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The Uses and Evolution of the Defense Production Act, 1950-2020**

Douglas I. Bell, PhD

Executive Summary

Since becoming law in late 1950, the Defense Production Act (DPA) has provided every president a tool to address national security issues. Initially, under President Harry S. Truman, Congress passed the DPA to accelerate mobilization for the Korean War and gave the president broad powers to prioritize production and supply contracts, to allocate materials, to requisition equipment and supplies for manufacturing materials for national defense, to expand plant production, and to employ wage and price controls. Although containing these broad authorities, the DPA required annual renewal, and even during the Korean War, Congress altered and limited the powers and authorities of the DPA.

During the 1950s, the Eisenhower administration used the provisions of the DPA to continue preparing the United States for a global war with communism by increasing the size of the national stockpile, funding exploration for metals and minerals, and supporting the dispersion of industry across the United States. Eisenhower also prioritized the development of missile technology for nuclear warheads as part of the “New Look” strategy. In the early 1960s, a government reorganization placed the DPA under the purview of the Office of Emergency Planning, divorcing the DPA from supporting solely military mobilization efforts. As an emergency act, the DPA was now accessible to several cabinet departments for national security requirements. However, as the Vietnam War intensified, the DPA’s authorities remained centered on meeting military needs.

Starting in the late 1960s and 1970s, as conflicts, incidents, and revolutions in the Middle East became more frequent, the DPA's authorities were increasingly applied to energy issues. This included not only funding efforts to expand domestic oil production, but also compelling corporate oil producers to prioritize the US military rather than the civilian economy during oil shortages. In the late 1970s, President Jimmy Carter started using the DPA to fund research into synthetic fuel, including natural gas and liquefied coal, and to establish the US Synthetic Fuels Corporation. The push resulted in the term "energy" being incorporated into the definition of national security. Nevertheless, President Ronald Reagan defunded and sold off the corporation. While Reagan did not support research into synthetic fuel, he did use the DPA to support research into technology, including composite materials and microelectronics.

When Congress included the term "emergency preparedness" into the definition of national security in the mid-1990s, the internal works of the DPA were altered through an Executive Order. President Bill Clinton placed the National Security Council in charge of maintaining national security resource preparedness and made the Department of Commerce responsible for the DPA's priority authorities regarding the acquisition of critical materials. The inclusion of emergency preparedness into national security broadened the DPA's uses beyond military mobilization and defense industry to include natural disasters and critical physical and cyber infrastructure. With this expansion, the Federal Emergency Management Agency has used the DPA frequently following natural disasters to aid in reconstruction and restoration in the United States.

With the onset of the COVID-19 pandemic, the Undersecretary of Defense for Acquisition and Sustainment established the COVID-19 Joint Acquisition Task Force (JATF). JATF's main responsibilities include synchronizing and supporting the acquisition execution of the DOD's COVID-19 response to interagency teams for medical resources and utilizing supply chain capabilities to identify opportunities for the industrial base to provide medical resources. With this authority, JATF has distributed DPA funds to expand and accelerate the production of ventilators, N95 masks, and other personal protective equipment. More recently, the Department of Defense (DOD) has started using DPA funding under the Coronavirus Aid, Relief, and Economic Security (CARES) Act to maintain the industrial base during this pandemic and subsequent economic downturn.

As the many uses and alterations of the DPA indicate, it contains broad powers for the executive branch, but these have changed over time, especially as the real and perceived threats to the US have shifted over the last seventy years. Initially enacted to spark industrial mobilization and to expand and secure the industrial base during the Korean War, Congressional amendments to the DPA have limited the ability of the

president to broadly intervene and manage the US economy, but the DPA retains the authority to direct funding and support to weapons systems and the industrial base. Nevertheless, with the ever-broadening definition of national security, the scope of the DPA is much broader than its original purpose. Today, it is perhaps the central tool used by the US government to provide natural disaster relief for the American people. The expansion of the DPA's scope, however, has weakened its ability to prepare and mobilize the nation for a military conflict and turned it into a panacea to solve national emergencies. In this regard, it might be time to consider removing the term "emergency preparedness" from the definition of national defense and returning the DPA to its original intent: preparing and mitigating risks to the industrial base.

The DPA also needs updated for the industrial base of the 21st century. When the DPA was first signed into law 70 years ago, national defense centered on the large-scale manufacturing of tanks, airplanes, bombs, and bullets. While supporting the industrial base remains an essential function of the DPA, it should be amended to reflect the industrial base of the 21st century, which relies on newer technologies and data. Just as the original DPA allowed the executive branch to collect and utilize large amounts of production data to coordinate mobilization for the Korean War, the DPA should allow the president to improve digital infrastructure and access to digital inventory and production data for emergency circumstances, enabling the president to direct a coordinated national response. The need for this coordination was clear in the response to the COVID-19 pandemic when it proved challenging for the administration to track real time COVID-19 caseloads, medical equipment burn rates, and available inventories of medical supplies. With access to this data, the federal response could improve resource allocation and accelerate resource matching.

Besides greater access to data, a coordinated national might have been more likely if the president and federal agencies used the DPA to establish and train a National Executive Reserve, industry experts that can work directly with government in times of crisis to supplement or address shortcomings in government expertise. Part of the original DPA included the maintenance of a National Executive Reserve to aid in the rapid conversion of the nation from peacetime to mobilization, but currently no single federal agency has a reserve, and the FEMA policy on the National Defense Executive Reserve had not been updated since 2007. If the presidents had maintain this reserve of experts from the private sector, the president could have drawn on this expertise to help manage the national response to the COVID-19 pandemic and have healthcare experts advising the government on testing, vaccine development, and medical manufacturing.

The need to update the DPA for the 21st century, reestablish and maintain an executive reserve, and carry out the normal functions of the DPA, including prioritization and emergency response, indicates the need for a new presidentially appointed office, similar to the one established by Truman to oversee the Korean War mobilization or more recently the Office of the Director of National Intelligence. Rather than having multiple cabinet level officials and numerous bureaucracies monitoring and carrying out the authorities of the DPA, a centralized office could consolidate these functions, coordinate between the departments and bureaucracies, and ensure that the DPA is used to its fullest extent to organize and maintain the industrial base, to prioritize the acquisitions of materials and weapons systems, and to prepare the national for a coordinated response to a national emergency.

Origins and Authorities

On 19 July 1950, weeks after the outbreak of hostilities on the Korean Peninsula, President Harry S. Truman sent a special message to Congress addressing the crisis. After describing the causes of the conflict and the efforts of US Soldiers to stop North Korean forces, Truman asked Congress for increased defense appropriations to acquire the materiel and manpower needed to prosecute a war against North Korea. The Congressional debate did not move quickly, but both the House and Senate passed the Defense Production Act on 1 September 1950, agreeing to increase defense spending, raise \$5 billion in taxes, and give the president broad authority to increase defense production and regulate the civilian economy. The president signed the bill into law on 8 September 1950.¹

The DPA provided the president the authority to intervene into the American economy for national security purposes and included seven provisions:

- Title I allowed the president to prioritize production and supply contracts, to force private companies to accept these contracts, and to allocate materials.
- Title II permitted the president to requisition equipment and supplies for the manufacture of material needed for national defense.
- Title III empowered the president and government agencies to work with industry and to expand production capacity at plants producing national defense materials.
- Title IV provided the president the ability to stabilize the national currency through wage and price controls.
- Title V allowed the president to mediate labor disputes and to ensure wage stabilization for the continued production of needed materials.
- Title VI gave the Federal Reserve the ability to control consumer and real estate credit.
- Title VII provided a number of miscellaneous authorities related to commerce that operated routinely, but quietly, in the background. This final title directed special contract preference to small businesses, allowed the president to approve

¹ Harry S. Truman, "Special Message to the Congress Reporting on the Situation in Korea," The American Presidency Project of UC Santa Barbara. <https://www.presidency.ucsb.edu/node/230983>.

“voluntary agreements and plans of action to help provide for the national defense” that would normally conflict with anti-trust statutes, and provided for a “Nucleus Executive Reserve” (or National Defense Executive Reserve) of volunteer industry executives who could be trained for emergency government employment.

Although providing the president significant authority, the DPA required annual renewal by Congress.²

DPA Precedents

The original 1950 DPA and its provisions reflected the US government’s previous experiences with mobilizing the nation for war in the 20th century. While preparing to enter World War I in August 1917, Congress provided President Woodrow Wilson the power to employ the resources of the United States to carry out war against Imperial Germany. Wilson used this power to create the War Industries Board and to coordinate the purchase of military matériel between the Army and Navy Departments. The Board established production quotas, allocated raw materials, and encouraged standardization, but it could not set prices, prevent competition between the Army and the Navy, or stop worker strikes. Those oversights hindered production and distribution, but the United States’ participation in the war lasted only 20 months, preventing these problems from undermining the wartime mobilization.³

The World War I experience served as the foundation for national mobilization during World War II (WWII) when the United States prepared the entire nation to fight a global war, but mobilizing for WWII was not without its problems. Shortly after the bombing of Pearl Harbor in December 1941, President Franklin Roosevelt signed into law the War Powers Act. This law authorized the president to reorganize the executive branch, independent government agencies, and government corporations for the war. A few months later, in March 1942, Congress passed the Second War Powers Act giving the president the power to prioritize the delivery of military matériel, to force businesses to accept contracts, and to allocate materials and facilities. Under these provisions, the president established the War Production Board (WPB) to replace the Office of Production Management and the Supply Priorities and Allocations Board; to oversee the conversion of industries to wartime; to allocate scarce materials; to establish priorities in the distribution chain; and to prohibit nonessential production.

² “Defense Production Act of 1950,” September 8, 1950 (<https://bit.ly/2BygdZT>).

³ David Kennedy, *Over Here: The First World War and American Society* (New York: Oxford University Press, 2004).

