

# Stalinism and the Economics of Wartime\*

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Mark Harrison\*\*

Department of Economics, University of Warwick  
Centre for Russian and East European Studies, University of Birmingham  
Hoover Institution on War, Revolution, and Peace, Stanford University.

## *Abstract*

The Stalinist command economy was designed to overcome weaknesses that had destroyed the Russian economy in World War I: a shortage of industrial capacity combined with the peasant farmers' withdrawal from the urban-rural market into autarky. Industrialization created the specialized mass production facilities that ensured the supply of the Red Army with weapons in World War II. There were only two major economies that mastered mass production in the war, and the Soviet Union was one of them. By converting the peasants into residual claimants on the available food, collectivized agriculture ensured that, when war broke out, the soldiers and war workers were fed first in line. So, the Stalinist command system was a case of intelligent design - but not all that intelligent. Stalin's war preparations, while purposeful, were associated with severe costs and capital losses. Collectivization was a peacetime disaster: it destroyed the human and social capital of the Soviet countryside and impoverished and alienated the majority of the population. The general rearmament in the late 1930s, including the mass production of weapons, was unnecessarily costly, and also failed to deter aggression. Stalinist industrial policies failed to appreciate the significance of new information and communication technologies for military as well as civilian uses; without Stalin noticing, the information revolution was already under way. Stalinist terror attempted to eliminate potential traitors before the war broke out. Despite killing a million people, it failed to do so; indeed it may have created more real traitors than it killed.

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\*\* Mail: Department of Economics, University of Warwick, Coventry CV4 7AL, United Kingdom. Email: [mark.harrison@warwick.ac.uk](mailto:mark.harrison@warwick.ac.uk).

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Between 1914 and 1945, global economic development was interrupted and set back by two world wars, and its regional patterns were brutally distorted by combat, exterminations, migrations, and the redrawing of borders. Nowhere was this more the case than in the territories of the Russian Empire and the Soviet Union.

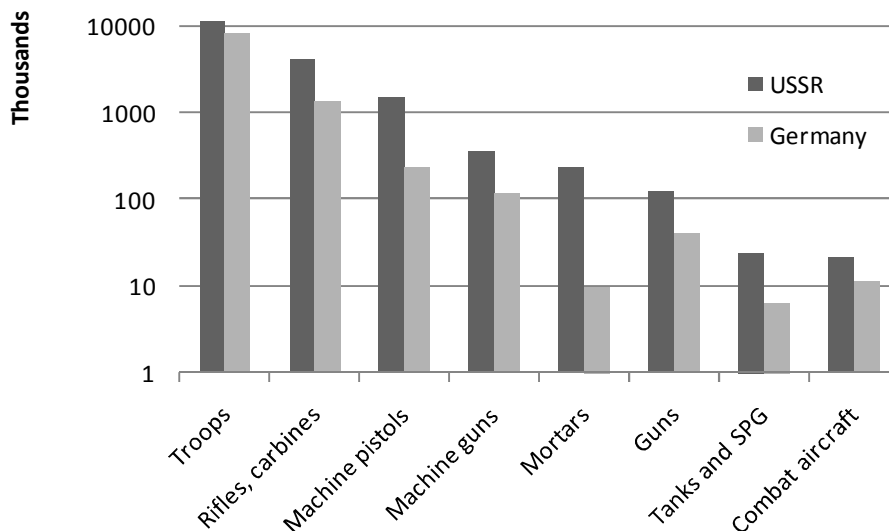
The two wars were a single historical process: a match of two halves, with an “interwar” breathing space. In the first war, the combatants learned about industrialized warfare. They also learned about their adversaries and themselves, about strengths and weaknesses. They used their new knowledge to prepare for renewed conflict, aiming to avert it or engage in it, with varying combinations of anxiety and eagerness. The second of the two wars then tested them on how well they had learned their lessons.

A distinguishing feature of war in the twentieth century was mass mobilization. In World War I Russia suffered defeat and revolution because its mobilization failed. Fully aware of this, and believing that a renewal of war was inevitable, the Bolsheviks determined to build a new system that would not fail when it came. Stalin personified this determination and acted on it. In the first part of this paper I outline the results of the war economy that he built, focusing particularly on 1942. Then, I consider the extent to which the results were those intended by prewar preparations. Finally, I discuss the strengths and weaknesses that the war revealed.

## The Soviet economy in 1942

The main dimensions of the Soviet war effort in 1942, the worst year of the war, can be established by a few measures. Chart 1 suggests how the Soviet and German forces measured up numerically.

