

Barbarossa: the Soviet Response, 1941*

Mark Harrison**

The War in Russia

On 22 June 1941, Hitler's war against the USSR began. It was fought mainly on Soviet territory, with tens of millions of soldiers, and hundreds of thousands of aircrafts, tanks and guns on each side. It was the greatest land war of all time.

If World War II directly caused the premature deaths of 50-60 million people, then three fifths of them would die on the eastern front. Official estimates of Soviet national losses, once given as "more than 20 millions," are now put at 27-28 millions (one in 7 of the prewar population).¹ With total wartime deaths among Soviet regular forces

* This paper appeared in German as "Barbarossa: die sowjetische Antwort, 1941," in *Zwei Wege nach Moskau. Vom Hitler-Stalin Pakt bis zum Unternehmen Barbarossa*, pp. 443-63, edited by Bernd Wegner (Munich: Piper, 1992); and in an English version of the same book: *From Peace to War: Germany, Soviet Russia and the World, 1939-1941*, pp. 431-48, edited by Bernd Wegner (Providence, RI: Berghahn Books, 1997).

** Mail: Department of Economics, University of Warwick, Coventry CV4 7AL, UK. Email: mark.harrison@warwick.ac.uk.

¹ The leading Soviet demographer, B. Uralnis, *Wars and Population* (Moscow, 1971), p. 294, gave total worldwide premature deaths as 50 millions, on the basis of a Soviet figure of 20 millions. The higher figure of 27-28 millions was cited authoritatively by the Soviet Commander-in-Chief of the Warsaw Pact forces in a Victory Day anniversary speech in 1990 in *The Guardian*, 8 May (1990); this was apparently based on an emerging consensus among Soviet demographers, summarised by L. Rybakovsky, "Dvadtsat' millionov ili bol'she?" in *Politicheskoe obozrenie*, no 10 (1989). At present, however, higher figures still cannot be excluded. The maximum scholarly estimate of up to 40 millions is supplied by V. I. Kozlov, "O lyudskikh poteryakh Sovetskogo Soyuza v Velikoi Otechestvennoi voiny 1941-1945 gg.," in *Istoriya SSSR*, no 2 (1989). For further discussion of this and other results of the war, see Mark Harrison and John Barber, *The Soviet Home Front, 1941-1945: A Social and Economic History of the USSR in World War II* (London 1991).

now officially fixed at 8,668,400,² it is clear that civilians made up the majority of Soviet war dead, caught in military crossfire, killed by bombing, by blockade and hunger, dying as partisans, hostages and slaves. In the worst period, the winter of 1941, more Leningraders starved to death every month than the total of British civilians killed by German bombs in the entire war; the million premature deaths in this one city comfortably exceeded the combined military and civilian casualties (killed and died of wounds) of the British Empire and dominions and of the United States. As far as military losses are concerned, the great majority of German dead also fell on the eastern front - 5,600,000, compared with 750,000 on other fronts between June, 1941, and the war's end.³

The unique scale and intensity of the war in Russia was already apparent in its opening phase. BARBAROSSA itself was the war's biggest single land operation. The Soviet defenders faced the full frontline combat strength of the Wehrmacht.⁴ The clash devastated the personnel of both the opposing armies. By December, 1941, the Russians had cost the Wehrmacht 750,000 casualties, the German dead totalling nearly 200,000 (by contrast, in the whole of the western campaign in 1940, the Wehrmacht had lost some 156,000 men, including 30,000 dead).⁵ Even so, the German losses were dwarfed by the 1,750,000 dead of the Soviet regular forces up to the end of the year.⁶ The latter figure does not apparently include the millions taken prisoner in 1941 but remaining alive at the end of the year, most of whom died later in captivity.

These six months were of profound significance. At first the Wehrmacht continued along its trail of victories. By mid-autumn Kiev was taken, Leningrad was besieged, and Moscow was directly threatened. But in the end neither Leningrad nor Moscow fell. On the Leningrad front the war of manoeuvre degenerated into a siege war of

² M. A. Moiseev, "Tsena pobedy," in *Voenno-istoricheskii zhurnal*, no 3 (1990), p. 14.

³ Jonathan R. Adelman, *The Tsarist, Soviet and U.S. Armies in the Two World Wars* (Boulder, Colo 1988), pp. 171-3.

⁴ On 22 June, 1941, Germany deployed 153 divisions on the Soviet front, compared with 63 divisions in Germany and in other occupied territories, and 2 divisions on other fronts. These proportions were unaltered six months later. *Velikaya Otechestvennaya voina Sovetskogo Soyuz 1941-1945. Kratkaya istoriya*, 3rd edn (Moscow 1984), p. 502.

⁵ German military sources, cited by Alexander Werth, *Russia at War* (London 1964), p. 259.