Although the WPB rapidly expanded production, raw materials remained scarce, and government officials and military personnel worried that plants producing military materiel might have to be temporarily idled. Part of the problem also stemmed from the fact that some agencies involved in industrial mobilization remained outside the WPB's purview and thus prevented the WPB from allocating certain raw materials. Fearing that manufacturing was outpacing the supply of raw materials, the Office of War Mobilization (OWM) assumed broader authority over the WPB and the wartime economy in May 1943. Roosevelt asked Associate Supreme Court Justice James F. Byrnes to oversee the OWM. After resigning his seat to assume the directorship, Byrnes, who would go on to become Secretary of State, assumed authority over the entire economic mobilization program and soon delivered a flood of equipment and supplies for American and Allied troops that demonstrated America's decisive economic and industrial power. The mobilization effort of WWII, while at times contradictory with several overlapping agencies, remains the classic case study of economic mobilization.⁴

When the war ended, the WPB was disbanded in November 1945 and replaced by the Civilian Production Administration (CPA). The CPA helped to ease the conversion from war to peacetime production by demobilizing controls and assisting industry in transitioning to consumer goods. Similarly, the OWM was renamed the Office of War Mobilization and Reconversion (OWMR) and aided in moving construction materials purchased for the war into the peacetime economy. The OWMR's decision to completely abolish price controls, however, started a bidding war for resources. Resources needed to construct housing for the growing suburbs competed with commercial projects such as racetracks and cocktail lounges. Moreover, the abolishment of price controls also caused rampant inflation and by mid-1946, wholesale food costs reached prices not seen since the 1920s and resulted in widespread worker strikes. These initial postwar economic shocks eventually stabilized by early 1947 and the United States started its postwar economic boom.⁵

Korean War

While post-WWII economic reconversion was rocky for a time, the US government did not want to lose the capabilities needed to organize and mobilize the economy for another war, especially as tensions with the Soviet Union intensified. The need to preserve these capabilities was evident in the reorganization of the US national defense. Signed by President Truman in July 1947, the National Security Act eliminated

⁴ Arthur Herman, *Freedom's Forge: How American Business Produced Victory in World War II* (New York: Random House, 2012); Mark R. Wilson, *Destructive Creation: American Business and the Winning of World War II* (Philadelphia: University of Pennsylvania Press, 2016).

⁵ US Civilian Production Administration, "From War to Peace: Civilian Production Achievements in Transition" (Washington, DC: Civilian Production Administration, 1946).

the War and Navy Departments and created the National Military Establishment (later Department of Defense) under a Secretary of Defense. This law also separated the Air Force from the Army, codified the service chiefs as the Joint Chiefs of Staff (JCS), and created the position of Chairman. Additionally, the National Security Act formed the Central Intelligence Agency, the National Security Council (NSC), the Munitions Board, and a short-lived organization called the National Security Resources Board (NSRB) to advise the president concerning the coordination of military, industrial, and civilian mobilization.⁶

The NSRB consisted of chairman who was overseen by a board that consisted of the Secretaries of State, Treasury, Defense, Interior, Agriculture, Commerce, and Labor. The chair's responsibilities included advising and assisting the president on issues related to industrial mobilization in the event of war. The board advised the president on the National Stockpiling Program, a program designed to collect and store critical military materiel such as metals and natural resources, and tried to create awareness among industry leaders about the strategic considerations underlying the location of industrial plants (See App. 1 for NSRB organization chart). The NSRB, however, never found a clear mission or place in the defense bureaucracy. Moreover, the NSRB never developed any policy papers for consideration, failed to create a coherent interagency process, and lacked a good working relationship with the newly established Munitions Board, which planned the military aspects of mobilization. Cabinet members also undermined the chairman with their direct access to the president. The NSRB was so ineffective that in May 1950, a month before the outbreak of hostiles on the Korean Peninsula, President Truman abolished the board and placed its authority in the chairman.⁷

When North Korean forces invaded South Korea in June 1950, NSRB chairman W. Stuart Symington, the former Secretary of the Air Force, advocated for large-scale economic mobilization, created committees, issued numerous reports, and established price and wage controls. However, there was little agreement within the administration about how to quickly reorient the economy to meet the rapidly increasing military needs, and many administration officials feared that the idea of controls would have negative psychological and economic effects on American society, especially as it was just reemerging from two decades of controls initiated during the Great Depression. Facing this uncertainty, Truman asked Congress for legislation to address the economic and mobilization conundrum. As Congress debated the DPA, the economic shift towards

⁶ Harry B. Yoshpe, "A Case Study in Peacetime Mobilization Planning" (Washington, DC: Executive Office of the President, 1953), 8.

⁷ Steven L. Rearden, *History of the Office of the Secretary of Defense, Volume I: The Formative Years, 1947-1950* (Washington, DC: Historical Office of the Office of the Secretary of Defense, 1984), 129-132; Yoshpe, 108-122.

mobilization raised consumer good prices and food shortages emerged across the country. In the midst of this growing crisis, Congress passed the DPA and provided the president with the authority to increase defense production and regulate the civilian economy.⁸

Although Truman signed the DPA into law in September 1950, he did not immediately implement its broad provisions. Initially, Truman only aimed to stabilize wages and prices through the creation of the Economic Stabilization Agency, which sought to balance wages and prices, and the Wage Stabilization Board (WSB), the body responsible for recommending wage control policies. In terms of economic mobilization, Truman first turned to the NSRB to oversee a decentralized mobilization effort, but he did not give it broad authority to intervene into the economy. This light touch failed to ramp up military mobilization or to calm American fears brought on by the war. American consumers started panic buying and hoarding food, undermining Truman's efforts to use wage and price controls. As the situation deepened, a *Life* magazine editorial characterized American leaders as "frightened, befuddled, and caught in a great and inexcusable failure to marshal the strength of America."⁹

Only when China intervened in the conflict in late November 1950 did Truman take decisive action and employ the full powers of the DPA. He bypassed the NSRB and created the Office of Defense Mobilization (ODM) to coordinate economic and mobilization policy. ODM director Charles E. Wilson, the president of General Electric and a former WWII mobilization executive, would oversee nineteen separate mobilization agencies, including the Economic Stabilization Agency, Office of Price Stabilization, the Wage Stabilization Board, National Production Authority, the Salary Stabilization Board, and the Defense Production Administration. Through the ODM, Wilson would direct these agencies to control almost every aspect of the American economy (See App. 2 for ODM organization chart).¹⁰

Truman used the DPA to create a powerful agency to oversee the economy, but neither the president nor Wilson wanted the ODM to dominate the private sector. This decision was clear when Truman's Council of Economic Advisors stressed the need to only "beat many of our plowshares into swords," not all of them. To achieve the objective of "guns *and* butter," Wilson and the ODM sought to expand industrial productivity by superimposing the defense program over the civilian economy. The *New York Times* reported that defense planners wanted to build new defense plants without

⁸ Doris M. Condit, *History of the Office of the Secretary of Defense, Volume II: The Test of War, 1950-1953* (Washington DC: Historical Office of the Secretary of Defense, 1988), 30.

⁹ "The Prospect is War," *Life*, December 11, 1950, 46.

¹⁰ Pierpaoli, "The Price of Peace: The Korean War Mobilization and Cold War Rearmament, 1950-1953" (PhD., diss.: Ohio State University, 1995), 57-59

converting or disabling factories that produced cars, refrigerators, and televisions. Additionally, the ODM placed strict price controls on all goods and services and subjected wages to government approval to reduce inflation. This plan, as Wilson himself noted in a radio address to the American public, was not to create an economy of scarcity, but to intervene as little as possible into the lives of Americans. While shortages would exist, he stated that US industry would still be creating more cars in 1951 than in 1948. There might be cutbacks, but this was hardly a calamity.¹¹

Although seeking to avoid setbacks and shortages, Wilson's plan quickly ran into problems, and mobilization was plagued throughout 1951, undermining both civilian and defense production. First, in early 1951, steelworkers went on strike for two months for higher wages and greater representation on the WSB where they could participate in policy decision making and strengthen their negotiation positions. This strike slowed down production as the ODM was starting to mobilize the larger economy, and initial efforts to placate steelworkers failed, resulting in labor leaders resigning from all government mobilization agencies. Unwilling to alienate labor, Truman worked with the WSB to address the problem and helped to bring about the end of the strike by expanding labor's representation on the WSB.¹²

Second, the ODM quickly faced challenges in resources allocation. Shortages of copper, nickel, steel, and aluminum slowed production, and a shortage of tungsten, used for producing armor-piercing ammunition, led to withdrawals from the strategic stockpile (See App. 3 for aluminum use during the Korean War). To better manage raw materials, the ODM revived the WWII era Controlled Materials Plan (CMP) to evenly distribute steel, aluminum, and copper to military suppliers. By controlling these materials, ODM could regulate production, planning, and delivery of defense items to meet the nation's productions goals. The CMP, however, was initially only applied to military and defense suppliers while civilian producers were to obtain their own materiel from whatever was leftover, a situation that left them unable to compete with defense industries for raw materials and undermined Wilson's effort not to hinder the consumer economy. Wilson then extended the CMP to cover both consumer and defense industries.¹³

Finally, a lack of machine tools hindered defense production. By the summer of 1951, the nation had a 22-month backlog of machine tools. When the war started,

¹¹ *The Economic Report of the President*, January 12, 1951 (<https://bit.ly/2Z1ZLx>); "U.S. Civil Economy Seen Unhampered," *New York Times*, February 8, 1951; "Text of Wilson's Broadcast on Stepped-Up Production Potential," *New York Times*, February 24, 1951.

¹² Paul G. Pierpaoli, "Truman's Other War: The Battle for the American Homefront, 1950-1953" *OAH Magazine of History* Vol. 14 no. 3 (Spring, 2000): 18.

¹³ Pierpaoli, "The Price of Peace," 193.

mobilization authorities found that the majority of the machine tools used to fight WWII were outdated and unable to produce the parts needed for jet engines and guided missiles. Yet, the production of new machine tools faced stiff resistance from industry because manufactures were frustrated by government imposed price ceilings. The use of order pooling helped mitigate the shortages, but the problem plagued the National Production Authority throughout the entire Korean War build-up.¹⁴

While dealing with these problems, the DPA came up for renewal in mid-1951. In April, just as the steel strike was ending, Truman asked that Congress renew the DPA and expand his authority to control wages, prices, and rents to better manage inflation. Most businesses were against greater economic controls, which they denounced as “un-American.” On the other hand, some claimed that price controls were more equitable and essential for national security. Nevertheless, with businesses organizing against the DPA, Congress choose not to expand the president’s authority. The revised act restricted the use of price ceilings, prevented the government from constructing and operating defense plants, and did extend rent controls on housing or impose them on commercial property. The Capehart Amendment was especially problematic for Truman. Introduced by Indiana Senator Homer Capehart, the amendment permitted price increases to compensate businesses for additional costs incurred under the DPA, thus undermining government efforts to control inflation through price controls. Although angered at the growing restrictions, Truman signed the revised DPA on 31 July 1951.¹⁵

Besides limiting the president’s actions and altering price ceilings, the amended DPA also placed a limit on the ODM’s annual borrowing authority to \$2.1 billion. While an effort to control spending, the early authorizations in the first years of the DPA’s existence meant that cumulative losses easily overtook this annual amount. For example, in 1955, losses under the DPA were at \$7.5 million and more than \$1.3 billion by 1965. Although running at a loss, this borrowing authority and its cap would remain in place until the mid-1970s and provided more than 1,700 federally backed loans totaling more than \$4 billion using Title III authorities.¹⁶

The reauthorization of the revised DPA altered the ODM’s mobilization plan. The administration recognized the continued urgency of the mobilization situation, but was concerned about economic dislocations in the civilian economy. With this in mind, the

¹⁴ “U.S. Defense Hinges on Machine Tools,” *New York Times*, August 8, 1951; Pierpaoli, “The Price of Peace,” 208-209.

