Gillian Brunet
April 2020

Five Economic Policy Lessons from World War II for the US in 2020

"It was plain that all our plans would have to be revolutionized to meet the immediate necessities of a crisis as explosive as the bombs dropped on Pearl Harbor. It was no longer a question of guns and butter; the guns *had* to come first." — Donald Nelson, *Arsenal of Democracy*

Over the past few weeks, comparisons to World War II have become common as the scale of the COVID-19 pandemic has become clear. World War II offers valuable lessons for the current moment, but we must be careful with our analogies.

It is tempting to focus on how the US economy operated in 1944-45, when early problems had been solved and war production was at its peak. However, by 1944 war production functioned well precisely because by then there had been two years to solve the many problems caused by abruptly reallocating economic activity.

The current moment is far more similar to the dark months after Pearl Harbor, when US leaders faced the daunting task of transforming the US economy virtually overnight. Then as now, every day mattered. In the first months of 1942, when top US officials feared that due to lack of equipment we might lose the war before we got a chance to start fighting it, their primary goal was transforming the economy as fast as possible.

Here are five lessons we can learn from the US experience of World War II.

1. **Centralize the government's purchases and coordination of medical equipment and personal protective equipment.** In World War II, FDR created the War Production Board (WPB) to oversee and coordinate all war production. All military purchasing was channeled through the WPB, even though decisions about what equipment was needed — and in what ratios, to what specifications, etc. — were all made by the experts (i.e. the military).

   The decision to centralize all purchasing in WWII was a reaction to the failures of WWI. In WWI purchasing was decentralized, with the result that different branches of the military (including numerous supply arms within the army) competed with each other in bidding for contracts, leading to production delays and increased prices for critical supplies.[1] Indeed, bidding wars between states and the federal government are already emerging.

   In WWII, the initial role of the WPB was to get production going in sufficient (previously unthinkable) quantities and to arrange new supply chains. But the WPB's role did not diminish once production got going. Rather, its focus changed to ensuring that scarce resources were being allocated optimally to support production. This was essential because the rapid shift in demand induced by war production was so large that scarcity emerged in the short run, since it takes time for suppliers to expand production to meet demand.

   There are clear parallels to today's war against the Coronavirus. Without a clear centralized authority to place orders for critical medical equipment and personal protective equipment and

[1] R. Elberton Smith (1957), *The Army and Economic Mobilization*

to distribute finished products where they are most needed, we risk a muddle of delays, inefficiencies, and needless price increases like those the US faced in WWI.

2. **Repurpose existing institutions and take advantage of existing expertise.** Creating new institutions is too slow and loses critical time. After Pearl Harbor, policymakers faced the need to totally transform the economy at a rapid pace. American policymakers feared that the war could be lost before it had fully begun, so speed was paramount. Key decisions to keep procurement under the purview of the military and to use the US Employment Service to match available workers to war production helped speed the transition to the wartime economy.

   In the winter of 1942, policymakers transformed existing institutions rather than creating entirely new institutions. Some institutions later evolved and new institutions were created later as the limits of original institutional frameworks became apparent, but starting from existing institutions was a key element of the transition to the wartime economy. Two such transformations merit close attention now.

   First, War Production Board (WPB) chairman Donald Nelson left purchasing and procurement decisions in the hands of the Armed Forces, using the WPB to manage and coordinate them, rather than seeking to give WPB authority to make purchasing and procurement decisions itself. This was one of Nelson's most controversial decisions, but it was the right choice — at least for the initial phase of the war — for two reasons:

      1. Keeping purchasing and procurement in the hands of the agencies that had previously made these decisions saved precious time and allowed production to ramp up faster.[2] In 1942 as in 2020, every day mattered.

      2. Nelson recognized that a civilian agency could not match the military's expertise in determining the technical details of production needs. Only trained military officers had the expertise needed to evaluate whether specialized products such as airplanes, tanks, and radar met quality standards and fulfilled military needs.