⁶ According to Moiseev, "Tsena pobedy," p. 15, 20 per cent of 8.7 million wartime deaths among Soviet armed forces personnel were suffered in the second half of 1941.

attrition. In the long and bloody battle of Moscow, which began in September and lasted until the spring thaw of 1942, Hitler's hopes of a lightning victory were decisively blocked. For the first time, if temporarily, Germany had lost the strategic initiative.

During 1942, Hitler would struggle to regain it. For the Soviet side, in 1942 things would get still worse. German forces advanced across the south to Stalingrad and the edge of the Caucasian oilfields. The German campaign ended with the Soviet encirclement of German forces at Stalingrad in the winter of 1942. The last big German offensive in the east, against the Kursk salient in July, 1943, ended in further defeat. The rest of the war was the story of the slow, still costly, but now inevitable expulsion of German forces from Soviet territory, and the advance of Soviet troops into the heart of Europe in pursuit.

Soviet War Preparations

The Soviet ability to deny victory to Germany in 1941 was rooted in prewar preparations. High military spending and continual preparation for war were already ingrained in Soviet military-economic policy in the 1930s. This contrasted with a background of low military spending in most other European countries where, after World War I, it was believed that Great Wars had become prohibitively costly.⁷

Soviet readiness to maintain high military spending in peacetime went back to 1918, when Bolshevik leaders had learnt the propensity of powerful imperialist adversaries to take advantage of any moment of weakness, and to intervene against the Russian revolution by force. They had learnt then to put more trust in munitions than in paper treaties or diplomacy. Soviet policy prepared continually for war. At the same time, this was not preparation for any particular war, forecast or planned for any specific time and place, but insurance against the possibility of war in general. Soviet military and economic planners did not set their sights on some particular operation to be launched on a set date, but instead aimed to build up an all-round, generalised military power ready for war at some point in the indefinite future.

This pattern of rearmament suffered from two main drawbacks. First, it was enormously costly. It required diversion from the civilian economy both of millions of young men who would otherwise have been available for work, and also of just those industrial commodities in which the USSR was poorest: refined fuels, rare metals and high quality alloys, precision engineering, scientific knowledge and technical expertise. Rearmament cut deeply into the civilian economy and living standards.

The other drawback lay in the possibility of miscalculation. Because the Soviet rearmament pattern aimed at some future war, it was never ready for war in the present. Changing forecasts and expectations

⁷ On Soviet rearmament in comparative perspective, see Mark Harrison, *Resource mobilization for World War II: the USA, UK, USSR and Germany, 1938-1945*, in *Economic History Review*, vol 41 no 2 (1988).

meant that military plans were always under revision. The armed forces were always in the midst of reequipment and reorganisation. Military products already in mass production were always on the verge of obsolescence; defence industries were always half way through retraining and retooling.

At the same time, the Soviet pattern carried important advantages. Germany's strategy was a gamble, staking everything on the possibility of immediate victory. If Soviet resistance could deny victory to the aggressor in the short run, and turn the lightning war which the aggressor expected to win into a protracted struggle, if the Soviets could finally bring to bear their entire national resources upon the struggle, then the aggressor would have lost the advantage. Germany would have entered the war with limited military stocks and low rates of defence output, expecting to win without major loss or need of replacement of weapons on any significant scale. If this expectation were frustrated, Germany's position would be relatively weak; it would be Germany's turn to mobilise frantically, to be forced to sacrifice the civilian economy to the needs of the Army. Conscious of the fragility of the Nazi regime, Hitler was determined to avoid this outcome.⁸

Soviet rearmament proceeded in the 1930s in two main waves. The first accompanied the First Five Year Plan. By the end of it the Soviet Union was already producing a full range of modern weapons; Soviet defence output had reached a high plateau, considerably exceeding the level of output of any other European power. But in the mid-1930s Soviet rearmament lost its head start, in terms of both quantity of forces and quality of weapons produced. From 1937, Soviet defence output and force levels began to multiply again; in 1939 conscription was reintroduced.

The Soviet rearmament of the last years before the war was impressive in its volume and scope. Defence output and Red Army force levels doubled and trebled. By 1940 there were more than 4 million Soviet citizens in uniform (6 per cent of the working population); every month, Soviet industry was producing 230 tanks, 700 military aircraft, 4,000 guns and mortars, more than 100,000 rifles and more than a million shells.

At the same time, this activity won far less immediate military security for the Soviet Union than might have been expected. One reason is that the Soviet concept of combining massive expansion with modernisation resulted in wide differences of quality. Of the millions of soldiers, few were properly trained, or experienced in combat. Most were operating large numbers of obsolete weapons according to outmoded tactical guidelines; a minority was in process of learning to operate modernised weapons in relatively small quantities, using new, poorly absorbed military doctrines.