¹⁵ Michael J. Hogan, *A Cross of Iron: Harry S. Truman and the Origins of the National Security State, 1945-1954* (New York: Cambridge University Press, 1998), 350-353; Pierpaoli, “The Price of Peace,” 183.

¹⁶ U.S. Congress, Joint Committee on Defense Production, *Fifteenth Annual Report*, 89th Congress, January 17, 1966.

ODM decided to readjust the mobilization program by speeding up the production of critical items while delaying non-essential production, plant expansion, and long-term mobilization goals. This decision, however, meant that production schedules were delayed, postponing some into 1955. This only proved possible because current production was meeting immediate needs and because the structure of the Defense budgets passed by Congress provided more than \$100 billion over the next two years.¹⁷

The revised DPA delayed production schedules and exacerbated tensions between industry and labor, especially in the steel industry. The Capehart Amendment's compensation provision and less restrictive price controls contributed to growing industry profits, but steel shortages persisted in late 1951. With defense production falling behind, Truman diverted steel into defense production from the more lucrative civilian population, a decision that dissatisfied US steel manufacturers. Moreover, as their profits increased, steel makers refused to increase worker wages during negotiations over the union contracts, which were set to expire at the end of 1951, unless the administration raised the price of steel. Truman, however, believed that the industry's profits were high enough to absorb a reasonable wage increase and sided with labor in the negotiations.

With labor and industry unable to reach an agreement, the WSB stepped in to study the problem and offer a recommendation. Based their investigation in wages, prices, and earnings, the WSB recommended in March 1952 that workers receive a 26-cent hourly raise. Steel companies rejected the WSB recommendation and claimed that this wage increase was impossible without increasing the price of steel by \$12 per ton, a price much higher than permitted under the DPA price ceiling, even with the Capehart adjustments. Most of the agencies under the ODM agreed with the WSB report, but Wilson, who supervised the entire mobilization plan, thought the 26-cent an hour raise was too generous. This created a split between himself and the president. Unable to reconcile their disagreements, Wilson resigned as head of ODM.¹⁸

With neither industry nor labor willing to back down, the steel workers' union authorized a nationwide strike in April 1952. Truman, while believing that the steel companies were overly greedy, also worried that the strike would undermine the war effort and his anti-inflationary measures. With few options, Truman decided to seize control of the steel mills to avoid a work stoppage, but his decision was criticized by friends and foes alike. In response, the steel industry quickly organized to have the order nullified, and the case went to the Supreme Court in May 1952. Ruling 6-3, the

¹⁷ Pierpaoli, "The Price of Peace," 215.

¹⁸ Hogan, 354.

Supreme Court held that the president has no authority under the Constitution to seize private property on national defense grounds.¹⁹

The ruling forced the Truman administration to reverse the seizure order, but the unions called a strike days later. With workers on strike, the CMP implemented stricter control over steel and other materials, but by the mid-July, stocks of steel were dangerously low for both the defense program and the civilian economy. On 24 July, Truman intervened in the negotiations and helped both sides reach a deal, ending the 53-day strike. The United Steelworkers won a union shop clause in their contracts and received a 21.5 cent-per-hour increase in wages and fringe benefits. The steel companies received a total price increase of \$5.20 per ton. The Council of Economic Advisors estimated that the strike cost the nation some 20 million ingot tons of steel, approximately 520,000 cars (or 12% of annual production), and between \$600 million and \$700 million in lost wages.²⁰

The strike was not as devastating as feared, but it raised questions about the mobilization plan and whether or not it was beneficial to the American economy, especially as the war entered a stalemate in 1952. Throughout the year, pressure mounted to decontrol the economy as rapidly as possible, especially following Truman's failed attempt to seize the steel mills. Congress was particularly eager to act and focused on further watering down the DPA, with many in the House even arguing that the DPA should not be renewed. Nevertheless, Truman signed the renewed DPA on 30 June, days after the Supreme Court ruled against him. The revised DPA extended allocation, requisitioning, and priority controls to 30 June 1953 as well as permitting wage and price controls under certain circumstances, but many of the agencies operating under the ODM had their budgets reduced, hindering their ability to oversee the economy.²¹

Although the mid-point of 1952 saw Congress further reduce the authority of the DPA and the Supreme Court rule against the administration, the mobilization program was making significant progress, especially as efforts to mitigate inflation had been successful and the economy had continued to reach new levels of productivity well into 1953. As Figure 1 shows, military expenditures had more than tripled since 1950 and played a key role in boosting production. The total value of military deliveries in the second quarter of 1952 was \$8 billion, 20 percent more than the first quarter and six times the production rate of June 1950. The \$8 billion level was approximately three-fourths of the way toward the anticipated peak of \$10.5 billion per quarter scheduled to

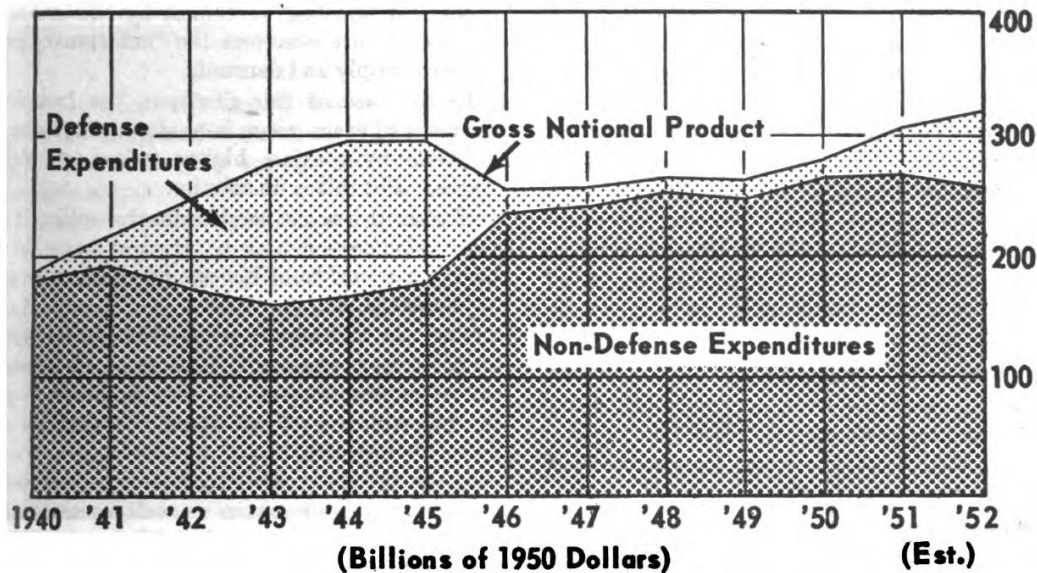
¹⁹ Hogan, 354.

²⁰ Pierpaoli, "The Price of Peace," 235-245. Under a union shop clause, the employer agrees to either only hire labor union members or to require that new employers become members of the union.

²¹ Pierpaoli, "The Price of Peace," 250.

be reached in 1953 and then maintained through 1954 as production plateaued. More than 300 M47 medium tanks rolled off assembly lines each month, and defense factories produced over 800 military aircraft per month, three times as many as in 1950. Investment in new plants and equipment grew tremendously, raising from \$17.8 billion in 1950 to \$24.1 in 1952, a 35 percent increase. Even the machine tool shortage was moving towards resolution and electronics and avionics production was seven times higher than the pre-Korean War rate.²²

Figure 1-Defense Expenditures and Gross National Product



Source: Defense Production Act Progress Report – No. 7, 82th Congress, April 4, 1951.

The increasing industrial production throughout 1952 and 1953 demonstrates the success of the mobilization plan. Less than two years after first implementing the DPA, the Truman administration had designed and implemented an effective, but limited mobilization plan that expanded production, built new plants, and adopted new technologies to produce advanced weapons. This outcome was especially significant based on the challenges the administration faced in attempting to mobilize the economy for an undeclared war without disrupting the consumer economy and in working with a reluctant Congress that reduced the authority of the DPA overtime.

With the election of Dwight D. Eisenhower in 1953, the new administration worked quickly to decontrol the economy, especially as Eisenhower had campaigned against the continuation of direct controls. Eisenhower's position was popular with Americans, but also easy to make because by 1953 defense production was meeting current needs, the Korean War was bogged down in a stalemate, and negotiations for a

²² Pierpaoli, "The Price of Peace," 262-263.

ceasefire were ongoing. As Eisenhower worked to decontrol the economy, the Congress allowed the DPA to lapse in 1953 and the majority of the 19 agencies functioning under the ODM were shuttered, though the ODM itself continued with a focus on future mobilization planning until it was merged into the Office of Civil and Defense Mobilization in 1958.²³

The DPA and the Cold War

During the Cold War, presidents used the DPA in several capacities, but the DPA no longer contained the broad executive authority that it held under Truman. When Congress renewed the DPA in 1955, but stripped it of Titles II, IV, V, and VI, meaning the president no longer had the power to introduce wage and price controls, mediate labor disputes, control consumer credit, or requisition equipment and supplies from private industry. Nevertheless, it still provided the president with the authority to require persons (including businesses and corporations) to prioritize and accept contracts for materials and services as necessary to promote the national defense; to incentivize the domestic industrial base to expand the production and supply of critical materials and goods. Authorized incentives include loans, loan guarantees, direct purchases and purchase commitments; and to prioritize the production of defense systems, including the authority to establish voluntary agreements with private industry; the authority to block proposed or pending foreign corporate mergers, acquisitions, or takeovers that threaten national security; and the authority to employ persons of outstanding experience and ability and to establish a volunteer pool of industry executives.