Chart 1. *The balance of supplies on the eastern front, 1942: USSR and Germany*



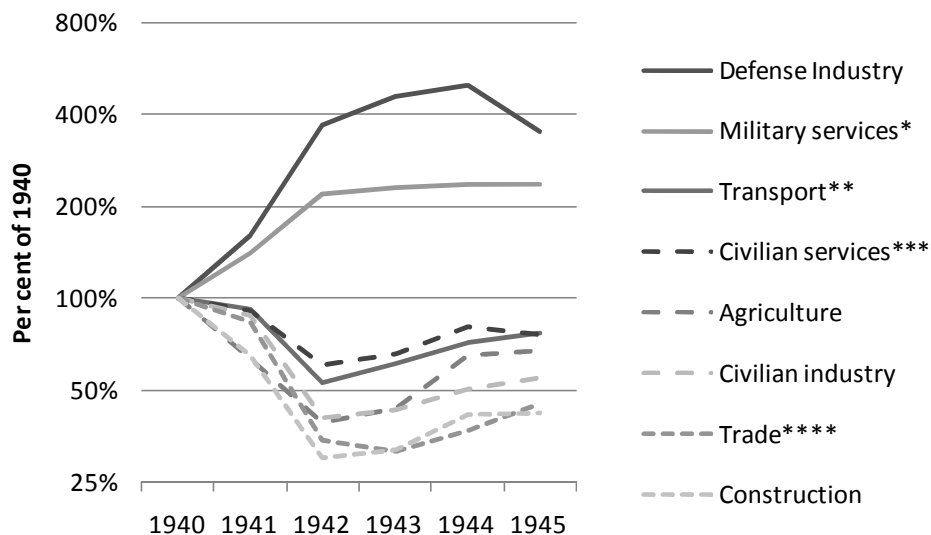
Source: Harrison (1998, pp. 14-16).

The chart shows that, in this critical year, despite devastating setbacks the Soviet Union was still able to field and supply an army that was larger than that of its adversary in personnel. Moreover, the Soviet Union was able to provision its troops more intensively, in terms not only of the total of munitions and ordnance available, but also in the provision per soldier; this is suggested by the fact that the relative Soviet advantage was greater in all lines of equipment than for the number of troops. “If there was a true ‘armaments miracle’ in 1942,” the historian of the Nazi war economy Adam Tooze (2006, pp. 588-589) has concluded, “it occurred, not in Germany, but in the armaments factories of the Urals.”

In fact, if all we knew about the war was the figures in Chart 1, we would not be surprised that the Soviets won the war; we would be astonished to hear that they nearly lost it. Generally accepted reasons for the near defeat start from Germany’s qualitative advantages: surprise, momentum, experience, the self-confidence created by previous victories, and intrinsically superior military organization. They extend to military weaknesses and errors on the Soviet side: a command staff broken by purges, a rank-and-file that was barely assimilated into military units or trained for combat, battle orders based on faulty operational concepts, and Stalin’s self-deception over Hitler’s true intentions.

Together these factors proved nearly sufficient to overcome Germany’s shortfall in numbers. The fact that they did not do so, however, suggests that the bigger mistake was made by Hitler. In 1941, as the military historian Chris Bellamy (2007, p. 61) has written, “the Germans catastrophically underestimated their opponent.”

*Chart 2. Net national product of the Soviet Union by sector of origin, 1940 to 1945 (per cent of 1940, at factor costs of 1937)*



Notes: \* Military services of Army, Navy, and NKVD troops. \*\* Including communications. \*\*\* Housing, health, education, finance, government, and other services. \*\*\*\* Including catering.

Source: Harrison (1996, p. 92).

The success of Soviet war production was first helped and then hindered by the sacrifices that accompanied it. Chart 2 shows the trend of real output of the main

production and service sectors of the economy on the territory under Soviet control (which changed continually); the underlying figures are the result of root-and-branch reconstruction of the Soviet national accounts, combining published and archival data. Economically the war can be divided into two parts. In the first part, from June 1941 through 1942, the rapid expansion of the armed forces and military supplies was achieved at the expense of the civilian economy. While the production of equipment and ordnance multiplied, everything else fell away, including the provision of the metals, fuels, power, transport services, and food on which the sustainability of the military mobilization relied. In short, whatever was happening on the battlefield, the Soviet economy was tilting over into an abyss.

In the second part of the war, the economy was pulled back from the edge of the precipice. In 1943 and 1944 there was stabilization; little further mobilization took place, and all branches were allowed to grow together. The difficulties of postwar reconversion in 1945 are signaled by the fact that, while war production fell sharply, the recovery of the civilian sector remained sluggish.

Chart 2 considers only domestic production, and sheds no light on the other sources of resources. As Chart 3 suggests, by 1942 the Soviet Union had mobilized more than 60 percent of its real GDP into the war effort, but GDP had also fallen by one third. As a result, civilian uses of output were squeezed from two sides, by the loss of resources and their mobilization into defense. The pressure was somewhat alleviated by foreign assistance, which added around 5 per cent to the total of resources available to the Soviet economy in that year (rising to 10 per cent in 1943 and 1944). In 1942, however, gross investment was zero and aggregate consumption was down by around 60 per cent from 1940. It is not clear exactly what proportion of the prewar population remained under Soviet control in 1942 but during 1943 consumption per head on Soviet territory probably averaged around 60 percent of the prewar level, which had already been somewhat squeezed by peacetime rearmament (Harrison 1996, p. 104).