There were further reasons for poor results, which stemmed from domestic politics. In the Great Purge of 1937-8 the Red Army command had been decimated. The experienced core of general and field officers

⁸ Alan S Milward, *The German Economy at War* (London 1965), pp. 26-7.

had been replaced by an immature, ill educated cohort whose members were typically either drilled in Stalinist dogmas, or cowed by Stalinist threats. Those advocating a flexible response to external aggression, including the inevitability of giving ground to the invader and the necessity of defence in depth, had been accused of conspiring with Nazi leaders to hand over territory, and executed or imprisoned.

In military doctrine, the concept of the operation in depth was replaced by a rigid insistence on frontier defence: invading forces must be met on the Soviet border and repulsed by an immediate Soviet counter-offensive; then the war must be carried onto enemy territory. Thus Stalin, like Hitler, was preparing his country for a short war, and an offensive one. By massing Soviet forces on Soviet frontiers and giving the appearance of an offensive deployment, Stalin hoped to deter German aggression. In practice, the bluff worked badly; it calmed Soviet fears and stimulated Stalin's own complacency, while German observers were not impressed.

The atmosphere of repression inevitably influenced the content of military-economic plans drawn up in the prewar years. Plans for boosting ammunition production in the event of war contained no realistic assessment of combat needs because they assumed a short war ending in a victorious offensive. In factories and cities contingency plans were drawn up for war production in the event of war, but the most obvious preparations for a defensive campaign were neglected. Specialised defence factories were concentrated in vulnerable territories to the south and west. There was talk of dispersing capacity into the interior regions, but nothing was done; it was always cheaper to expand output where production was already concentrated. Nothing was done to prepare vital industrial assets for defence against air attack, or for possible evacuation, since the idea that an invader might penetrate Soviet territory had become treasonous.⁹

Everyone in positions of responsibility believed that there would always be time to make good any oversights.

The Shock of War

The war was a shattering blow to an unprepared population, and to a political leadership which had successfully deceived itself. Stalin himself was not immediately paralysed, and his recently published engagement diary shows that in the first days of the war he was constantly involved in conferences with military leaders and economic administrators.¹⁰ By 28 June, however, the endless succession of stunning setbacks temporarily broke his will; depressed and demoralised, he retreated to a country residence near Moscow. Molotov had to break the news to the Soviet population on the radio. When

⁹ Mark Harrison, *Soviet Planning in Peace and War, 1938-1945* (Cambridge 1985), pp. 53-63.

¹⁰ "Iz tetradi zapisi lits, prinyatykh I.V. Stalinym. 21-28 iyunya 1941 g.," in *Izvestiya TsK KPSS*, no 6 (1990), pp. 216-22.

senior Politburo members came to see Stalin, to propose formation of a war cabinet, his reaction (first anxiety, then relief) implied that he thought they had come to arrest him.¹¹ Later, facing the failure of frontal defence in October, 1941, Stalin tried to buy peace from Hitler in return for the Baltic, Belorussia, Moldavia and part of the Ukraine.¹²

The formal administrative system did not collapse, but its effectiveness was gravely weakened. Rules and planning procedures became irrelevant. While the Wehrmacht cut away Soviet territory, including the country's most important military-industrial centres, economic planners went on turning out factory plans and coordinating supplies. But the factories and supplies only existed on paper. Meanwhile, Army requirements for new supplies of munitions and soldiers just to replace early losses hugely exceeded plans. The gap between needs and resources could not be bridged by any paper plan, and swiftly grew to unbearable dimensions.

What happened now was that informal leadership took over and carried out the essential tasks of war mobilisation. In the economy, the most important measures were a crash programme to evacuate the big munitions factories in the war zones to the remote interior of the country, and the all-out conversion of civilian industry to war production. The evacuation, carried out without any planning beforehand, was an act of inspired improvisation in which the key roles fell to individual leaders - Kaganovich, Kosygin, Shvernik. Other individual leaders - Beriia, Malenkov, Malyshev, Mikoyan, Molotov, Voznesensky - armed with unlimited personal responsibility, took on key tasks of industrial mobilisation and conversion.¹³ All this was carried on regardless of economic plans and attempts at high level coordination, which were irrelevant to the needs of the situation.

Of course individual leaders did not do everything themselves, and their efforts would have been utterly useless if they had not been joined by a common current of mobilisation from below. There was initiative from below, both in the evacuation of economic assets, especially farm stocks, and in the conversion of factories to war production (which

¹¹ Dmitrii Volkogonov, *Triumf i tragediya. Politicheskii portret I. V. Stalina*, vol II, part 1 (Moscow 1989), p. 169.