Throughout the 1950s, the Eisenhower administration specifically used the DPA to grow the national stockpile of metals, a still relatively new practice for the US government. The decision to stockpile important materials emerged in the late 1930s as the US government sought to prepare for war. The 1939 Strategic Materials Act had authorized \$100 million for the Secretaries of War and the Navy acting jointly with the Secretary of the Interior and in conjunction with the Army and Navy Munitions Board to purchase 42 raw materials for a stockpile. After the war, the US government sought to maintain a strategic stockpile and passed the Strategic and Critical Stock Piling Act of 1946 until it was superseded by the NSRB in 1947. The NSRB led stockpile policy while the Munitions Board was responsible for evaluating military as well as civilian needs. The NSRB was aided by a civilian interagency advisory team initially called the Strategic Materials Committee and later the Interdepartmental Stockpile Committee. By

²³ Pierpaoli, "The Price of Peace," 310-311.

1950, the actual stockpile inventory included 75 specific materials and had reached a market value of \$1.6 billion.²⁴

National Stockpile materials were stored at secure military, government, and commercial depots across the country. In January 1948, 70 military depots, 10 commercial warehouses, and 3 stand-by defense plants were being used as storage sites. During the Korean War, the ODM released about \$60 million worth of materials from the stockpile, but as the war continued, stockpiling resumed. Between December 1949 and December 1952, the inventory value went from \$1.15 billion to \$4.02 billion; total stockpile objectives went from \$3.77 billion to \$7.49 billion in the same period. By 1953, the stockpile was stored at 318 locations consisting of 71 military depots, 9 Government Services Administration (GSA) depots, 4 government-owned vaults, 6 commercial vaults, 165 commercial warehouses, 34 commercial tank-farms, 7 open-air commercial sites, 4 open-air government sites, and 18 industrial plants. All of these facilities were supervised by the GSA, but both the DPA and the Department of Agriculture contributed materials to the national stockpile (See App. 4 - Stockpile Locations).²⁵

During the Eisenhower administration, the DPA was used to grow the National Stockpile and expand the mining and production of metals, especially aluminum, copper, and nickel. DPA money was even used to build a nickel plant in Nicaro, Cuba, which the Castro government seized during the revolution and operated from 1959 until 2012. The focus on metals and minerals gave the Department of the Interior responsibilities under the DPA and allowed Interior to fund projects related to oil, natural gas, and pipeline construction. The act also encouraged the exploration and mining of strategic metals like zinc, fluorspar, nickel, manganese, tungsten, and selenium. In 1955 alone, the Department of the Interior received almost 3,000 applications for loans and acted on 750. Additionally, total DPA expenditures in 1955 covered almost 75 different minerals and metals, including 16 percent of the nation's aluminum production. Such a large acquisition irritated industry as many CEOs felt the program raised prices and diverted too much from the civilian economy. The growing frustrations of businesses did eventually force Eisenhower to release some supply stocks into the civilian economy to ease shortages (See App. 5 - Stockpile Materials).²⁶

²⁴ National Research Council, *Managing Materials for a Twenty-first Century Military* (Washington, DC: The National Academies Press, 2008), 134-136.

²⁵ National Research Council, *Managing Materials for a Twenty-first Century Military*, 136-137.

²⁶ U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 33*, 84th Congress, August 3, 1955; U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 31*, 84th Congress, June 9, 1955; “Dispute Delayed ODM Extension,” *New York Times*, August 7, 1955; “US May Release Stockpile Copper,” *New York Times*, July 6, 1955.

The Eisenhower administration also used the DPA's Title III provisions to continue the expansion of the industrial base. In examining steel production shortly after the Korean armistice, statistics showed that production had risen 25 percent from 1950 and exceeded peak WWII production by 38 percent, but one government report worried that this was not enough for war needs. While steel production might have been worrying to some planners, others focused on the lack of aluminum and expanded production using DPA funds. This included new factories operated by Olin Industries in Illinois, the Harvey Machine Company in California, and the Wheland Company in Tennessee that were projected to meet defense planners' needs by doubling the tonnage of aluminum available in 1950. Moreover, the geographical distribution of these new factories was part of the broader government effort to disperse industrial production and stockpiles across the nation in order to prevent the destruction of the US industrial base by one single nuclear weapon. The dispersion goal was formalized when the DPA was renewed in 1956, and the renewed legislation stated that the construction of any government-owned industrial factories, the improvement of any industrial facilities, and the procurement of goods and services under the DPA must follow the principle of geographical dispersion in the interest of national defense.²⁷

In addition to these Title III provisions, the Eisenhower administration utilized the DPA's Title I authority. Under Title I, the president can designate a material or weapons system as "DX," which requires all producers, manufacturers, and sub-contractors to prioritize US government contracts over any production for the civilian economy. According to one DPA report, Eisenhower used the prioritization especially for the development of intermediate-range ballistic missiles (IRBMs), intercontinental ballistic missiles (ICBMs), and satellite programs. One report noted that these programs received "super-priority treatment" and took precedence over other defense programs. The prioritization of these programs fell within Eisenhower's "New Look" strategy that relied on strategic nuclear weapons to deter the Soviet Union. Yet, the construction of ICBM silos also shows how the DPA's prioritization powers could create problems. In the construction of the silo elevators, Elser, the company contracted to construct elevators, focused on the silo elevators and failed to complete its work building the elevators in the Department of Veterans' Affairs' (DVA) building. Viewing Elser in breach of contract, the DVA attempted to recover damages from Elser, but the DPA protected companies under contract and forbid penalties caused by complying with the DPA priority orders. In this regard, the DVA dropped its suit against Elser.²⁸

²⁷ "DPA Concerned on Steel Capacity," *New York Times*, January 27, 1953; "Aluminum Plant Planned in South," *New York Times*, January 30, 1953; U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 40*, 85th Congress, June 4, 1957.

²⁸ Quarterly Report to the Joint Committee on Defense Production April 1-June 30, 1959) in U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 44*, 86th Congress, August 18, 1959; Matthew J. Ruane, "The Defense Production Act of 1950: Vital Defense

In 1961, as the John F. Kennedy administration came into office, the authorities of the DPA again transitioned following a government reorganization that abolished the Office of Civil and Defense Mobilization. While issues related to civil defense went to the DOD's Office of Civil Defense, the DPA went to the Office of Emergency Planning (OEP) within the executive branch. The OEP was responsible for addressing natural disasters, which increasingly came under the purview of the federal government in the late 1950s, and for ensuring that the nation was prepared for war or nuclear attack. Within this agency, the DPA could be used to aid any cabinet level department to ensure it was prepared for the possibility of war or nuclear attack. Throughout the 1960s, however, the DPA was mostly used to maintain the national stockpile and to provide materiel to the military during the Vietnam War.

Shortly after Kennedy entered in office in 1961, the scale of the national stockpile became a concern. The president was "astonished" that the stockpiling program had accumulated \$7.7 billion worth of materials, \$3.3 billion more than the estimated value of wartime needs. This concern resulted in Congressional investigations and led some in Congress to call for a "de-stockpiling" program, especially as military planners were unsure whether to prepare for a long protracted conflict or short thermonuclear war. Much of the blame for this excess was placed on the "scare-buying" sparked by the Korean War, but the Kennedy administration saw the surplus as an "unconscionable" decision that created massive profits for suppliers, especially as evidence surfaced that the Eisenhower administration paid in excess of \$3 million for copper to a company previously led by Eisenhower's Secretary of the Treasury.²⁹

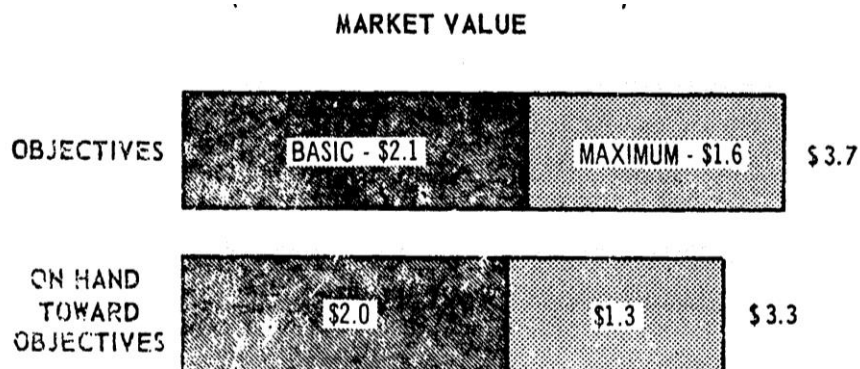
The excess of the program led the Kennedy administration to seek out legislation that would permit the sale of the surplus at market prices and in conjunction with industry to prevent flooding the marketplace and driving down prices. To investigate these questions, an Executive Stockpile Committee was formed to study the disposal of the strategic materials and in 1963, the Interdepartmental Disposal Committee was established by OEP to develop long-range disposal plans for materials no longer required. From July 1964 to June 1965, the OEP director approved the sale of 30 materials, 9 of which were in the DPA stockpile inventory, including nickel, copper, and manganese, but most of these sales went to industry. The change in the stockpile value under Kennedy is clear in Figure 2, which shows that by 1963, the value of the stockpile

and Emergency Acquisition Authority for 2002" (Army JAG School Research Paper, 2002), 13-14. (<https://apps.dtic.mil/dtic/tr/fulltext/u2/a402217.pdf>).

²⁹ "De-Stockpiling," *Baltimore Sun*, February 14, 1962; "Senators Charge Windfall Profit Made on Stockpile," *Wall Street Journal*, April 17, 1962; "Kennedy Asks New Law To Facilitate Disposals From One Stockpile," *Wall Street Journal*, June 6, 1962.

had dropped from \$7.7 billion to \$3.7 billion. By 1965, the entire National Stockpile held 77 different materials at a market value of \$3.8 billion³⁰

Figure 2-National Stockpile (in \$billion) as of June 30, 1963)



Source: *Thirteenth Annual Report of the Joint Committee on Defense Production, January 13, 1964.*

The push to sell off the stockpile in the early 1960s soon declined as operations in Vietnam intensified. In fact, the demand for metals soared as the use of ammunition in Vietnam far exceeded previous wars. Specific shortages emerged in copper, aluminum, and nickel, and President Lyndon B. Johnson directed the release of 200,000 tons of copper from the stockpile to support the production of military matériel and to ensure that national copper prices did not drive up costs for defense manufacturers. The need to supply ammunition caused scarcities in minerals such as sulfate, crystalline tungsten carbide, and hydrogen reduced tungsten powder used in manufacturing of ammunition also started declining. These shortages drove the Department of the Interior to expand funding for mining projects.³¹

As production for the Vietnam War accelerated, other plans supported by the DPA went into action. Since at least 1955, war planners had been using DPA funds to buy and sell machine tools and replacement parts and store them in “stand-by” plants in case of rapid mobilization. In 1965, a government report stated that 80 such contracts covering 12,551 machines tools valued at \$232.9 million were available. As the United States deployed ground forces in Southeast Asia, these tools and plants were activated to supply material for the war. According to a 1968 report, this involved 9,314 machines

³⁰ U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 49*, 90th Congress, June 24, 1967; U.S. Congress, Joint Committee on Defense Production, *Fifteenth Annual Report*, 89th Congress, January 17, 1966.