An equivalent demographic balance is hard to strike. During 1942 Soviet troops were being killed or captured at 9,000 per day (Krivosheev 1993, p. 143). While premature civilian deaths have never been counted in the same detail as military deaths, on a daily basis at least 2,000 Soviet civilians suffered death prematurely behind Soviet lines (and another 9,000 behind the German lines).<sup>1</sup>

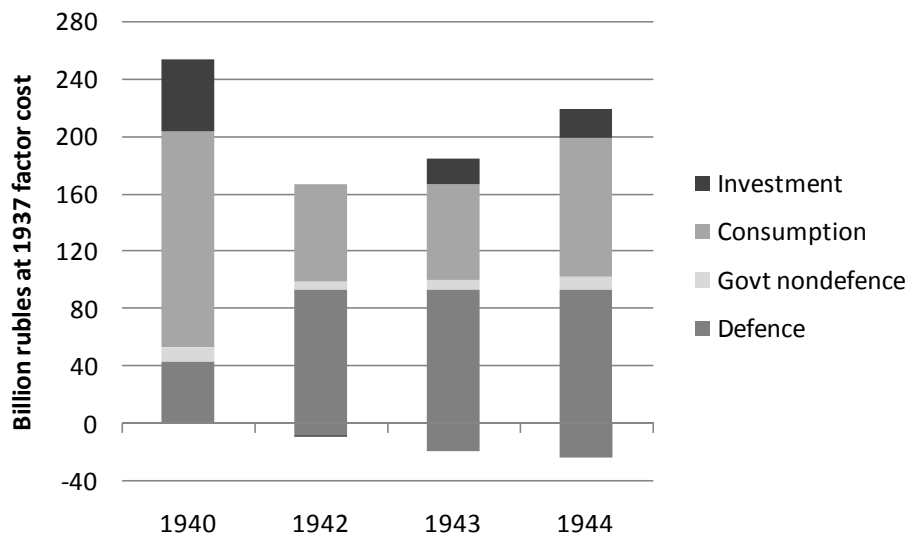
At the midpoint of the war, then, the situation was this. There had been a huge mobilization of resources into combat, and this in itself was a remarkable achievement. In spite of it, the Red Army was not winning the war. Behind the battlefield, the economy was near to collapse. Fixed investment in 1942 did not

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<sup>1</sup> Barber and Harrison (2005, pp. 225-226) give more detail. While there were undoubtedly hunger deaths in the general population under Soviet control, civilian deaths in 1942 were disproportionately selected from two categories: prisoners in labour camps, and those living under siege in Leningrad. Later in the war ethnic minorities deported from the Caucasus on suspicion of collaboration with Germany formed a third category chosen for special treatment that led to disproportionate mortality.

cover capital depreciation; inventories were falling. There was not enough food or fuel to keep everyone alive. In short, the stocks of both people and physical capital were tending to shrink, because neither could be maintained by the resources available. Other things being equal, in the next period there would be less production, and the war effort would dive into the ground.

Chart 3. Gross national product of the Soviet Union, by final use, 1940 and 1942 to 1944 (billion rubles at 1937 factor cost)



Note: Investment is gross capital formation, including not only inventories but also depreciation; this means that when gross investment was zero (as in 1942), net investment was negative. Consumption is the sum of outlays on household consumption and communal services. Government spending is split between defence and non-defence uses. The Soviet gross national product is the sum of the items shown *above* the horizontal axis, while the sum of *all* items, both above and below the line, equals the total of resources available to the Soviet Union in each year. The excess of total resources available over GNP was made up by net imports (chiefly, British mutual aid and United States Lend-Lease). Thus, the area *below* the horizontal axis shows the contribution to total Soviet resources from foreign military-economic assistance; in the chart foreign assistance is set against domestic defense outlays but this is arbitrary to the extent that domestic resources were transferable between uses.

Source: Harrison (1996, p. 104).

This situation was not sustainable. Without relief, the economy would collapse. Relief now came from the victories at Stalingrad in the winter of 1942, and at Kursk-Orel in the summer of 1943, and from the arrival of foreign aid in increasing quantities. As a result, the economy was stabilized.

Some years would pass before the Soviet consumer experienced real relief. In 1944 and 1945 the economy began to recover but new burdens arose from the recapture of territories devastated by looting, enslavement, and extermination. The occupied territories required not only rebuilding but repopulating, since more than 13 million of their people had died prematurely. In 1946 there were fresh hardships to face across the country and one to 1.5 million famine deaths (Ellman 2000).

In summary, 1942 had two remarkable features. One was how close the Soviet economy came to collapse. The other is that it did not collapse, despite suffering an attack of vast dimensions that resulted in a deep invasion. In this respect the Soviet experience of World War II was entirely exceptional. In two world wars, relatively poor countries such as the Soviet Union that were seriously attacked were defeated either immediately or after their economies had disintegrated (Broadberry and Harrison 2008). The Soviet Union was the only country to break this rule.