   The lessons for today are clear: while we need central coordination for purchasing key equipment, specific procurement decisions — the specifications and requirements for medical equipment — must remain in the hands of medical professionals.

   Second, Depression-era unemployment offices were repurposed for the war. As unemployment fell sharply in the early 1940s, the U.S. Employment Service pivoted from coordinating services for the unemployed to helping match workers to war production jobs, helping employers find replacements for workers entering the military.[3]

   Today, local unemployment offices around the U.S. are well suited to help respond to the crisis. Whether administering furlough insurance for workers whose jobs are temporarily suspended or helping coordinate increased labor for key industries (which will become even more

[2] Nelson argued that creating new civilian institution to handle purchasing would have cost at least six crucial weeks. See Bureau of the Budget (1946), *The United States at War*, p. 107; Nelson, Donald (1946), *Arsenal of Democracy*, p. 198.
[3] Bureau of the Budget (1946), *The United States at War*, pp. 178-179

necessary as infection rates rise), we can move quickly by using existing institutional infrastructure.

3. **Availability of materials is a key constraint.** Although the US avoided nationalizing most industries during WWII, the federal government did take direct control of the production of strategic materials, specifically rubber and metals. Strategic materials — not labor and not manufacturing capacity — proved to be the absolute binding constraint on US wartime production. Most economic models emphasize capital and labor because in normal times they are the major determinants of output. But in a major crisis — especially when the composition of the economy must shift very quickly — the availability of key materials becomes the binding constraint.

   In 2020 the key strategic materials are different: chemical reagents needed for testing, synthetic materials capable of blocking airborne particles, etc. The availability of these materials may be a binding constraint in our efforts to fight the COVID-19. Ensuring the availability of these materials must be a top priority.

   Constraints on overall manufacturing capacity should be much less severe in this crisis than they were in WWII. Over $100 billion of military contracts were placed in the first 6 months of 1942, compared to $20 billion in defense contracts over all of 1941[4] and a 1941 GDP of $129 billion.[5] Production capacity initially fell far short of what was needed for the war effort, even with extensive conversion of civilian manufacturing capacity. Today we need vast increases in our production of medical equipment, particularly ventilators, personal protective equipment, and test kits, but the total volume of equipment needed is significantly less than a full year's GDP. In this sense, constraints on manufacturing capacity are orders of magnitude less severe now than in WWII.

   Similarly, given the recent explosion in unemployment claims in the wake of the crisis, constraints on labor capacity are less immediate than constraints on materials. Unless the pandemic is left unchecked, growth in the number of available workers should outpace the number of infected workers — though retraining workers for medical equipment production may slow the pace at which that production can grow. The need for distancing in manufacturing processes may also prove tricky, as ideally we would have many facilities producing medical equipment with only partial staffing (to protect workers), rather than fewer facilities producing equipment at full capacity. Still, the point at which labor force capacity would become a binding constraint is far past the point at which the healthcare system would be totally overwhelmed. We need to worry about materials availability first and foremost.

4. **The crisis itself creates strong incentives for manufacturing firms to produce critical equipment.** The growth of U.S. military production over 1942 and 1943 was an immense achievement, hailed as an "industrial miracle." The war aligned manufacturing firms' incentives with those of the nation. The Defense Production Act is a good mechanism for mobilizing industry — indeed, it was written with the experience of World War II in recent

[4] Bureau of the Budget (1946), *The United States at War*, p. 113
[5] https://fred.stlouisfed.org/series/GDPA

memory — and should be used aggressively as needed, but its necessary application may be narrow.

A government guarantee to buy all medical equipment meeting stated specifications and produced by specified dates at a set price, combined with the incentives provided by the crisis itself, would provide enough incentive for most firms. Indeed, we are already seeing a number of private firms convert their production lines to key equipment, from small distilleries making hand sanitizer to Ford Motor Company's production of ventilators, even in the absence of clear leadership and communication from the federal government.