¹² Nikolai Pavlenko, "Tragediya i triumf Krasnoi Armii," in *Moskovskie novosti*, no 19 (1989), pp. 8-9. Pavlenko cited Marshal Zhukov as first-hand witness to this attempt, initiated by Stalin on 7 October, 1941. Volkogonov, *Triumf i tragediya*, vol II, part 1, pp. 172-3, places the episode as early as July, 1941, but in this he is apparently mistaken.

¹³ Sanford R Lieberman, "The evacuation of industry in the Soviet Union in World War II," in *Soviet Studies*, vol 35, no 1 (1983); Sanford R Lieberman, "Crisis management in the USSR: The wartime system of administration and control," in Susan J Linz, ed, *The Impact of World War II on the Soviet Union* (Totowa, NJ 1985); Harrison, *Soviet Planning in Peace and War*, pp. 63-100.

followed prewar plans drawn up in factories, municipalities and industrial branch administrations). Initiative from below did not mean that there was no organisation, but the point was that people did these things without first waiting for instructions from the Kremlin.

Soviet political authority remained in civilian hands. This is reflected in composition of Stalin's war cabinet, the GKO (State committee of defence), formed on 30 June, which included only one soldier, Marshal Voroshilov; Stalin himself took on the role of Supreme Commander-in-Chief. The Army itself was fully occupied with fighting the Germans, and had neither time nor resources to divert to matters of home or foreign policy.

This does not mean that civil-military relations would remain unchanged. At the outset, Stalin exercised untrammelled personal influence over grand strategy and detail of military policy and appointments. The professional autonomy of military leaders and institutions had been reduced to insignificance. The main factors ensuring this were the savage Red Army purge of 1937-8, which created an atmosphere of terror, and resulted in wholesale replacement of the officer corps; and the colossal numerical expansion during 1938-40, which further lowered the average professional standards of army officers. However, the setbacks of 1941 (and more would come in the following spring) rendered Stalin's defects as a military commander embarrassingly visible in wrong strategic dispositions and in an incapacity to organise defence in depth. After a while, professional soldiers would begin to wrest back some control over military operations and planning. Stalin would learn to act less like a dictator, more like an arbitrator between conflicting professional standpoints. In 1941, however, this remained in the future. For the time being, Stalin would deflect potential criticism by executing the generals responsible for frontier defence.

Stalin never ceded any military influence over grand strategy or diplomacy. Additionally, even in the planning and conduct of military operations, Stalinism left an indelible stamp, for example in the lack of previous calculation of casualties, and in the reckless pursuit of arbitrary objectives despite huge military and civilian losses, from start to finish of the war.¹⁴

Economic Requirements

The key to victory in World War II was munitions of all kinds: aircraft, tanks, ships, guns and shells. In the end, the Allies won the war because they were able to produce munitions in vastly greater quantity than Germany and Japan.

The Soviet Union's contribution to Allied munitions was ultimately very substantial - at least as much as that of the United Kingdom, and as much as half that of the United States. Soviet war production would

¹⁴ *Istoriki sporyat. Trinadtsat' besed* (Moscow 1988), p. 314; Kozlov, "O lyudskikh poteryakh," p. 132.

exceed Germany's total by as much as two thirds.¹⁵ The quantities involved were fantastic. During the war, Soviet production alone would amount to 100,000 tanks, 130,000 aircraft, 800,000 field guns and mortars and up to half a billion artillery shells, 1,400,000 machine guns, 6,000,000 machine pistols and 12,000,000 rifles. (However, the Soviet Union produced hardly any warships, jeeps or military trucks.)

In 1941 these quantities were still unimaginable. No one expected a war of these dimensions. The Germans did not expect it because they planned to win their wars quickly and without major losses. Even now, the Allies knew that to beat the Germans would take time and resources, but they did not understand how much. After the failure of the German Blitzkrieg the Allies succeeded in committing increasing resources to the war. But as yet they did not understand that Germany, although stalemated and under increasing pressure, was far from exhausted. On the contrary, German leaders had only begun to tap the available resources. From the Soviet invasion to July, 1944, Germany's war production would treble. This burst of effort would be too late. Nonetheless it meant that the Allies, too, would be forced to devote absolutely undreamt-of resources to their own war production.

Still, the most important factor underlying the future war of production was already clearly visible in 1941. This was the unprecedented expenditure of combat equipment. A Red Army gun would last 18 weeks in the field. The average life of a Soviet combat aircraft was 3 months, and that of a Soviet tank was barely longer. At the worst, in a typical week of the winter of 1941, the Soviet frontline forces would be losing one sixth of their aircraft, one seventh of their guns and mortars and one tenth of their armoured equipment.¹⁶

There were special reasons which heightened the demands of the eastern front. One was the relatively intense character of the fighting. Much more than the British and the Americans, the Russians were faced with a war of national extermination. They carried on fighting under conditions in which soldiers of other nations might have given ground, and their losses were correspondingly heavy.