## War preparations

Expectations of war played an essential role in the Stalin revolution. This is something that historians have rediscovered. During the Cold War, economists on both sides described a Soviet strategy or model for economic development that was motivated by social goals of a predominantly civilian and welfare nature, perhaps distorted by an unduly long time horizon and willingness to impose present sacrifices for the sake of future generations (Dobb 1948; Spulber 1964a,b; Wilber 1969; Nove 1969; Hunter and Szyrmer 1992; Allen 2003). Partly for lack of information, scholars placed little weight on military considerations or examined them only superficially, with rare exceptions (Carr and Davies 1969).

In contrast, recent studies of Bolshevik politics and policies in the 1920s have advanced new evidence of the heavy weight of internal and external security in Stalin's key decisions to accelerate industrialization, collectivize peasant farming, and squeeze consumption for the sake of accumulation and defense (Simonov 1996; Samuelson 2000, Stone 2000; Ken 2002; Sokolov 2008).

How did the Bolsheviks envisage the future war? Historians have placed much emphasis on the important precedent of the Civil War. To some, the Civil War directly formed Stalinist institutions such as extreme centralization, allocation by rationing, coercion, and terror (Nove 1969; Cohen 1973; Szamuely 1974; Malle 1985). To others, the Civil War merely presented the Bolsheviks with an opportunity to put into practice ideas that they had already espoused, and so these ideas were reinforced for the future (Roberts 1971; Boettke 1990).

Regardless of the truth of this argument, World War I was formative in a different way: it provided essential lessons about what to avoid. In that war, the Russian economy had been destroyed by military mobilization (Gatrell 2005). The government had taken young men and horses from the villages into the army. Russian industry had converted its facilities to war production, cutting back on the textiles and metal goods for which farm households were willing to trade their surplus food. Whether or not the remaining farmers still had surpluses of food to sell to the towns and the government, they had less incentive to sell it since they could no longer purchase fabricated goods in exchange. Food production declined gradually, and more of it was consumed within the countryside, leaving much less for other uses. Urban consumers were caught in a double squeeze between the peasants and the army. An urban famine developed that dispatched Russia towards economic and military collapse and revolution.

Russia was not special in this regard. The same processes could be seen at work in all the countries at war that retained a substantial sector of low-productivity peasant farmers such as the Habsburg and Ottoman Empires, and even Germany. It is true that government initiatives, such as the introduction of food rationing and procurement at controlled prices, typically made matters somewhat worse, but the underlying problem was the structure of the economy (Broadberry and Harrison 2008). With agriculture in the hands of peasant farmers, the government and the industrial workers were the residual claimants on food. In wartime, when the urban-rural market was disrupted, the peasants decided how much of it to eat, and the government and the industrial workers got what was left. If that was not enough to wage war, the war was lost and the state was overthrown.

Stalin and his supporters understood this weakness. In the economy, Stalin designed his revolution from above to overcome it. From 1929, a command system directed resources from the centre. One of the most important requirements of the command system was a reliable supply of food to the urban-rural market. How could the centre direct the market behavior of more than twenty million small farms? Temporarily it could use force alone, and in the late 1920s peasant farmers with significant food stocks felt the force of government repression and confiscation on an increasing scale. These measures were systematized through mass collectivization, which began in early 1930; the farms were amalgamated into larger units, and through them the government established centralized control over the disposition of the grain harvest (Davies 1980a,b).

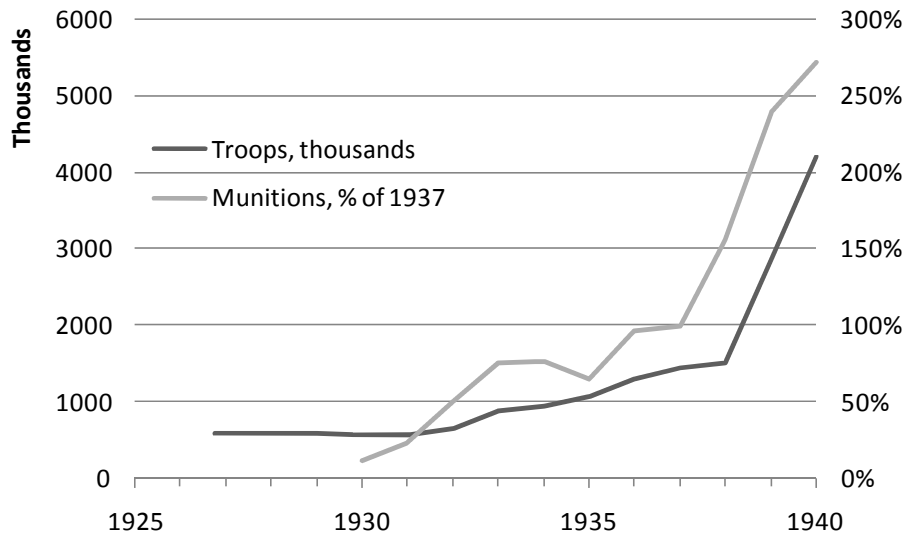
Huge losses accompanied this process. At first, the harsh campaign was a success, extracting millions of tons of grain from the countryside above what the market would have yielded to feed the cities and for export to purchase foreign equipment. Then there was not enough food left for the livestock, which had to be slaughtered. With the loss of horses, the agricultural production system was undermined, causing damage to the following harvests. There was also a measure of bad luck in poor weather. Eventually, rising exactions and falling harvests left insufficient food in the countryside to keep all the people there alive. By the time this was recognized, it was too late to prevent millions from dying of hunger (Davies and Wheatcroft 2003; Kondrashin 2008). More millions were sent into internal exile or imprisoned in labour camps. These losses made it impossible to continue the extraction of resources from the countryside on the scale that the government expected. In this sense, the rapid industrialization of the 1930s took place despite collectivization, not because of it (Millar 1974; Ellman 1975).