³¹ “President Orders Release of More Stockpiled Copper,” *Wall Street Journal*, March 22, 1966; U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No.46*, 90th Congress, June 16, 1967.

that provided \$101 million worth of acquisitions. The report noted the layaway equipment “contributed materially toward the ability to accomplish early production.”³²

The DPA also funded plant expansions for the war in Vietnam. One specific case was the Turtle Mountain Ordnance Plant in Rolla, North Dakota. The plant manufactured jewel bearings used in sensitive measuring instruments, such as compasses, gyroscopes, gimbals, scales, gauges, dial indicators, dial calipers, and turbine flow meters. This type of material was not only required for developing military technologies, but also used in the guidance systems of missiles and in space exploration as NASA’s mission to the moon also received DPA priority. With support from DPA funds, the plant constructed a new building and purchased updated equipment to expand production, lower unit costs, and provide materials in case of an emergency. Nevertheless, even with the increased capacity, a 1966 report noted that while the plant produced nearly 1 million jewel bearings, this was still less than one-third of estimated consumption for military products.³³

The government also used the Title I authorities of the DPA to prioritize defense orders for the Vietnam War for a broad range of items, including oil, copper, steel, and chemicals. The DPA specifically expanded chemical plants producing herbicides such as 2,4,5-T and 2,4-D. When combined in equal parts, these chemicals create the compound Agent Orange. Besides chemicals and minerals, priority was also used to manufacture parts for weapons, helicopters, and airplanes, including helicopter gears, carbon steel balls, ammunition, bombs, rockets, and Mark 48 torpedoes. Moreover, for several years during the Vietnam War, the president’s priority authority was used for the procurement of items for the Agency for International Development’s counterinsurgency operations in Vietnam, including blankets, corrugated aluminum roofing materials, and 5 million D batteries for displaced South Vietnamese villagers.³⁴

In the 1970s, the DPA continued to play an important role in national defense, but it started taking on larger roles and lost its borrowing authority. In 1973, a report to the Joint Committee on Defense Production, the Congressional body that monitored the DPA until 1977, stated that the \$2.1 billion cap on the DPA no longer provided enough

³² U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 34*, 84th Congress, April 11, 1956; U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 45*, 89th Congress, October 4, 1965; U.S. Congress, Joint Committee on Defense Production, *Seventeenth Annual Report*, 90th Congress, January 15, 1968.

³³ U.S. Congress, Joint Committee on Defense Production, *Fifteenth Annual Report*, 89th Congress, January 17, 1966; U.S. Congress, Joint Committee on Defense Production, *Seventeenth Annual Report*, 90th Congress, January 15, 1968.

³⁴ U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 46*, 90th Congress, June 16, 1967; U.S. Congress, Joint Committee on Defense Production, *Seventeenth Annual Report*, 90th Congress, January 15, 1968.

borrowing authority to cover loans to businesses and interest payments. It estimated that the fund would be bankrupt by March 1974. To address this issue, the Nixon administration asked Congress in May 1973 to terminate the borrowing authority and substitute it with budgetary appropriations. This change was made to the 1974 DPA reauthorization (See App. 6 for DPA Appropriations). The 2009 reauthorization of the DPA restored this loan granting authority, but only under two conditions: the inclusion of an advanced budget authority for the cost of the loan and a limitation on the amount guaranteed.³⁵

Besides changes to funding, the use of the DPA also started to change in the 1970s. This change was clear in the statement by the Director of the Office of Preparedness MG (R) Leslie W. Bray Jr. in 1975 before the Joint Committee:

In the late 1950s [the DPA] was seen as a means for strengthening the mobilization base of the Nation . . . in preparedness for total war. Through the Sixties and to the height of U.S. military involvement in Vietnam it was seen and used as a means for assuring direct production needs of our armed forces . . . In the Seventies the situation has been changing. The energy situation and general lowering of production have been accompanied by shortages of many things, most notably steel.

These changes, he noted, resulted in a decline in the use of the priorities allocation under the DPA due to a slack in military needs, but priority ratings were still in use for aircraft, missiles, ships, weapons, and tanks. In fact, even as Bray testified before Congress, the priority system was aiding in the production of the M1 Abrams tank.³⁶

In the initial efforts to replace the Army's Main Battle Tank (MBT) in the 1960s, the project had run over budget and the prototype MBT-70 was scrapped in 1970. Both GM and Chrysler participated in the competition for the new MBT contract, a project that was restarted in 1973 to incorporate insights from the Yom Kippur War. A competition between the two prototypes in 1976, followed by a second trial after both companies made modifications, resulted in Chrysler winning the competition, though some suggest Chrysler won because it was in a poor financial situation. After winning the contract, the newly designated M1 Abrams tank was assigned the DX priority by the president,

³⁵ U.S. Congress, Joint Committee on Defense Production, *Twenty-Third Annual Report*, 93rd Congress, February 7, 1974; U.S. Senate, Committee on Banking, Housing, and Urban Affairs, *Defense Production Act: Opportunities for Reauthorization*, 113th Congress, July 16, 2013.

³⁶ U.S. Congress, Joint Committee on Defense Production, *The Defense Priorities System and Associated Special Priorities*, 94th Congress, May 22 & 23, 1975.

making its production essential to national security, and requiring Chrysler to ensure tank production received first priority.³⁷

Energy production, as Bray noted, also became more central to the DPA starting in the late 1960s and throughout the 1970s. The initial impact came from the three-month embargo placed on the United States and other western nations in the midst of the Vietnam War shortly after the start of the Six Day War between Israel and Arab states in 1967. The embargo spurred action by the Department of the Interior. Under the DPA, Interior held responsibility for the development and implementation of solutions to petroleum emergencies that threatened or impaired national security. Interior previously discharged these responsibilities following the 1951 assassination of the Iranian prime minister and the Suez Canal crisis of 1956-57 when access to Middle East oil was disrupted. Once the Department of the Interior established that an emergency existed, it convened the Foreign Petroleum Supply Committee, a body established in 1950 and composed of 21 companies that helped to formulate and carry out measures to meet petroleum shortages and dislocations. As not every Middle Eastern nation supported the oil embargo, the committee used DPA funds to identify and convert old tankers to increase oil shipments. A 1968 report by Attorney General Ramsey Clark noted that oil remained available, but that the closure of the Suez Canal increased transport times as tankers now needed to sail around Africa. Clark further noted that the disruption, lasting only three months, did not require joint action by the petroleum industry (See App. 7 for US Oil Import Dependency in 1970).³⁸

Only six years later, during the Yom Kippur War, the Organization of Arab Petroleum Exporting Countries (OAPEC), an organization formed after the 1967 Six Day War, imposed an oil embargo on the United States. This embargo cut off 50 percent of the DOD's oil supply, and the DOD sought permission under the authority of the DPA to divert domestic oil production to military needs. Using the DPA's Title I powers, the president forced producers, regardless of existing delivery contracts, to furnish the oil specified by the military, but the DOD decreased training and flights to reduce the military's use of domestic production. Although the oil embargo ended in March 1974, OAPEC's ability to undermine the US economy and threaten national defense spurred the drive toward energy independence. Thus, in late 1974, the DPA was employed to advance the construction of the trans-Alaskan pipeline, the first time the DPA was used for a civilian project. By using the authority of the DPA, the president

³⁷ Steven J. Zaloga and Peter Saron, *M1 Abrams Main Battle Tank 1982-92* (Osprey Publishing, 1993); Hearings on the Military Posture and H.R. 6495, Committee on Armed Services, House of Representatives, 96th Congress, 2nd Session, 1980.

³⁸ U.S. Congress, Joint Committee on Defense Production, *Defense Production Act Progress Report – No. 47*, 90th Congress, June 19, 1967; U.S. Attorney General, Report on Section 708(e) of the Defense Production Act of 1950, Review of Voluntary Programs, August 9, 1968.

ensured that the pipeline would receive first priority on high-demand materials, even in case of a “war-related emergency.”³⁹

In addition to expanding production, President Jimmy Carter started using the DPA to direct research and development into deriving synthetic fuels from coal and natural gas after the 1979 Iranian Revolution again undermined American access to Iranian oil. With the president pushing for research into expanding the United States’ energy mix, Congress included the Energy Security Act of 1980 with the 1980 renewal of the DPA. The Energy Security Act provided billions of dollars to stimulate research into oil shale and liquefied coal, and the DPA directed funds to the recently created Department of Energy and the newly established US Synthetic Fuels Corporation. By funding research and development under the DPA, the federal government would have the right to purchase the bulk of new production for the US military. Nevertheless, when he entered the White House in January 1981, President Ronald Reagan cut funding for this program and slowly phased out any government aid to the Synthetic Fuels Corporation. By 1986, the corporation had been sold to private industry.⁴⁰

Although cutting back on synthetic fuels research, the Reagan administration continually used the DPA to direct research and development into new technologies and the mining of rare earth minerals for defense purpose. This objective was clearly made before Congress when administration officials claimed that uses of the DPA throughout the 1970s did not focus on defense needs. The Reagan administration specifically used the provisions of the DPA to fund technologies such as machine intelligence, composite materials, integrated optics, fiber optics, and microelectronics. These technologies were then used to improve military capabilities, such as designing composite rotor blades for Army helicopters and developing a metal matrix armor for the M1A2 and the M-2 Bradley Fighting Vehicle. The administration also used the DPA to acquire materials for contractors manufacturing these newer technologies. After entering a contract for a classified project with the US Air Force in 1979, likely for the F-117 Nighthawk, Lockheed purchased two “Axis Modu-Line Traveling Column Machining Centers” from Kearney and Trecker Corporation, a manufacturer of high-end machine tools. However, when the USAF accelerated their production schedule, the DPA was used by the administration to compel Kearney to prioritize production for Lockheed. As the use of the DPA led Kearney and Trecker to miss delivery to Rolls Royce, who cancelled their \$625,000 contract with Kearney. Seeking damages for this loss, Kearney sued the US

³⁹ “Military Needs Force Domestic Oil Diversion,” *LA Times*, November 16, 1973; “Alaska Pipeline Firms’ Supplies Get Priority,” *Wall Street Journal*, September 24, 1974.