The US did not nationalize major industries to achieve its World War II production miracle. US war production relied primarily on manufacturing by private firms. Washing machine manufacturers made artillery shells, vacuum cleaner companies made bomb fuses, as both small and large manufacturers switched to war production.

In WWII, most US firms faced a choice between sitting idle — e.g., a home appliance producer cannot produce appliances if it cannot acquire the metal needed to make its products — and participating in war work. Firms that volunteered for war production were able to acquire inputs while other firms were not. The government's control of raw materials created the incentives for firms to voluntarily convert.

Today, lockdowns, quarantines, and abruptly rising unemployment have sharply reduced demand for many goods. Manufacturing firms in sectors that now face reduced demand (e.g., automobiles) have every incentive to volunteer to produce needed medical supplies as soon as a centralized process for placing orders can be put into place. What we need is a mechanism for matching production needs to firms' manufacturing capacities.

For relatively simple production orders, the WWII War Production Board publicized production requirements for the goods it needed and facilitated matching products with interested firms. The more complex and difficult orders were sent to the large, established firms with the greatest expertise in relevant production processes.

There was also an overarching incentive for war production: the sooner firms produced the needed materials, the faster the war could be won, and the sooner everyone could get back to real life. That same overarching incentive exists today, and it is powerful.

In WWII the normal bidding process for contracts was suspended (to save time) and most government contracts were instead negotiated on a cost + fixed basis. This approach provided certainty for manufacturers — who were guaranteed to recoup their costs — and ultimately saved significant money for the government as production costs for key goods (e.g. aircraft) plummeted over time. This approach is warranted now, as it would likely save both time and money.

When multiple manufacturers expressed interest in producing a good, often contracts went to all of them because demand was so high. Then as now, overproduction is a problem we can

only dream of facing. Any excess ventilators, etc., left over at the end of the pandemic can be stockpiled or sold.

5. **Even though the economy is almost certainly in a recession, extraordinary economic conditions can alter the fiscal multiplier. The evidence supports a strategy of relief now and stimulus after the pandemic.** Recent economics research has emphasized state-dependence in the multiplier, or the idea that the fiscal multiplier is larger when the economy is in a recession. Although we have entered a (severe) recession, the multiplier is likely to be smaller than usual during this pandemic, not larger. We can expect to see a significantly larger fiscal multiplier when the pandemic ends — whenever that may be.

   My research found that the fiscal multiplier in WWII was much smaller than the typical multiplier because the savings rate was so high during the war. Many products, particularly durable goods, were not available for purchase during WWII because they were not produced at all. Consumer spending rebounded strongly after the war ended, particularly on goods, such as cars and appliances, that were not available during the war.

   The experience of WWII suggests that when consumption options are significantly restricted, people may spend a smaller share of income than in other times. Specifically, the closest substitute for buying a specific good now is buying that good in the future, when it is available again, rather than buying another good. The extreme uncertainty of the current situation may also depress the multiplier, since people will delay making decisions and larger purchases.

   Today, significant sectors of the US economy have ground to a halt, particularly the travel industry, the arts, and the restaurant industry. As in WWII, the ordinary lives of millions of Americans have been abruptly transformed. Significant portions of people's regular consumption baskets are unavailable, even though no formal rationing has been enacted. So, as in WWII, the multiplier on relief spending may be lower than in a "normal" recession.

   The evidence from World War II strongly backs up the paradigm that policy should focus on relief now and stimulus later. Targeting relief funds may help increase the multiplier to the extent that most relief funds are used to buy basic necessities. People who lose all or most of their income in this pandemic recession will be more likely to spend on necessities rather than saving, which would increase the fiscal multiplier. However, perfect targeting may be difficult to achieve quickly.

   Further evidence from late in the Great Depression suggests that fiscal stimulus may be particularly effective after a long period of downturn, as it can support pent-up demand. This suggests that policymakers should focus on relief for as long as the pandemic continues, but then be sure to follow relief with broad-based stimulus to help the economy rebound.