From another angle, collectivization tells a different story. It reveals the price that Stalin was prepared to pay in capital resources and the lives of others in order to show that from now on the government, not the peasant, was the master. The government would define the quantity of food that was surplus to rural consumption, and would take it. The peasant became the residual claimant on food.

There are different views on the pace of militarization of the prewar Soviet economy. Pointing to the strong influence of the military in plans and policies and the pervasive militarization of institutions, David Stone (2000) argued that the Soviet economy was already highly militarized by the completion of the first five year plan

in 1932. At this time, however, the weights of the defense industry in the economy and of defense outlays in national and public expenditure remained at a low level, and for this reason R. W. Davies (2008) replied that full scale militarization was not apparent until the late 1930s when war was already imminent.

*Chart 4. Soviet rearmament, 1926/27 to 1940: troops and munitions supplied*



Source: Davies and Harrison (1997, pp. 373, 374).

Both views have their place. What Stalin aimed to create through the first five year plan was a potential for speedy mobilization rather than immediate war capacities. In the early 1930s, military spending and investment in defense factories grew rapidly, but remained at modest levels in proportion to the economy. There was a steady escalation of strategic threats to the Soviet Union, however, from the Far East as well as from the West. These events gave rise to corresponding pressure to rearm; as Chart 4 shows, the pressure gave rise to curves of military mobilization and production that ascended with particular rapidity from 1938 onwards. As a result, the strategy of creating reserve capacities available for mobilization when required continually tended to give way to a different strategy, one of putting the reserve capacities to immediate use for building military equipment in very large numbers – from 1930 to 1940, nearly 30,000 tanks and more than 40,000 military aircraft, for example (Davies and Harrison 1997).

An important breakthrough accompanied this shift. This was the transfer of most Soviet defense factories to mass production and standardized, interchangeable parts. New production systems were imposed on the defense industry in the teeth of resistance from the old culture of craft engineering. The artisan tradition of incremental local “improvement” on designs approved at the centre had two unwanted consequences: it continually halted production and so increased costs and lowered productivity; and it meant that military engineers in the field could never be sure that a mechanical ball or pin manufactured in one factory would fit a socket manufactured in another. The middle years of the decade saw a war of



attrition between the government and industry that the government won – seemingly, just in time for the war (Davies and Harrison 1997; Harrison 2000).

## The test of war

When war broke out, the costly policies of collectivization and rearmament turned out to have had some benefits. Food and mass production were both critical elements in the success of the war economy. In food supply, the important change was that the peasants took the place previously occupied by the urban workers and soldiers as residual claimants on food. Yields collapsed, but the shares that were taken by government procurement agencies, 38 per cent of the grain harvest and 43 percent of meat supplies in 1940, rose to 47 and 68 per cent respectively in 1942 (Harrison 1990, p. 84).<sup>2</sup> This outcome was the opposite of the experience of World War I – and it was the intended result of collectivization. As a result, there was no urban famine in World War II, except in Leningrad where the blockade made starvation unavoidable; widespread hunger could not be prevented, but supplies to the army, the defense industry, and the urban population were protected.

Whether this can be said to have justified the immense suffering and costs of collectivizing agriculture in the first place is another matter. From the perspective of the wartime experience, we can say the following. Without collectivization there would have been a more prosperous agriculture in the 1930s, and more food would have been available when war broke out. On the other hand, without collectivization it would have been more difficult to transfer the food from the countryside to the war workers and soldiers, since the peasants would have retained and probably exercised their option to retreat into self-sufficiency in the face of wartime disruption of the urban-rural market. From this wartime perspective, collectivization brought a net gain.

Collectivization entailed a profound violation of social justice, on the other hand, and this should matter in so far as the Allies waged war in its name. Collectivization was achieved at the cost of millions of deaths of people who could never be compensated for their sacrifice; not only did the Soviet state not honour them after death, it tried to suppress their memory. Although the Bolsheviks professed to be building a society based on principles of fairness, they never showed much interest in equity over time, across the generations, and it is not obvious why people that were alive in one period of time should have been treated so much worse than those that would be alive in the following period.

Further issues concern political accountability and individual choice. Individual choice is involved when people choose to make sacrifices because they care more about their children than themselves. Those who died because of collectivization were not asked to make a choice, however; they were just deprived of food and killed (often, along with their children).

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<sup>2</sup> Liveweight meat procurements are measured against deadweight output; this must bias the share upwards without affecting the sign of the large change from 1940 to 1942.