Another reason was the profound disadvantage of the Soviet soldier when it came to handling the equipment of modern war. Soviet pilots and tank or gun crews lacked the training and combat experience of the Wehrmacht, especially in the early stages. The threshing of Red Army personnel, first by Stalin in 1937-8, then by Hitler in 1941-2, ensured this. By 1942 the typical Soviet soldier was very young and green, as likely to write off his brand new Il-2 on the airfield as under enemy fire. The Luftwaffe rated the Soviet air forces much lower than their British and American counterparts, and "used Russia as a school for

¹⁵ Mark Harrison, "The volume of Soviet munitions output, 1937-1945: A reevaluation," in *Journal of Economic History*, vol 50, no 3 (1990), Table 8.

¹⁶ Derived from Harrison, *Soviet Planning in Peace and War*, pp. 110-15.

inexperienced pilots. There they could build flying and fighting skills before being thrown into the cauldron of western air battles.”¹⁷

Conditioning everything was a third factor, the Stalinist reliance on harsh and wasteful military policies which set too little emphasis on the avoidance of losses. For example, Soviet home militia units, consisting largely of untrained industrial workers lacking qualified officers and proper weapons, were sent to the front to be slaughtered. Soviet tanks were also squandered.¹⁸ When planning military operations, high officials generally did not take into account the possible human casualties, and also ignored the likely losses of equipment. Formed in the desperate days of 1941, reinforced by the low valuation which Stalinist ideology placed on the human “cogs” which made up the military and economic machine, this habit would persist through the war into the period when there was no compelling need to spend resources so carelessly.

Soviet war industries thus faced a double task of daunting magnitude - not only to make good the initial heavy losses, under conditions which were far from ideal in the first place, but also to supply additional resources for the huge expansion of the armed forces which the war required.

Restructuring the Economy

From 22 June, 1941, a new acceleration of Soviet war production was marked. In the first half of the year the monthly output of Soviet war factories had included 1,000 aircraft, 300 tanks, nearly 4,000 guns and mortars, and 175,000 rifles. In the second half of the year these rates rose to 3 300 aircraft, 800 tanks, 12,000 guns and mortars, and 270,000 rifles per month. More than 10 million shells, mines and bombs were produced on a monthly basis. Even so, this was just the beginning. By the wartime peak in 1944, monthly Soviet output would stand at 3,400 aircraft and nearly 1,800 armoured fighting vehicles, 11,000 guns and mortars, 200 thousand rifles, and 19 million shells, mines and bombs.¹⁹

The great expansion was very costly. Neither the defence industries nor the civilian economy were ready for it. Different lines of war production were not coordinated with each other; for example, at first the output of guns raced ahead of shell production. In the autumn, the production of aircraft and armour fell behind because of the high proportion of factories being decommissioned and put on wheels for transfer from the battle zones to the interior regions.

¹⁷ Williamson Murray, *Luftwaffe: Strategy for Defeat, 1933-1945* (London 1988), p. 371.

¹⁸ Vitali Shlykov, “On the history of tank asymmetry in Europe,” in *International Affairs*, no 10 (1988).

¹⁹ Harrison, *Soviet Planning in Peace and War*, pp. 250-1.

Moreover, the expansion of war production was completely out of balance with what was happening elsewhere in the economy. While defence output climbed, everything else pointed to collapse. Between the first and second halves of 1941, supplies of coal and electric power fell by a third. Supplies of pig iron, crude steel and rolled steel products were down by as much as one half. The output of machine tools had fallen by two fifths. The 1941 grain harvest was also down by two fifths in comparison with 1940. And even these disastrous declines would look good in comparison with the further setbacks waiting round the corner in 1942.

The dreadful performance of the civilian economy was partly a measure of German success in capturing territory. Huge industrial complexes vital to the manufacture of modern weapons were lost or decommissioned. On the remaining territory, agricultural production was carried on only with great difficulty; the main causes were the loss of the best agricultural land in the southern regions, the loss of horses and tractors, and the disappearance of young men from the agricultural workforce. But the downward spiral of the civilian economy was worsened further by the Soviet pursuit of war production at any price, which took away additional resources and intensified the disequilibrium between the growth of munitions and the collapse of everything else.

Moreover, the widening imbalance would also take its toll of munitions output. Without a minimum level of civilian output, there could be no war production. To be operated, defence factories needed metals, fuels, machinery and electric power. They also needed workers, who could not live without food, clothing and shelter. The civilian economy was also crucial because, as well as munitions, the Army needed huge quantities of food rations, petrol and aircraft fuel, transport services, and building materials - the means of military construction and operations.

