of repression can be studied in the files of the ruling party's "control commission," Stalin's watchdog on the party members. As the 1930s wore on, the slightest suspicion of compromising circumstances – including not only misconduct but past association with others about whom doubts had been raised – led to censure and dismissal, followed increasingly by transfer of the case to the security services, detention, interrogation, torture, and imprisonment or execution. During 1937, as the number of those that could be found guilty by association exploded, the work of the control commission was paralyzed by suspicion of its own members and employees.

Ten years later, the quality of repression was very different. There was still suspicion; every allegation of guilty association or misconduct was still investigated. The control commission's investigations were meticulous and exact. A party member's past association with "enemies of the people" and "traitors" living abroad, including family relationships, was no longer an issue – provided it had been confessed to the party, so there was no deception, and provided it had been discarded, so that contact was broken. Bad associations and social origins were no longer an irreparable stigma; they could be wiped away by patriotic behavior during the war. No one was presumed innocent – but many were exonerated after investigation, and even sharply adverse judgments often led to nothing worse than a slap on the wrist. What could not be repaired was wartime treachery or passivity; it was intolerable for a party member, for example, to have lived under German occupation without engaging actively in resistance or the partisan movement.

The sharp change in the quality of repression from the late 1930s to the late 1940s can be explained in more than one way. Most obviously, Stalin learned that indiscriminate bloodletting was costly; he could not afford to lose tens or hundreds of thousands on suspicion alone. As early as 1938 and 1939, Stalin permitted limited effort to go to rehabilitating some of the more obviously unjust sentences that fell short of execution. But for many it was too late; he had already executed tens of thousands of talented managers, engineers, artists, and military leaders.

To set this in context, consider the Great Terror as Paul Gregory has modelled it.³² In this view Stalin ruled subject to a revolution constraint set by the maximum number of "enemies" that could be at liberty in society without triggering his overthrow. In 1937 Stalin became convinced that the number and potency of his enemies was greater than he had previously thought. In number, he saw a large and growing stratum of embittered citizens, previously dispossessed or disenfranchised, that would never be reconciled to the Soviet regime, and many others with uncertain political or ethnic loyalties. In potency he saw that the growing risk of war would soon give them the chance to turn traitor, even if this was an opportunity that the "potential" enemies did not yet foresee or appreciate.

Chart 3 illustrates this perception. The dotted line shows the true distribution of the Soviet population over loyalty and disloyalty. Stalin defined those with negative loyalty (shown to the left of the vertical axis) as his enemies. When he feared that their number (shown as the area under the distribution in the negative loyalty sector) and potency might breach his revolution constraint, he wanted to kill them.

Chart 3. The distribution of loyalty

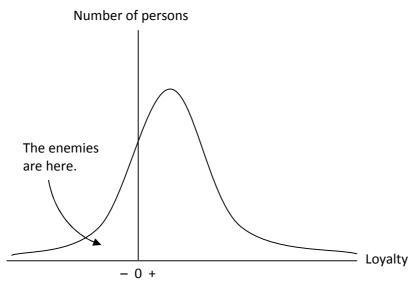
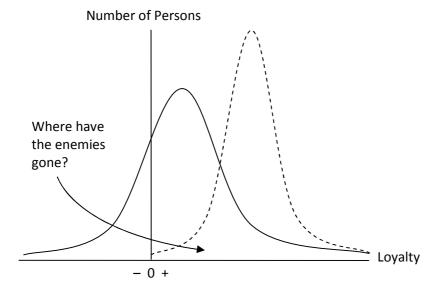
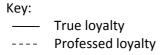


Chart 4. The distribution of loyalty: Where have the enemies gone?





This was only the start of Stalin's problem, however. Before he could kill his enemies, he had to identify them. Under a dictator, people do not disclose their true loyalties; whatever they feel, everyone tries to look loyal. As a result, the more powerful the dictator, the less he can trust what people tell him – a paradox that Ronald Wintrobe has called "the dictator's dilemma." Stalin could not observe the true distribution of loyalty, shown in Chart 4 as the solid line; he could see only the

professed distribution (the dotted line), which seems to show no enemies. He knew his enemies existed, but where had they gone?

The problem was that they had scattered and gone to hide among the loyal. After two decades of increasingly repressive dictatorship, all citizens looked alike and could be told apart only by such imperfect markers as class origins and past political and social affiliations. Given that, according to Gregory, Stalin's solution was to impose excess repression. He decided to kill all those in the left tail of the professed loyalty distribution, despite the fact that all claimed to be loyal – and despite the fact that many of them truly were loyal. He killed many more than his estimate of the true number of enemies in the hope that, at the cost of killing many of the truly loyal, he would also catch a high proportion of those that were only simulating loyalty.