Political accountability is raised by the fact that the leading democracies also traded lives for victory. In Britain and North America, leaders that called for sacrifices had to compete for office beforehand, and face the judgment of the electorate afterwards. In Britain, for example, the Parliament changed the prime minister in 1940 when the war was going badly, and the electorate changed him again in 1945 when the war was won. That might seem ungrateful but Churchill accepted it as the will of the electorate. Stalin passed the test of war, but he never submitted himself to the test of a free and fair election.

I turn to the effectiveness of prewar industrial policies. When war broke out, again, these policies turned out to have had benefits but the benefits were much less than might have been expected. The rearmament required a large consumption sacrifice; on the figures underlying Chart 3, by 1940 defense outlays were consuming about 17 per cent of Soviet GDP. In fact, prewar industrialization brought no benefit to the Soviet consumer because all of the increase in output was recycled back into investment or defense. The defense sector benefited, but by less than might appear. It is true that tens of thousands of tanks and aircraft were built during the 1930s but, of those added to the combat stocks existing in 1941, most were lost immediately or turned out to be unusable. There was a benefit to investment, but again there was a detriment too: many of the specialized defense factories built in peacetime were located in regions exposed to attack and were lost or had to be moved to the remote interior; the relocation process was immensely costly in itself, and precious time was lost while the production facilities in transit.

In contrast, the market economies that were faced with defending themselves against aggression put the primary emphasis on building a flexible industrial system that produced civilian goods in peacetime but could be converted to war production rapidly when needed. As a result, Britain and America were able to avoid accumulating large stockpiles of equipment that became obsolete before they could be used. It could be objected that this strategy lacked commitment; as a result, they failed to deter the aggression of the Axis powers. But this criticism is weakened by the Soviet experience. Although Soviet preparations were very extensive, and conveyed plenty of commitment, they too did not have a deterrent value. If they had, the war might not have happened.

In wartime as in peacetime, the Stalinist pattern of war preparations through industrialization turned out to have important gaps. The goals of the five-year plans were heavily biased towards things fabricated from steel and cement and the electric power required to produce them. Because the rival powers made large quantities of these, Stalin and his associates may well have supposed that there was a causal connection: make lots of steel and cement and become rich like the West. But steel and cement were not as critical as they thought. Other processes were probably more important in "causing" economic development. In particular, the costs of copying and transmitting information were shrinking rapidly with modern printing and cable and wireless telecommunications. The productivity of information was rising as incomes rose. Across market economies in the 1930s average incomes were correlated with the consumption of newsprint and access to telephone

networks just as strongly as with ingots of steel or kilowatts of electric power (Harrison 1994).

In this respect the Bolshevik development model, if it existed, was seriously incomplete, and failed to reckon with the falling cost and rising value of information. The Bolsheviks' traditions of secrecy and monopolization of information led them deliberately to suppress the opportunities associated with the age of information. In peacetime, information flowed sluggishly through distorting channels, or was locked away altogether in the deep freeze of Stalinist secrecy. In wartime, the Soviet Army paid a heavy price in poor communications among the frontline units and with the command staff. They made this good by importing large quantities of radios and field telephones from the United States, including a million miles of telephone cable.

The Soviet prewar rearmament was very costly, therefore, partly because it involved the accumulation of large stocks of weapons and facilities that turned out to have much less military value than was thought at the time. There was also a characteristic neglect of information and communication technologies. To set against these were two clear gains.

One gain was the habituation of the workforce to the idea of a likely war. There was a lot of contingency planning for the wartime mobilization of industry. Much of it was superficial or fanciful (Davies 2008). One benefit of this activity, however, was that the mobilization plans left no one in any doubt that war was possible. If war broke out, everyone was expected to do something at once, even if it was not completely clear what that should be. No one was to sit around waiting to see what would happen next.

The other gain lay in having won the battle for mass production before the war broke out. However costly it may have been to produce and deliver those ultimately useless tens of thousands of airplanes and tanks in peacetime, it is hard to see any other way in which the experience of mass production could have been embedded in Soviet factories and work teams before the war broke out. This experience was critical to Soviet industry's wartime production "miracle." Using the techniques of mass production and standardization embedded before the war, by 1943 Soviet industry was delivering weapons to the Red Army at a small fraction of the real unit costs of 1940 (Voznesensky 1948, p. 92; Harrison 1996, pp. 221-228). It was because of this that, in the decisive years of the war, Soviet industry was able to produce larger numbers of tanks and airplanes in fewer models and longer runs than the German adversary (Harrison 2000).

To summarize, the successful implementation of the Stalinist command system in wartime was the intentional result of prewar policies that Stalin designed for that very purpose. The policies that worked towards this goal were the mass collectivization of agriculture and the establishment of a modern defense industry based on mass production and standardization. This was not a chance evolution; the hand of the designer has left clear traces in official documents and memoirs.

At the same time, the designer was not that intelligent. Stalin's war preparations, while purposeful, were hugely wasteful. Collectivization was a peacetime disaster. It decimated the human and social capital of the Soviet countryside and impoverished and alienated the majority of the population.