⁴⁰ “Conferees Push Plan to Develop Synthetic Fuels,” *Wall Street Journal*, December 10, 1979; “US Set to Spend Billions Devising Synthetic Fuels,” *Washington Post*, June 8, 1980; “Synthetic Fuels Agency Face A Funds Cutback,” *New York Times*, May 15, 1984; “Congressional Conferees End Financing of Synthetic Fuels Program,” *New York Times*, December 17, 1985.

government. The Court ruled in favor of the US government stating that while the government likely frustrated Kearney's contract with Rolls Royce, it did not appropriate Kearney's property.⁴¹

The Reagan administration also announced major purchases for the national stockpile, claiming that the nation was vulnerable to raw material shortages. Reagan's criticisms were aimed at large disposals of the national stockpile in the 1970s, especially the \$2.05 billion sold off in FY 1974. Under President Carter, the stockpile was to support defense requirements during a major war over a 3-year period, operate on the assumption of full-scale industrial mobilization and increased materials demands, provide for a wide range of civilian economic needs to ensure a healthy economy, and develop the Annual Materials Plan. In the last year of his presidency, Carter also approved the 1979 Strategic and Critical Materials Stockpiling Revision Act. This revision transferred stockpiling functions to the newly created Federal Emergency Management Agency (FEMA) from the GSA, though the GSA maintained responsibility over storage, maintenance, upgrades, purchases, and sales of the stockpile.⁴²

Under Reagan, a long-term stockpiling program was initiated to upgrade chromite and manganese ores to high-carbon ferrochromium and high-carbon ferromanganese. This program would help sustain a US ferroalloy furnace and processing capability vital for the national defense industry and was paid for with excess stockpile materials that were authorized for disposal. Between 1984 and 1994, nearly 1.4 million tons of chromite ore and 1.0 million tons of manganese ore were upgraded to ferroalloys. These ferroalloys were used to manufacture high strength alloy steels. In February 1988, with Executive Order 12626, the president designated the Secretary of Defense to be the National Defense Stockpile manager. The Secretary of Defense then delegated the managerial functions to the Assistant Secretary of Defense for Production and Logistics. The Defense National Stockpile Center was established as a field activity within the Defense Logistics Agency to manage the operations of the stockpile program. FEMA and the GSA transferred all funds, personnel, property, and records of the National Stockpile to DOD. The civilian agencies were now out of the stockpiling business except for being represented on the advisory committees.⁴³

⁴¹ "The Ailing Defense Industrial Base: Unready for Crisis," Report of the Defense Industrial Base Panel, December 31, 1980, 30; "Report to Congress on the Defense Industrial Base: Critical Industries Planning," Assistant Secretary of Defense (Production and Logistics) Office of Industrial Base Assessment, October 1990), 17, 42; U.S. Court of Claims, June 5, 1982 to September 30, 1982, Vol. 231 (G.P.O.: Washington, DC, 1983): 572-578.

⁴² National Research Council, *Managing Materials for a Twenty-first Century Military*, 139-140.

⁴³ National Research Council, *Managing Materials for a Twenty-first Century Military*, 140-141.

At the same time that the Reagan administration was reorganizing management over the national stockpile, the administration also took action to amend the DPA during its 1988 reauthorization. With the DPA already giving the president the authority to review corporate mergers and acquisitions, the 1988 Exon-Florio Amendment provided the president the broad powers to block foreign investment threatening US national security, enabling the executive the ability to prevent American firms in the defense-industrial base from coming under foreign control. Currently, this authority is exercised for the president by the Committee on Foreign Investment in the United States.⁴⁴

The DPA after the Cold War

During the Cold War, the DPA was used in a variety of ways and its diverse uses would continue over the next thirty years. This was evident almost as soon as President George H.W. Bush entered the White House in 1989. In the spring of 1988, an explosion and conflagration at the Nevada PEPCON chemical plant destroyed the plant. The plant was one of two in the United States producing ammonium perchlorate, an oxidizer used in solid propellant rocket boosters. This compound was necessary not only for Space Shuttle launches, but also for military weapons such as SLBMs launched from nuclear submarines, Patriot missiles, and Atlas rockets that delivered satellites into earth orbit. With the PEPCON plant destroyed by the fire, Bush used the DPA's Title I authority to manage the supply and distribution of ammonium perchlorate.⁴⁵

Although Bush used the DPA in 1989, Congress allowed the DPA to lapse in September 1990. This oversight meant that the DPA was not in effect during the Gulf War. As a result, Bush issued Executive Order 12742 in January 1991 "to achieve prompt delivery of articles, products, and materials to meet national security requirements." Under this temporary order, the president used the priority rating system to acquire computers, communication equipment, and satellite-based mapping systems (GPS), and activated charcoal, a form of processed carbon used in military protective masks to protect against chemical weapons. Through this executive order, the president ensured there were no shortages during the conflict. Although the president showed the importance of the DPA by using an executive order to mimic its provisions, reauthorization of the DPA did not appear essential as Congress waited until late 1991 to once again renew it.⁴⁶

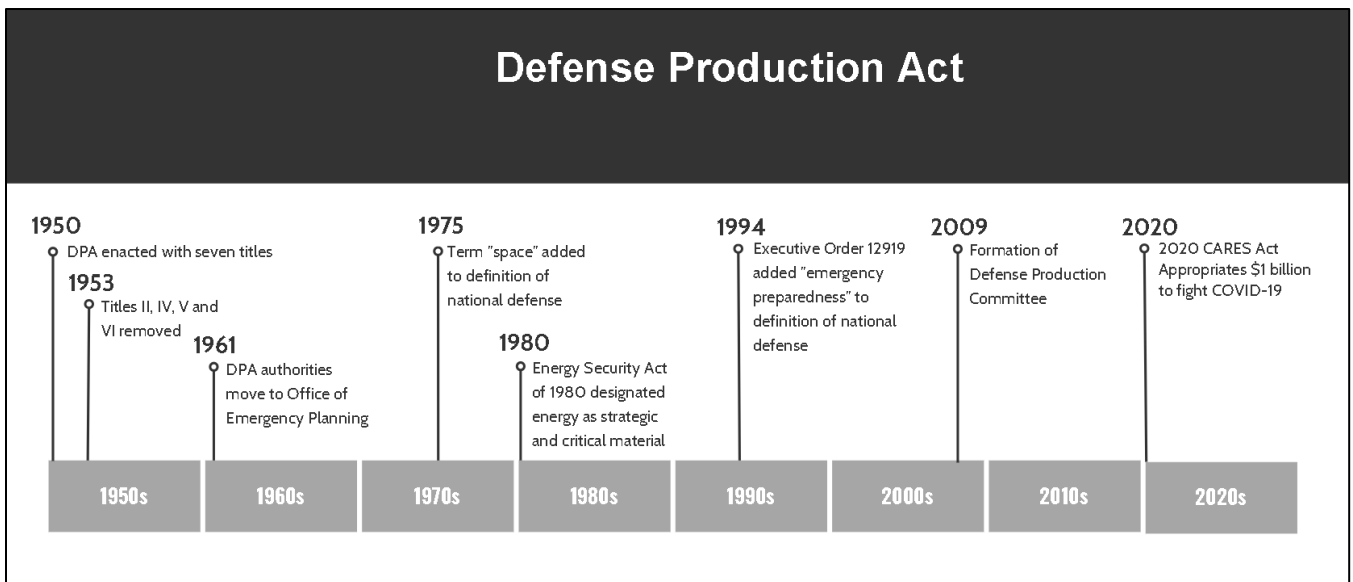
⁴⁴ U.S. Library of Congress, Congressional Research Service, *The Defense Production Act of 1950: History, Authorities, and Considerations*, Report R43767 (2020), 18.

⁴⁵ Steven R. Linke, "Managing Crises in Defense Industry: The Pepcon and Avtex Cases," Institute for National Strategic Studies, July 1990.

⁴⁶ "Executive Order 12742 of January 8, 1991, National Security Industrial Responsiveness," 56 Federal Register 1079; U.S. Congress, House, Subcommittee on Domestic Monetary Policy, Technology, and Economic Growth, Reauthorization of the Defense Production Act of 1950, 107th Congress, June 13, 2001.

The workings of the DPA changed again in 1994 with Executive Order 12919 (see Figure 4 for major changes to DPA), which President Bill Clinton used to designate the NSC as the principal body for addressing national security preparedness. Additionally, Congress authorized the Director of FEMA to advise the NSC and to use the DPA for emergency preparedness activities. Under this executive order, the president delegated the authority to prioritize materials to agencies and departments according to their responsibilities. For example, the Department of Agriculture is responsible for food while the DOD, and more specifically the Army because of its Title 10 obligations, is responsible for “water resources,” including flood control, navigation, shore protection, and other purposes. The Department of Commerce oversees “all other materials, services, and facilities” and administers the DPA to implement the authority of the president. However, the Secretary of Commerce does re-delegate authority to the Secretary of Defense for priority rating of defense contracts and other materials, services, and facilities. Although Executive Order 12919 was supplanted by President Barack Obama’s 2012 Executive Order 13603, this structure remains largely in place, and the vast amount of bureaucratic work for the DPA today is done by the Department of Commerce while the NSC, the Homeland Security Council, and the National Economic Council serve as an integrated policymaking forum for national defense resource preparedness.⁴⁷

Figure 4-Defense Production Act Usage



Following this restructuring of the DPA’s authorities, it was continually used throughout the 1990s to establish Title I priorities for the US military and American

⁴⁷ Executive Order 12919, June 7, 1994 (<https://bit.ly/3fQZpMk>). Executive Order 13603, March 16, 2012 (<https://bit.ly/2ZfRmlt>).

allies. It was used to clarify conflicts in the acquisition of parts for the F-22, F-18A/B/C, and F-18E/F, to fund research into radiation hardened electronics, electronic materials such as gallium arsenide, indium phosphide, and high purity silicon. All of these were supported by Title III funds that advanced research into microelectronics technology and provided greater resistance to radiation, reduced power requirements, and enabled high operating capacities. Title III funds also advanced research into structural materials like aluminum metal matrix and titanium metal matrix composites that improved strength, weight, durability, and resistance to extreme temperatures. These materials were used for aerospace applications. These lighter-weight components reduced fuel consumption and increased ranges, payloads, and maneuverability.⁴⁸