This stratagem was extraordinarily costly. It also encountered diminishing returns. By the end of the Great Terror Stalin's security service had exhausted the low-grade information it held on the potentially disloyal strata. But then, a stroke of luck: the war opened a new window for Stalin to peer into the souls of his subjects! Hitler's invasion gave millions of Soviet citizens the freedom to choose, for the first time in twenty years, whose side they were on. The phase in which the Red Army was retreating allowed many to lose their fear of Stalin's regime or to replace it with a greater one – fear of the consequences of *not* switching allegiance to the invader at the opportune moment. Under these conditions, some revealed previously latent preferences for disloyalty by accepting surrender or collaboration, or by adopting an attitude of wait-and-see, where Stalin had ordered patriotic resistance.

His subjects' wartime behaviour gave Stalin a flood of new information. He found that it was no longer necessary to sort and classify people on the basis of historical political allegiance and social origin. He did not throw away the historical accounts, but he closed them and opened a new set of books based on the war.

In a study of postwar Ukraine, Amir Weiner found that after the war the regime began systematically to sort and regrade people by new criteria: wartime conduct and ethnicity. The cultural mechanism that regraded them was a pervasive idea -- that the war had healed the divisions in the nation and provided the opportunity for redemption. The people that carried this idea in their heads and acted on it were the soldiers returning from the front.

Weiner shows how many people perceived war service as removing the stigmas of adverse social origin and forgiving prewar sins. Life could begin again. This integrated the wartime experience into the repeated purification of Soviet society, and changed the cleansing process by making social origin redeemable. Those that behaved badly in the war, in contrast, could not redeem themselves. The postwar era began, as a result, with a new secret party purge amid the shattered ruins of the Ukraine, and this purge took precedence over other the pressing tasks of reconstruction.

The break with the past was not complete. The postwar years also saw Stalin stirring up vicious intrigues against potential rivals distinguished by their war service – Marshal Georgii Zhukov, for example, and the Leningrad leadership, which was showing signs of excessive independence – and he had some of these killed. More

widely in society, ethnicity became relatively important as an indirect marker of loyalty because the Soviet state found itself still at war with resurgent nationalisms from the Baltic to the Ukraine; the creation of the state of Israel also caused Stalin to suspect Soviet Jews of divided loyalties. These countervailing changes moderate the trend we observe, but we still observe it.

To summarize, the war tended to collapse the distribution of professed loyalty into the true one. As a result, Stalin could identify his enemies and deal with them person by person, not *en masse*. Selective terror became a better choice than mass terror, at least for a few years. Eventually, the natural tendency to conformism under a dictator would again blur the distinguishing marks of the "enemy." Rather than return to mass terror, Stalin's successors would try to dispense with terror altogether.

We asked how it was that the Soviet command system effectively mobilized resources into postwar recovery. The increased efficiency with which Stalin managed his enemies after 1945 was an enabling factor in the Soviet postwar economic recovery. Strong political authority was at the core of the command economy; this would be revealed vividly, 40 years later, by the economic collapse that accompanied the disintegration of Soviet political authority under Gorbachev.

Conclusions

We started from the postwar resilience of the Soviet political and economic system, with rapid economic recovery from the war accompanied by political consolidation and an absence of postwar reforms. On close inspection we find that the war contributed to two factors that between them explain both the pace of recovery and the resilience of Stalin's dictatorship.

The rapid growth of the Soviet economy from 1946 was part of a long rebound from a series of disasters of which the war contributed the most recent instalment. The long-run trajectory of the Soviet economy was scarcely dynamic. In 1945, however, it was far below this trajectory; there was great scope for catching up on the backlog of unrealized potential, and this helps to explain the rapidity of Soviet economic development from the late 1940s through the 1960s.

Soviet postwar recovery and growth was organized within the framework of a centralized command system for mobilizing resources. The working arrangements of this mobilization system also benefited from the increased efficiency of Stalin's postwar rule. The war greatly increased Stalin's information about the distribution of loyalty in Soviet society. This explains how Stalin could manage his enemies without incurring the costs of mass terror, and so rule as Soviet dictator more efficiently than before the war.

Endnotes

¹ Earlier versions of this paper were presented to a panel at the annual meeting of the Allied Social Sciences Associations, Chicago, January 5 to 7, 2007, and the Balzan Conference on Post-War Reconstruction in Europe, Birkbeck College, London, June 5 to 6, 2008. I thank Vladimir Kontorovich and the referees for comments and advice; the University of Warwick for research leave; and the Hoover Institution for its hospitality and access to documents in its superb archive.

² S. G. Wheatcroft, and R. W. Davies, "Population," in *The Economic Transformation of the Soviet Union, 1913-1945* (edited by R. W. Davies, Mark Harrison, and S. G. Wheatcroft), Cambridge: Cambridge University Press (1994), p. 63.