While expanding defence output continued to be coupled with civilian economic collapse, there was still a danger that war production might at any moment grind to a halt. Munitions plants might simply run out of steel and power, or munitions workers might starve. In 1941-2 these things were clear and present dangers, all of the time to some degree but especially in the winter months of 1941 and 1942.

To prove the point, in the winter of 1941 war production faltered. More than 2,200 aircraft were produced monthly in the third quarter, but barely more than 1,000 in the fourth. In December only 39 per cent of the aircraft programme was fulfilled, and only 24 per cent of the plan for aeroengines. The monthly supply of medium T-34 and heavy KV tanks fell from 540 to 400. By the first ten days of January, 1942, shell production had fallen to 20-30 per cent of the plan.²⁰ Measured by the gap between military needs and available supplies of war goods, this was the worst moment of the war, and it accompanied the nerve-racking, decisive stages of the battle of Moscow. Early in 1942 the meteoric rise of war production would be resumed, but to stabilise its

²⁰ Ibid., pp. 92, 251.

foundations in the civilian economy would take further titanic efforts and eventually considerable external economic support.

Labour, Food

This was a war of production, and productive effort was limited chiefly by the availability of workers, hours and intensity of work. The problem was that, when war broke out, several millions of additional soldiers and war workers were required almost overnight; on the other hand, the supply of workers not only did not increase but was cut by many millions because of the loss of territory.

The prewar industrial labour market was already under strain. It was also heavily regimented under emergency labour laws enacted in 1938 and 1940, which had brought increased hours of work and reduced freedom of movement from one job to another. The war brought with it a further proliferation of controls on workers. Steps were taken immediately to reduce normal leisure time and holidays and to increase hours of work which, in industry, rose from 41 hours on average before June 1940 and 48 hours thereafter to 54-55 hours in 1942.²¹ Other measures were adopted, although with some delay, to ensure that the working population was mobilised to the maximum extent through universal liability to perform either military or civilian service.

A more complex issue was how to ensure that the right proportions were maintained between numbers of military personnel, of war workers delivering munitions, fuel and other goods to the armed forces, and of civilian workers. At first there was chaos in the labour market, with different rival military and civilian agencies competing to recruit workers for different purposes. New, more centralised institutional controls were required to overcome this; they were worked out in the course of war mobilisation, and it would take right through 1942 to get them right.²²

These measures, undertaken from above, were met with a ready response from below. There was an immediate flow of volunteers for war work, including many hundreds of thousands of housewives, college and school students, and pensioners. The response from below extended to massive participation in organised programmes such as the emergency tasks of industrial evacuation and conversion, and the industrial movements of "socialist emulation" - individuals and groups pledged to double and triple fulfilment of low peacetime work norms.²³

²¹ According to N. A. Voznesensky, *War Economy of the USSR in the Period of the Patriotic War* (Moscow 1948), p. 91, in 1942 the industrial worker's hours exceeded those worked in 1940 by 22 per cent.

²² Harrison, *Soviet Planning in Peace and War*, pp. 185-91.

²³ L. S. Rogachevskaya, *Sotsialisticheskoe sorevnovanie v SSSR. Istoricheskie ocherki. 1917-1970 gg.* (Moscow 1977), pp. 175-212.

Lower level responses were also represented by recruitment into war work from the rural economy, Russia's traditional labour reserve, which was not, however, inexhaustible when compared with wartime needs.

The disruption of the rural economy meant that, for most civilian households and consumers, life in wartime teetered on a precipice. Food became the central concern of household economics.²⁴ By November 1941, bread, cereals, meat, fish, fats and sugar were rationed for almost half the population of the country (the only important foodstuff not to be rationed was potatoes). Most important was bread, which supplied 80-90 per cent of rationed calories and proteins.

Not everyone got the same; there was a pronounced differentiation by age and working status (roughly, in ascending order - adult dependents, children, office workers, industrial workers, war workers, coal face workers). But no one except soldiers and war workers in the most hazardous occupations got enough from rations to live. There was simply not enough to go round, and most people went hungry. In 1941, however, deaths from starvation were restricted to Leningrad.

If rations alone were not sufficient to sustain life, most supplemented their diet from unofficial sources (except for Leningraders, who lacked any surrounding farmlands). From the winter of 1941 these made up the difference between life and death. Big factories and urban households went in for sideline farming on a massive scale. Another unofficial means of survival was the declining trickle of peasant food surpluses sold in the unregulated urban food markets.

How did the collective farmer live under wartime conditions? Here is a "blank space" in Soviet history which we can hardly begin to fill. Certainly, food output per farmworker was falling, while government needs rose. And this happened in a context where, even in peacetime, the attitude of authority to the consumer needs of the village was harsh and arbitrary.