The DPA's Title I authority was also used to prioritize deliveries and minimize cost and schedule delays for the United States' NATO Allies. When the German and Belgian Air Forces were unable to receive GPS navigational processors from Rockwell Collins in a timely manner, the DOD and the Department of Commerce used the DPA's authorized ratings authority that allowed the contracts to be filled in advanced of lesser priority orders. Delays of Raytheon's identification friend or foe (IFF) transponders for British WAH-64 Apache helicopters led the DOD and the Department of Commerce to apply a higher rating to ensure a faster delivery of these required parts. To accelerate the production and delivery of materials for the NATO mission in Bosnia and Kosovo, Title I authority was used to supply satellite communications (SATCOM) equipment, Joint Direct Attack Mines, and computer equipment.⁴⁹

To monitor the use of DPA funds, Congress established the Defense Production Act Committee (DPAC) in 2009 to coordinate and plan for the effective use of the DPA. The DPAC reports to the Senate Committee on Banking, Housing, and Urban Affairs and the Committee on Financial Services in the House of Representatives. The formation of this body recalls the period from 1953 to 1977 when the DPA was administered by the Joint Committee on Defense Production. Nevertheless, the DPAC's oversight and coordination effort was limited to only reporting on activities related to the Title I authorities when the DPA was reauthorized in 2014. The most recent DPAC annual report included the use of the priorities authority to support national defense programs; an overview of contingency planning by federal departments and agencies for events that might require the use of the priorities and allocations authorities; and a description of information sharing among the departments and agencies with DPA

⁴⁸ U.S. Congress, House, Subcommittee on Domestic Monetary Policy, Technology, and Economic Growth, Reauthorization of the Defense Production Act of 1950, 107th Congress, June 13, 2001.

⁴⁹ U.S. Congress, House, Subcommittee on Domestic Monetary Policy, Technology, and Economic Growth, Reauthorization of the Defense Production Act of 1950, 107th Congress, June 13, 2001.

responsibilities. Reporting on Title III uses of the DPA is included in the *Annual Industrial Capabilities Reports* from the Office of Industrial Policy within in the DOD.⁵⁰

In the recent Global War on Terror, the DPA was used to prioritize body armor, and the manufacturing of the Mine-Resistant Ambush-Protected (MRAP) vehicles. Once improvised explosive devices (IEDs) became the weapon of choice among insurgents, Secretary of Defense Robert Gates accelerated the acquisitions process to quickly get the MRAP into production. Once was finalized, the DX priority was applied to all components of the MRAP under Title I of the DPA so that MRAP contracts had to be accepted and performed on a priority basis over all other contracts. Additionally, the Secretary of the Army also waived restrictions to expand the countries from which armor plate steel could be sourced.⁵¹

At the same, the Navy requested that Title III be used in the development of biofuels for their “Great Green Fleet” initiative, an effort recalling the DPA’s use for synthetic fuels in the late 1980s. In this regard, the Navy requested that DPA funds be used support biofuel manufacturers, a proposal similar to that used by the US Air Force which also employed DPA funding to research the potential of biofuels. The Navy supported the initiative by arguing that it would reduce the number of refueling stops in the Middle East and increase development of biofuels to decrease reliance on foreign oil imports. Under these concerns, the project received \$210 million from DPA funds. Nevertheless, the high cost of the program, especially as it would have to support a nascent biofuel industry, led Congress to reduce funds and scrap budgets meant to retrofit destroyers to run on lower consumption fuels in 2018.⁵²

In the last 20 years, the DPA has also been increasingly used for domestic national emergencies. In January 2001, suppliers to Pacific Gas & Electric (PG&E), California’s largest gas and electric utility, halted sales of natural gas as PG&E’s credit worthiness faltered. The loss of electric and natural gas supplies would have crippled the state and left 13 million people without reliable supplies of natural gas. To avert this catastrophe, President Bill Clinton exercised the DPA on his last day in office to direct

⁵⁰ Defense Production Act Committee Report to Congress, *Calendar Year 2018 Report to Congress*, June 24, 2019.

⁵¹ Barry D. Watts and Todd Harrison “Sustaining Critical Sectors of the U.S. Defense Industrial Base,” Center for Strategic and Budgetary Assessments, 2011, 49.

⁵² U.S. Library of Congress, Congressional Research Service, *The Navy Biofuel Initiative Under the Defense Production Act*, Report R42568 (2012); U.S. Department of Energy, *Departments of the Navy, Energy and Agriculture Invest in Construction of Three Biorefineries to Produce Drop-In Biofuel for Military*, September 19, 2014 (<https://bit.ly/3eEXfiZ>); Noah Shachtman, “How the Navy’s Incompetence Sank the ‘Green Fleet,’” *Brookings Institution*, July 17, 2012; Steve Walsh, “Navy Cancels Plan for Hybrid Engines on Destroyers,” KPBS, March 12, 2018 (<https://bit.ly/2BvrNos>).

gas companies to continue selling gas to PG&E under existing contracts. President George W. Bush extended this order through February 2001.⁵³

Following this use, Congress expanded the DPA's priorities system in 2003 to apply to critical infrastructure and restoration, including physical and cyber-based systems vital to US national security. The legislation placed this power within the newly created Department of Homeland Security, which includes FEMA. More recently, FEMA has increased its use of the DPA to provide goods and services to federal disaster sites, including 1,343 times in 2018. When invoked by FEMA, the DPA's Title I authority is used to buy goods and services already in production and to compel companies to fill FEMA orders first. After Super Storm Sandy battered the northeast in 2012, FEMA used the DPA to hire translators to help non-English speakers of New York and New Jersey. After hurricanes hit Texas, Florida, and Puerto Rico in 2017, the Title I authority of the DPA was used to support the production of manufactured homes, to restore electrical systems, and to buy food and bottled water. While FEMA used the DPA after Hurricane Katrina, the Army Corps of Engineers used the DPA's Title I authority to prioritize contracts for the reconstruction of levees, floodwalls, and the Greater New Orleans Hurricane and Storm Damage Risk Reduction System program.⁵⁴

Prior to March 2020, the DPA was being utilized for advancing research and prioritizing the production of materials and weapons related to national security. According to the Undersecretary of Defense for Acquisition, Technology, and Logistics' 2016 annual report to Congress, there were 21 projects being operated under the DPA, but the specific programs were not included in the report. Nevertheless, the 2014 report listed a variety of technologies and materials being developed under the DPA, including Advanced Carbon Nanotube Volume Production Project, Advanced Drop-In Biofuel Production Project, Bio-Synthetic Paraffinic Kerosene, CO2 Absorbent Reactive Plastic Project, Conductive Nano-Materials Scale-Up Initiative Project, Heavy Forgings Capacity Improvement Project, and Light-Weight Ammunition Project among others.⁵⁵

In July 2017, President Donald J. Trump signed Executive Order 13806 to investigate and identify areas to strengthen the defense industrial base. It specifically identified five forces undermining the industrial base, including the decline of US manufacturing capabilities, the industrial policies of competitor nations, sequestration

⁵³ Frank R. Lindh, "Keeping California's Pilot Lights Burning: A Rare Exercise of Presidential Powers" *Natural Resources & Environment*, Vol. 16, no. 1 (Summer 2001): 320-321, 333-335.

⁵⁴ U.S. Library of Congress, Congressional Research Service, *The Defense Production Act of 1950: History, Authorities, and Considerations*, R43767 (2020), 9.

⁵⁵ Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, "Annual Industrial Capabilities Report FY 2016," 106-107; Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, "Annual Industrial Capabilities Report FY 2014," Appendix C.

and uncertainty of US government spending, US government business practices, and diminishing STEM trade skills. In 2018, the Interagency Task Force in Fulfillment of Executive Order 13806, identified the DPA as an important tool for improving the industrial base and specifically recommended “expanding direct investment in the lower tier of the industrial base through the DOD’s Defense Production Act Title III” to address bottlenecks, support fragile suppliers, and mitigate points of failure.⁵⁶

The DPA and COVID-19

On 18 March 2020, President Trump invoked the DPA to combat the COVID-19 pandemic. A week later, the Undersecretary of Defense for Acquisition and Sustainment established the COVID-19 Joint Acquisition Task Force (JATF) under Deputy Assistant Secretary of Defense Stacy Cummings to synchronize and support the execution of DOD’s COVID-19 response. This specifically focused on supporting the interagency acquisitions process for medical resources and utilizing supply chain capabilities to identify opportunities for the industrial base to provide medical resources. Shortly after the creation of the JATF, the president used the DPA’s Title I authority to direct General Motors to make ventilators. In these circumstances, GM, like Ford, is not manufacturing the ventilators themselves, but providing expertise and idled factory floors for ventilator manufacturers like Ventec Life Systems and Airon. The President also used the DPA to facilitate the supply of ventilator materials to General Electric, Hill-Rom Holdings, Medtronic, Resmed, Royal Philips N.V., and Vyaire Medical.⁵⁷

When the president signed the CARES Act of 2020 on March 27, 2020, Congress appropriated \$1 billion under the DPA “to prevent, prepare for, and respond to coronavirus, domestically or internationally.”⁵⁸ With this allocation of funds, Trump ordered FEMA to acquire N95 masks from 3M and its subsidiaries. To increase the production of N95 masks in mid-April 2020, the administration invested \$133 million in 3M, O&M Halyward, and Honeywell. Mask production was again addressed in early May when 3M received \$126 million under the CARES Act to increase the production of N95 masks and to ensure a sustainable supply to the Strategic National Stockpile. While similar to the national stockpile, the Strategic National Stockpile is a repository of antibiotics, vaccines, chemical antidotes, antitoxins and other medical supplies started in the year 2000 that remains separate from the national stockpile of metals and

⁵⁶ Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States, September 2018 (<https://bit.ly/2Zpb8Lu>).

⁵⁷ Joint Acquisition Task Force Fact Sheet, April 10, 2020. <https://bit.ly/3evmHqM>. Michael Wayland and Christina Wilkie, “Trump orders General Motors to make ventilators under Defense Production Act,” *CNBC*, March 27, 2020. <https://cnb.cx/31foQ6t>; Sean O’Kane, “How GM and Ford Switched Out Pickup Trucks for Breathing Machines,” *The Verge*, April 15, 2020, <https://bit.ly/2VVSZ5oN>.