⁷ J. Bradford De Long and Barry Eichengreen, "The Marshall Plan: History's Most Successful Structural Adjustment Program," in *Postwar Economic Reconstruction and Lessons for the East Today* (edited by Rudiger Dornbusch, Wilhelm Nölling, and Richard Layard), Cambridge, Mass.: MIT Press (1993), pp. 189-230; Barry Eichengreen, "Institutions and Economic Growth: Europe after World War II," in *Economic Growth in Europe since 1945* (edited by Nicholas Crafts and Gianni Toniolo), Cambridge: Cambridge University Press (1996), pp. 38-70.

³ I thank one of the referees for this highly relevant point.

⁴ Paul R. Gregory, "National Income," In *From Tsarism to the New Economic Policy: Continuity and Change in the Economy of the USSR* (edited by R. W. Davies), Basingstoke and London: Macmillan, pp. 237-47.

⁵ Michael Ellman, "The 1947 Soviet Famine and the Entitlement Approach to Famines," *Cambridge Journal of Economics* 24:5 (2000), pp. 603-630

⁶ Nicholas Crafts, and Gianni Toniolo, "Postwar Growth: An Overview", in *Economic Growth in Europe Since 1945* (edited by Nicholas Crafts, and Gianni Toniolo), Cambridge: Cambridge University Press (1996), pp. 1-37.

⁸ Yoram Gorlizki and Oleg Khlevnyuk, *Cold Peace: Stalin and the Soviet Ruling Circle*, 1945-1953, New York: Oxford University Press (2004).

⁹ Amir Weiner, *Making Sense of War: The Second World War and the Fate of the Bolshevik Revolution*, Princeton: Princeton University Press (2001).

¹⁰ See relevant chapters in *The Soviet Defence-Industry Complex from Stalin to Khrushchev* (edited by John Barber and Mark Harrison), Basingstoke: Macmillan (2000).

¹¹ Mark Harrison, "Industrial Expansion under Late Stalinism (1945-1955): the Short-Run Dynamic of Civilian Output from Demobilisation to Rearmament," *Journal of European Economic History* 17:2 (1989), pp. 359-78, and 18:3 (1990), pp. 601-3.

¹² Gregory Brock, "Public Finance in the ZATO Archipelago," Europe-Asia Studies 50:6 (1998), pp. 1065-1081. ZATO (*zakrytye administrativno-territorial'nye obrazovaniia*) is translated as "closed administrative-territorial formations."

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¹³ For example, George Reklaitis, *Cold War Lithuania : National Armed Resistance and Soviet Counterinsurgency.* The Carl Beck Papers in Russian & East European Studies no. 1806. Center for Russian & East European Studies, University of Pittsburgh, 2007.

¹⁴ Włodzimerz Brus, "1950-1953: The Peak of Stalinism," in *The Economic History of Eastern Europe, 1919-1975*, vol. 3: *Institutional Change within a Planned Economy* (edited by M.C. Kaser), Oxford: Oxford University press, pp. 3-39.

¹⁵ It is wrong, however, to think of the late 1940s as a particular time of reformist ideas about market socialism or plan decentralization. Enrico Barone's proposal for market-like allocation within an economy based on public ownership, first published before World War I, was translated into English and published before World War II as "The Ministry of Production in the Collectivist State," in *Collectivist Economic Planning* (edited by F. A. Hayek), London: Routledge (1935), pp. 245-290. The first practical proposals to decentralize management within the Soviet economy to be advanced (unsuccessfully) by a powerful leader rather than a scholar or critic were those of the minister of industry Sergo Ordzhonikidze in 1931, as R. W. Davies has shown in *The Industrialisation of Soviet Russia*, vol. 4: *Crisis and Progress in the Soviet Economy, 1931-1933* (Basingstoke: Macmillan, 1996).

¹⁸ Yoram Gorlizki, "Theft Under Stalin: A Property Rights Analysis," PERSA Working Paper No. 10 (28 June 2001), University of Warwick, Department of Economics, available from http://www.warwick.ac.uk/go/persa.

¹⁹ Alec Nove, "Soviet Peasantry in World War II," in *The Impact of World War II on the Soviet Union* (edited by Susan J. Linz), Totowa, NJ: Rowman and Allanheld (1985), pp. 71-90.

²⁰ Don Filtzer, *Soviet Workers and Late Stalinism: Labour and the Restoration of the Stalinist System after World War II*, Cambridge: Cambridge University Press (2002); Andrei Sokolov, "Forced Labor in Soviet Industry: The End of the 1930s to the Mid-1950s, An Overview," in *The Economics of Forced Labor: The Soviet Gulag* (edited by Paul R. Gregory and Valery Lazarev), Stanford: Hoover Institution Press (2003), pp. 23-42.