What bread was to the urban worker, the potato became to the peasant. Everything else of importance - proteins, fats and vitamins - came from milk (and, if neither potatoes, nor bread, nor milk, then from grass).²⁵

Not all rural dwellers suffered equally. Food produce became fantastically scarce - but those with food surpluses, however small, could take them to market. In wartime many did so, and this contributed to survival of the urban population. With rising free market

²⁴ U. G. Chernyavsky, *Voina i prodovol'stvie. Snabzhenie gorodskogo naseleniya v Velikuyu Otechestvennuyu voinu (1941-1945 gg.)* (Moscow 1964); A. V. Lyubimov, *Torgovlya i snabzhenie v gody Velikoi Otechestvennoi voiny* (Moscow 1968); William Moskoff, *The Bread of Affliction: The Food Supply in the USSR during World War II* (Cambridge).

²⁵ Yu. V. Arutyunyan, *Sovetskoe krest'yanstvo v gody Velikoi Otechestvennoi voiny*, 2nd edn (Moscow 1970), p. 361.

prices, a few would become rouble millionaires. But the cash income from food sales on the free market would not contribute significantly to peasant living standards, since there was soon nothing else to be bought for cash.

National Feeling

National feeling was of great importance to the Soviet war effort, but not in a simple way. What led Russians and Uzbeks, Ukrainians, Armenians and Azeris, to join in waging war against Germany? Was it in defence of “their” Soviet state, out of loyalty to Soviet institutions and traditions, embodied in a Soviet culture and guided by Soviet leaders? How did ethnic affiliation blend with wartime participation in Soviet political structures? These are questions which have evoked doubt and speculation, and not much else.

It is fairly certain, though, that national feeling did not always point in one direction. This would be demonstrated clearly in 1941. For significant elements of the Soviet ethnic groups most directly confronted by war and German occupation threw in their lot with the invader, and one factor in this may have been a mistaken sense of national feeling, a belief that the Nazis offered some better route to national salvation than the Bolsheviks.²⁶ The basis for such a belief was soon weakened by experience of German treatment of Soviet prisoners of war and occupation policies, but it would still be possible for Vlasov’s Russian Liberation Movement to find popular support in the occupied territories as late as 1943.²⁷

As far as the war effort in the interior of the country was concerned, national feeling was certainly a factor. It was all the more important for the supply of resources to the war economy, because compulsion alone did not prove effective. Wartime experience in the construction industry would show that military-style organisation without attention to worker morale would not give good results.²⁸ Nor could monetary incentives be as effective in wartime, given the extent to which market allocation of consumer goods had been displaced - partly by official rationing, partly by barter which tended to drive out cash on the free market.²⁹ (However, privileged access to rationed goods could

²⁶ John Barber, “The role of patriotism in the Great Patriotic War,” paper to Conference on Russia and the USSR in the XX Century (Moscow 1990).

²⁷ Catherine Andreyev, *Vlasov and the Russian Liberation Movement: Soviet Reality and Émigré Theories* (Cambridge 1987), pp. 47-50.

²⁸ Yu. L. D’yakov, “Promyshlennoe i transportnoe stroitel’stvo v tylu v gody Velikoi Otechestvennoi voiny,” in *Istoricheskie zapiski*, no 101 (Moscow, 1978), p. 60.

²⁹ Moskoff, *The Bread of Affliction*, chapter 8.

evidently be a powerful incentive to participate in war work and to perform reliably at work.)

There was an important relationship between food and morale. In the USSR, as in other warring nations, the wartime food shortage gave rise to “food crimes.” Illicit activity included diversion of state stocks to the black market for resale at high prices; and trade in ration coupons, which could be forged, or stolen from the authorities, or procured by deceit or by theft from individuals.³⁰ All food crimes imposed losses on society, but theft bore most heavily on individual victims. In Leningrad, lost ration cards would not be replaced before the end of each month, in order to discourage falsely reported losses. In the winter of 1941, the citizen deprived of a ration card early in the month because of theft was unlikely to survive without support of family or friends. All food crimes were punished severely and, in Leningrad at least, usually by shooting.³¹

The link from food to civic morale was complex, with many intervening factors. Loss of morale was not invariably the result of food shortages. For example, whole communities in the western territories annexed in 1939-40, in eastern Poland and the Baltic, welcomed the invader without any prompting of material deprivation. At the other extreme lies Leningrad; there, in the winter of 1941, the whole city was dying on its feet, and individuals suffered every kind of physical and moral degeneration, but civic morale did not crack. There was no panic, no looting, and no surrender.

There were many intermediate cases. An instructive case is that of the Moscow “panic” of October 1941, which was prompted not by material deprivation, but by the near approach of German forces combined with the evacuation of main government offices. Then, looting and other breaches of public order were the product not of food shortage but of the fear that the people’s leaders had deserted them.