Knowing that his policies were filling the country with dumb resentment and unexpressed bitterness, Stalin launched a preventive war, not in 1941 against Germany as is sometimes alleged, but in 1937 against the “enemy within” (Khlevniuk 1995). Through show trials and secret mass operations, Stalin attempted to eliminate the potential traitors beforehand. Despite killing a million people, he failed to do so: there were still plenty of actual traitors when war broke out. Possibly, Stalinist terror created more new traitors than it killed old ones.

## Conclusions

The Soviet economy eventually collapsed in 1991, at a time of growing international relaxation, when the burden of military outlays was shrinking, when the only threat to the country’s borders came from within. It did *not* collapse in 1941, with its territory deeply penetrated by the mightiest military machine in the world at the time for the purposes of a genocidal onslaught.

The reasons include Soviet preparations for war, Stalin’s successful exploitation of national feeling and repression to hold the war effort together, and the provision and effective utilization of Allied assistance. Stalin declared afterwards (*Pravda*, February 10, 1946) that the war had provided “a great school of testing and verification of all the people’s forces ... an examination for our Soviet system, our state, our government, our Communist Party.” If World War II was a test, then the Soviet war economy passed it.

Stalin claimed that the Soviet economy had been proven more effective than capitalism at the tasks of both peace and war. Stalin was half right: despite the costs and weaknesses that we have reviewed, the Soviet economy was able to mobilize its resources effectively under the colossal pressures of wholesale attack. It was able to commit a proportion of its resources to the battlefield that matched those achieved by market economies at a much higher development level. The fact that it was assisted by substantial Allied aid is significant, but does not detract from the remarkable resilience that was in evidence.

Success in war is no criterion or guarantee of a good society, however. World War II presented criteria only of ruthless discipline, technology, and state capacity. Other societies that passed similar tests at one time or another have included those of Alexander the Great, Julius Caesar, Chinghiz Khan, and the Moghuls. We do not look back to these for lessons on how to organize our own society. Nor should we look to Stalin. Hitler’s Germany almost won its war; would that have made it a model for us to copy?

The methods that Stalin employed to prepare the Soviet economy for war were bloody and disastrous by the standards of peacetime. Stalin’s claim of an advantage for the Soviet state in peaceful uses of resources turned out to be false. For wartime purposes, the Soviet advantage was confined to its ability to drive up the share of resources for national priorities at the expense of the personal well-being of its citizens. Societies at war are also measured by their enemies, and Hitler’s Germany provided the measure of Stalin’s Russia. Stalin’s place in history has benefited from

the fact that he was not the only murderous tyrant of his day. The claim that he was better than Hitler is arguable, but also speaks for itself.

## References

- Allen, Robert C. 2003. *Farm to Factory: a Reinterpretation of the Soviet Industrial Revolution*. Princeton: Princeton University Press.
- Barber, John, and Mark Harrison. 2006. Patriotic War, 1941 to 1945. In *The Cambridge History of Russia*, Vol. 3, *The Twentieth Century*, pp. 217-242. Edited by Ronald Grigor Suny. Cambridge: Cambridge University Press.
- Bellamy, Chris. 2007. *Absolute War: Soviet Russia in the Second World War*. Basingstoke: Macmillan.
- Boettke, Peter J. 1990. *The Political Economy of Soviet Socialism the Formative Years, 1918-1928*. Boston: Kluwer Academic Press.
- Broadberry, Stephen, and Mark Harrison. 2008. Economics of the World Wars. In *The New Palgrave Dictionary of Economics*, second edition. Edited by Stephen Durlauf and Lawrence Blume. Basingstoke: Palgrave Macmillan.
- Carr, E. H., and R. W. Davies. 1969. *Foundations of a Planned Economy, 1926-1929*, vol. 1 (London).
- Cohen, Stephen F. 1973. *Bukharin and the Bolshevik Revolution: A Political Biography, 1888-1938*. Oxford: Oxford University Press.
- Davies, R. W. 2008. Planning for Mobilization: the 1930s. In *Guns and Rubles: the Defense Industry in the Stalinist State*, pp. 118-155. Edited by Mark Harrison. New Haven: Yale University Press.
- Davies, R. W. 1980a. *The Industrialisation of Soviet Russia*, vol. 1. *The Socialist Offensive: the Collectivisation of Soviet Agriculture, 1929-1930*. Basingstoke: Macmillan.
- Davies, R. W. 1980b. *The Industrialisation of Soviet Russia*, vol. 2. *The Soviet Collective Farm, 1929-1930*. Basingstoke: Macmillan.
- Davies, R. W., and Mark Harrison. 1997. The Soviet Military-Economic Effort under the Second Five-Year Plan 1933-1937. *Europe-Asia Studies* 49:3, pp. 369-406.
- Davies, R. W., and S. G. Wheatcroft. 2003. *The Industrialisation of Soviet Russia*, vol. 5. *The Years of Hunger: Soviet Agriculture, 1931-1933*. Basingstoke: Macmillan.
- Dobb, M. H. 1948. *Soviet Economic Development since 1917*. London: Routledge & Kegan Paul.
- Ellman, Michael. 1975. Did the Agricultural Surplus Provide the Resources for the Increase in Investment in the USSR During the First Five Year Plan? *Economic Journal* 85:340, pp. 844-863.
- Ellman, Michael. 2000. The 1947 Soviet Famine and the Entitlement Approach to Famines. *Cambridge Journal of Economics* 24:5, pp. 603-630.
- Gatrell, Peter. 2005. Poor Russia, Poor Show: Mobilising a Backward Economy for War, 1914-1917. In *The Economics of World War I*, pp. 235-275. Edited by Stephen Broadberry and Mark Harrison. Cambridge: Cambridge University Press.
- Harrison, Mark. 1994. GDPs of the USSR and Eastern Europe: Towards an Interwar Comparison. *Europe-Asia Studies* 46:2, pp. 243-59.
- Harrison, Mark. 1998. The Economics of World War II: An Overview. In *The Economics of World War II: Six Great Powers in International Comparison*, pp. 1-42. Edited by Mark Harrison. Cambridge: Cambridge University Press.
- Harrison, Mark. 1990. Soviet Industrialisation and the Test of War. *History Workshop Journal* 29 (1990), pp. 65-84.