²¹ Mark Harrison, "Secrecy," in *Guns and Rubles: the Defense Industry in the Stalinist State* (edited by Mark Harrison), New Haven: Yale University Press (2008), pp. 230-254; Gorlizki and Khlevnyuk, *Cold Peace*.

¹⁶ Harrison, *Soviet Planning*, pp. 192-197.

¹⁷ Gorlizki and Khlevnyuk, *Cold Peace*.

²² Ellman, "The 1947 Soviet Famine."

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²³ Aleksei Tikhonov, "The End of the Gulag," in *The Economics of Forced Labor: The Soviet Gulag* (edited by Paul R. Gregory and Valery Lazarev), Stanford: Hoover Institution Press (2003), pp. 67-74; Mark Harrison, *Soviet Planning in Peace and War,* 1938-1945, Cambridge: Cambridge University Press (1985), pp. 230-235.

²⁴ Abram Bergson, *The Real National Income of Soviet Russia Since 1928* (Cambridge, Mass.: Harvard University Press, 1961), pp. 295 and 297-8.

²⁵ Ferenc Jánossy, *The End of the Economic Miracle: Appearance and Reality in Economic Development*, White Plains, NY: International Arts and Sciences Press (1971). For further evaluation see Nicholas Crafts and Terence C. Mills, "Europe's Golden Age: an Econometric Investigation of Changing Trend Rates of Growth," in *Quantitative Aspects of Europe's Postwar Growth* (edited by Bart van Ark and Nicholas Crafts), Cambridge: Cambridge University Press (1996), pp. 415-31; Nicholas Crafts and Terence C. Mills, "After the Golden Age: A Long-Run Perspective on Growth Rates That Speeded up, Slowed Down and Still Differ," *Manchester School* 68:1, pp. 68-91.

²⁶ R. W. Davies, *The Industrialisation of Soviet Russia*, vol. 1: *The Socialist Offensive: the Collectivisation of Soviet Agriculture, 1929-1930*, Basingstoke: Macmillan (1980); R. W. Davies and S. G. Wheatcroft, *The Industrialisation of Soviet Russia*, vol. 5: *The Years of Hunger: Soviet Agriculture, 1931-1933*, Basingstoke: Palgrave (2004).

²⁷ Barbara G. Katz, "Purges and Production: Soviet Economic Growth, 1928-1940," *Journal of Economic History* 35:3 (1975), pp. 567-590; R. W. Davies. "The Soviet Economy and the Launching of the Great Terror," in *Stalin's Terror Revisited* (edited by Melanie Ilič), London and New York: Palgrave (2006), pp. 11-37

²⁸ Cited by Jerry F. Hough, "Debates About the Postwar World," in *The Impact of World War II on the Soviet Union* (edited by Susan J. Linz), Totowa, N.J.: Rowman & Allanheld (1985), p. 255.

²⁹ Robert Conquest, *The Great Terror: A Reassessment* (40th Anniversary edn), Oxford: Oxford University Press (2008); Gorlizki and Khlevniuk, *Cold Peace*; Oleg V. Khlevniuk, *Master of the House: Stalin and his Inner Circle* (New Haven: Yale University Press, 2009); David R. Shearer, *Policing Stalin's Socialism: Repression and Social Order in the Soviet Union, 1924-1953* (New Haven: Yale University Press, 2009); Paul R. Gregory, *Terror by Quota: State Security from Lenin to Stalin (an Archival Study*), New Haven: Yale University Press (2009).

³⁰ Mark Harrison, "The Dictator and Defense," in *Guns and Rubles: the Defense Industry in the Stalinist State* (edited by Mark Harrison), New Haven: Yale University Press (2008), pp. 1-30.

³¹ The Archive of the Hoover Institution, Stanford University, contains thousands of files of the party control commission from 1934 through the 1960s in its "Archives of the Soviet Communist Party and Soviet State" microfilm collection, based on the holdings of the Russian State Archive of Contemporary History (RGANI). My study of these files has focused on two collections, *opis* 1 (minutes of the party control

commission, February 1934 to June 1939) and *opis* 6 (reports, references, verbatim accounts, protocols, June 1939 to October 1966). On the history and operations of the party control commission see Arch Getty, "Pragmatists and Puritans: The Rise and Fall of the Party Control Commission," The Carl Beck Papers in Russian and East European Studies no. 1208, University of Pittsburgh, Centre for Russian and East European Studies (1997); Andrei Markevich, "How Much Control is Enough? Monitoring and Enforcement under Stalin," PERSA Working Paper no. 53, University of Warwick, Department of Economics (2007).

³² Gregory, *Terror by Quota*, pp. 166-171 and 293-294.

³³ Ronald Wintrobe, *The Political Economy of Dictatorship*, Cambridge: Cambridge University Press (1998), pp. 20-36.

³⁴ Weiner, *Making Sense of War*.