In order to unify Soviet society for war, the Stalinist regime softened or abandoned prewar themes of internal class war and purging of the enemy within. This took several main forms. Campaigns against the prewar oppositions of left and right were played down, and a limited number of victims of the prewar purges were rehabilitated, especially military and economic leaders.

There were also important concessions to Russian national feelings, which were led by Stalin himself in his speeches and decrees. In the autumn of 1941 there began a restoration of the role of the Army in Imperial Russian history, changing its image from an instrument of imperialist oppression to an agent of national liberation; this trend would culminate in the summer of 1942 with the return to a unified military hierarchy (abolishing supervision of professional army officers

³⁰ See K. S. Karol, *Solik: Life in the Soviet Union, 1939-1946* (London 1986) pp. 94-5.

³¹ Harrison E Salisbury, *The 900 Days: The Siege of Leningrad* (London 1970), p. 533.

by political commissars), and the restoration of privileges of rank. Meanwhile, there was a strong promotion of anti-German feeling.

The other side of the coin was Moscow's persistent distrust of civilian morale and values. Soviet leaders behaved as if they believed that public order was always on the verge of breakdown. This is shown by Stalin's reluctance to allow the evacuation of noncombatants from Leningrad in face of enemy advance, and his willingness to incur the resulting casualties, rather than signal a retreat. This pattern would be repeated in 1942 with the refusal to evacuate Stalingrad of noncombatants, which also resulted in heavy civilian losses.

Uncontrolled Economic Mobilisation

What was the historical significance of 1941? It was the year in which the Soviet Union staved off military and economic collapse. This postponement was of such importance because it derailed Hitler's timetable, placed the achievement of his strategic goals in doubt, and ensured that to continue the struggle for a doubtful victory in Russia would now cost Germany ten or twenty times as much in men and materiel as had been anticipated. German defeat before Moscow marked the first time in the history of the Third Reich when the Wehrmacht lost ground to a defending army, and when Berlin failed to decide the outcome of a clash of forces. Moreover, Hitler's strategy of Blitzkrieg depended upon Germany's holding the initiative continuously for its success.

At the same time, this was not yet the true turning point of the war. For another year, the two sides would struggle to gain or regain the initiative. On the Soviet side, 1942 would mostly be worse than 1941. Not until after Stalingrad would the Soviet war effort be placed on a relatively stable footing, and in some particular respects (for example, in food supply) 1943 would be even worse than 1942.

There were two reasons for deterioration of the Soviet position in 1942. One was the partial success of German strategic plans, which deprived Moscow of further rich economic assets in the south of the country and additionally disrupted the war economy of the interior regions. The other reason lay in the nature of the Soviet economic mobilisation in 1941.

What was the character of this mobilisation? In 1941, Soviet defence industries were saved, and munitions production soared, but everything else was left to look after itself, and plunged into an appalling shambles. Over this mess presided the system of informal management at the highest level, described above - the uncoordinated system of economic leadership by individual members of the war cabinet and Politburo.

The war effort could not be long sustained on this basis. The intolerable strains in the civilian economy in 1942 were not just consequences of successful German offensives, but had been worsened by the uncontrolled pattern of mobilisation in the previous year. Uncontrolled mobilisation had saved the country's immediate military-economic capacities, but at the same time stored up huge problems. The heart of the war economy had been shifted bodily hundreds of

kilometres to the east, and now lay in the Urals and western Siberia where the western and southern factories for making tanks, guns, shells and aircraft had been relocated. This in itself had cost huge resources of civilian transport and construction. Moreover, the remote regions of the interior were utterly unready for such accelerated exploitation. They lacked most things necessary for recommissioning the evacuated war factories - additional workers, housing and food supplies, transport links, electric power, sources of metal products and components, and any kind of commercial and financial infrastructure.

To make good these shortages would cost the economy dearly. Most of the cost was met straight away, in immediate creation of a supportive infrastructure, by huge Soviet civilian sacrifice. Later on, some costs were borne by the United States through Lend-lease shipments, which acquired a massive scale in 1943. Other costs have been realised only in the present day, in the ecological crisis of the Urals and Siberia.

To sustain the war effort, the uncoordinated system of informal management by individual members of the war cabinet and Politburo eventually had to give way. It lasted until the end of 1942. At about the same time, workforce controls were centralised in a single government agency, while personal war production responsibilities of individual war cabinet and Politburo members were devolved upon a new powerful cabinet subcommittee, the Operations Bureau. After this there were fewer crash programmes and panic measures, and formal planning procedures were progressively restored.³² The administrative rationalisation, aided by the enlarged flow of Allied resources through Lend-Lease, would eventually bring stabilisation of the Soviet war economy.

³² Harrison, *Soviet Planning in Peace and War*, pp. 175-85.