- Harrison, Mark. 2000. Industrial Mobilisation for World War II: a German Comparison. In *The Soviet Defence Industry Complex from Stalin to Khrushchev*, pp. 99-117. Edited by John Barber and Mark Harrison. Basingstoke and London.
- Harrison, Mark. 1996. *Accounting for War: Soviet Production, Employment, and the Defence Burden, 1940-1945*. Cambridge: Cambridge University Press.
- Hunter, Holland, and Janusz M. Szyrmer. 1992. *Faulty Foundations: Soviet Economic Policies, 1928-1940*. Princeton: Princeton University Press.
- Ken, O. N. 2002. *Mobilizatsionnoe planirovanie i politicheskie resheniia. Konets 1920-seredina 1930-kh gg*. St. Petersburg: Evropeiskii universitet v Sankt-Peterburge.
- Khlevniuk, Oleg. 1995. The Objectives of the Great Terror, 1937-38. In *Soviet History, 1917-1953: Essays in Honour of R. W. Davies*, pp. 158-76. Edited by J. M. Cooper, Maureen Perrie, and E. A. Rees. New York: Macmillan.
- Kondrashin, Viktor. 2008. *Golod 1932-1933 godov: Tragediia Rossiiskoi derevni*. Moscow: ROSSPEN.
- Krivoshchev, G. F. 1993. *Grif sekretnosti sniat. Poteri voeruzhennykh sil SSSR v boevykh deistvii i voennykh konfliktov. Statisticheskoe issledovanie*. Moscow: Voennoe izdatel'stvo.
- Malle, Silvana. 1985. *The Economic Organization of War Communism, 1918-1921*. Cambridge: Cambridge University Press
- Millar, James R. 1974. Mass Collectivization and the Contribution of Soviet Agriculture to the First Five-Year Plan: A Review Article. *Slavic Review* 33:4, pp. 750-766.
- Nove, Alec. 1969. *An Economic History of the USSR*. London: Allen Lane.
- Roberts, Paul Craig. 1971. *Alienation and the Soviet Economy*. Albuquerque: University of New Mexico Press.
- Samuelson, Lennart. 2000. *Plans for Stalin's War Machine: Tukhachevskii and Military-Economic Planning, 1925-41*. London and Basingstoke: Macmillan.
- Simonov, N. S. 1996. *Voенно-promyshlennyi kompleks SSSR v 1920-1950-e gody: tempy ekonomicheskogo rosta, struktura, organizatsiia proizvodstva i upravlenie*. Moscow: ROSSPEN.
- Sokolov, Andrei. 2008. Before Stalinism: The Early 1920s. In *Guns and Rubles: the Defense Industry in the Stalinist State*, pp. 31-49. Edited by Mark Harrison. New Haven: Yale University Press.
- Spulber, Nicolas. 1964 *Soviet Strategy for Economic Growth*. Bloomington: Indiana University Press.
- Spulber, Nicolas, ed. 1964. *Foundations of Soviet Strategy for Economic Growth: Selected Soviet Essays, 1924-1930*. Bloomington: Indiana University Press.
- Stone, David R. 2000. *Hammer and Rifle: The Militarization of the Soviet Union, 1926-1933*. Lawrence: University Press of Kansas.
- Szamuely, Laszlo. 1974. *First Models of the Socialist Economic Systems: Principles and Theories*. Budapest: Akademiai Kiado.
- Tooze, Adam. 2006. *The Wages of Destruction: the Making and Breaking of the Nazi Economy*. London: Allen Lane.
- Voznesensky, N. A. 1948. *The War Economy of the USSR in the Period of the Patriotic War*. Moscow: Foreign Languages Publishing House.
- Wilber, Charles K. 1969. *The Soviet Model and Underdeveloped Countries*. Chapel Hill: University of North Carolina Press.