⁵⁸ CARES Act of 2020, <https://www.govinfo.gov/content/pkg/BILLS-116hr748enr/pdf/BILLS-116hr748enr.pdf>.

minerals. The DPA has also been employed to accelerate the production of other needed materials. On 29 April 2020, \$75.5 million was appropriated to increase the production of swabs for testing kits. Besides using the DPA to procure needed medical equipment, the administration designated meat-processing plants as critical infrastructure and directed them to remain open to ensure the food supply chain continued operating and fulfilling orders.⁵⁹

In June 2020, the DOD announced \$135 million in DPA Title III actions to sustain the industrial base through the COVID-19 pandemic. More specifically, the DOD signed a \$15 million contract with Bethel Industries to increase critical industrial capacity for specialized laser cutting of laminated nylon fabrics for soldier protective systems. This investment will expand domestic production capability and capacity by installing laser-cutting technology that will increase the production rate and reduce the costs of manufacturing body armor. A \$20 million contract signed with GE aviation to support the Propulsion Defense Industrial Base. GE aviation is one of two US suppliers capable of producing large advanced combat engines. The contract will enable GE to expand its development in advanced manufacturing techniques, including improving digital engineering proficiencies, additive manufacturing, and promoting advanced material development. Another \$80 million was allocated to Spirt AeroSystems to expand its production for advanced tooling, composite fabrication and metallic machining. Finally, \$19.5 million contract with Steel American, a division of Colonna Shipyard, will help to expand production capability and capacity for shaft repair and manufacturing in support of the U.S. Navy and Coast Guard. As critical suppliers to the defense industrial base, these DPA investments will strengthen and sustain the supply chain as well as ensure the protection critical workforce capabilities during the COVID-19 pandemic.⁶⁰

A week after this investment into the defense industrial base, the DOD announced another \$187 billion in DPA Title III actions to ensure workforce and supply chain capabilities. Austal USA received \$50 million to maintain, protect, and expand critical domestic shipbuilding and maintenance capacity; \$55 million was allocated to W International to maintain, protect, and expand capabilities for the U.S. Navy nuclear shipbuilding industry; \$25 million was contracted with Weber Metals to sustain capabilities and capacities for making of large, open and closed die forgings used in many weapons systems; \$55 million went to GE Aviation to sustain essential aircraft

⁵⁹ “Trump invokes Defense Production Act for ventilator manufacturing,” *CNBC*, April 2, 2020 (<https://cnb.cx/2Ys1icH>); “DOD Details \$133 Million Defense Production Act Title 3 COVID-19 Project,” *Defense.Gov*, April 21, 2020 (<https://bit.ly/2V7N9iv>); Anna Nicholson, Scott Wollek, Benjamin Kahn, and Jack Herman, *The Nation’s Medical Countermeasure Stockpile* (Washington, DC: The National Academies Press, 2016); “DOD Details \$75 Million Defense Production Act Title 3 Puritan Contract,” *Defense.Gov*, April 29, 2020 (<https://bit.ly/2BBfNly>); Alex Gangitano, “Trump uses Defense Production Act to order meat processing plants to stay open,” *The Hill*, April 28, 2020 (<https://bit.ly/3erul5L>).

⁶⁰ US Department of Defense, Press Release, June 10, 2020 (<https://bit.ly/2CKisKa>).

engine component manufacturing capabilities, especially for components used on the F110-100/-129 turbofan jet engine and the F118-101 turbofan jet engines which are used to power F-16 and U-2 aircrafts; and \$2 million was allocated to American Woolen Company to sustain domestic production of poly/wool blend fabric for U.S. Army dress uniforms.⁶¹

Conclusion and Insights

All of these various uses over the last 70 years demonstrate that the Defense Production Act is, in the words of Rep. Peter T. King (R-NY), “a little-known bill of great national significance.”⁶² While it is little known today, the DPA emerged from a Congress seeking to fight global Communism and gave the president vast powers that mimicked the 1943 War Powers Act. Over the last 70 years, the DPA’s prominence in the national consciousness declined and then only reentered the national dialogue with the outbreak of the COVID-19 pandemic. Yet, even though the DPA was not on the front pages of newspapers, it has remained an important tool for the executive branch and helped to ensure national security, whether it was stockpiling needed metals and minerals, prioritizing the production of weapons systems, developing energy security, or providing emergency relief from natural disasters. In meeting all of these requirements, the DPA has evolved into a flexible piece of legislation that is able to aid in the development and acquisition of military weapons and technology as well as the procurement and distribution of emergency relief materials.

The history of the DPA’s usage over the last 70 years provides some important insights for today:

- While evolving into a broad and accessible law, the DPA requires updating for the 21st century. The ever-growing definition of national security, especially the inclusion of “emergency preparedness,” has altered and diluted the original purpose of the DPA. The DPA still supports research into and the production of rare minerals, new technologies, composite materials, weapons systems, and the industrial base, but it is much more frequently used by FEMA to help regions hit hard by natural disasters. Although these missions require aid from the federal the government, specific legislation to provide FEMA with the funding necessary to support and aid these areas would allow the DPA to once again become a tool for national defense.

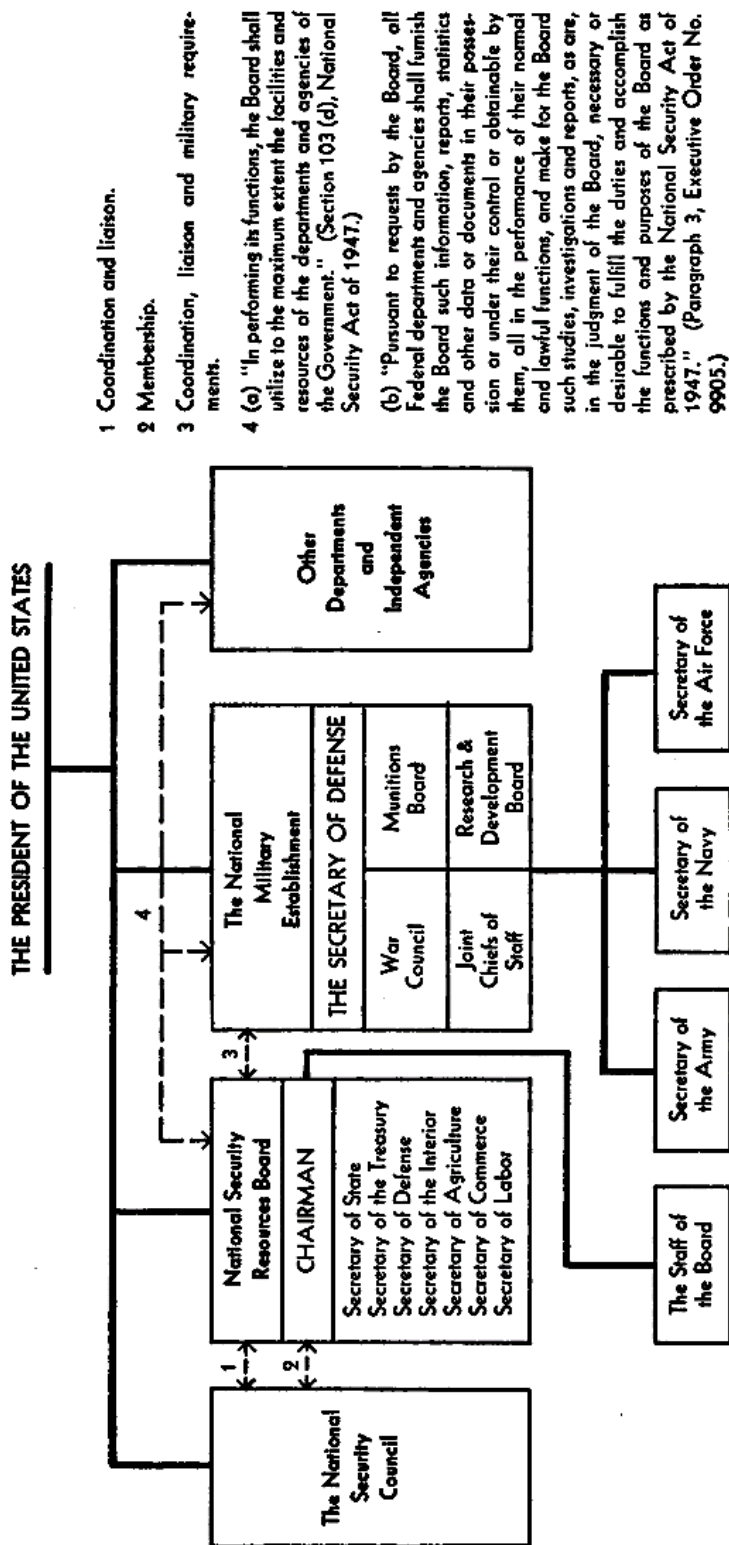
⁶¹ US Department of Defense, Press Release, June 19, 2020 (<https://bit.ly/3823P0k>).

⁶² U.S. Congress, House, Subcommittee on Domestic Monetary Policy, Technology, and Economic Growth, Reauthorization of the Defense Production Act of 1950, 107th Congress, June 13, 2001.

- The DPA should be used to improve data sharing networks. While ODM relied on and collected data from industrial manufacturers to quickly mobilize and produce materials and supplies for the Korean War, the executive branch should be able to access and share data from numerous industries in the event of a national emergency. The need for this coordination was clear in the response to the COVID-19 pandemic when it proved challenging for the administration to track real time COVID-19 caseloads, medical equipment burn rates, and available inventories of medical supplies. With access to this data, the federal response could improve resource allocation and accelerate resource matching. Even though the DPA currently includes “cyber” assets within the definition for “critical infrastructure,” the ability to share and access data remains limited. Besides enabling the federal government to better respond to a national emergency, using the DPA to improve data sharing would improve access to manufacturing and production data, enabling a more rapid and coordinated government response to a national emergency.
- The DPA’s authority to establish a National Executive Reserve should be updated and deployed. While FEMA established a policy for a National Defense Executive Reserve in 2007, there are currently no federal agencies with a reserve. The creation and maintenance of a such a reserve would ensure industry experts can work directly with government in times of crisis to supplement or address shortcomings in government expertise. If this reserve had been maintained over the years, the president could have drawn on this expertise to help manage the national response to the COVID-19 pandemic and have healthcare experts advising the government on testing, vaccine development, and medical manufacturing
- The expanding definition of national security, the numerous departments and bureaucracies involved in carrying out the DPA, and the need for updating and maintaining the authorities and amendments to the DPA indicates the need for a new ODM-like office to consolidate the functions of the DPA and ensure that the DPA is used to its fullest extent to organize and maintain the industrial base, to prioritize the acquisitions of materials and weapons systems, and to prepare the national for a coordinated response to a national emergency.

THE NATIONAL SECURITY RESOURCES BOARD

Its Position in the Executive Branch of the Government
as Established by the National Security Act of 1947



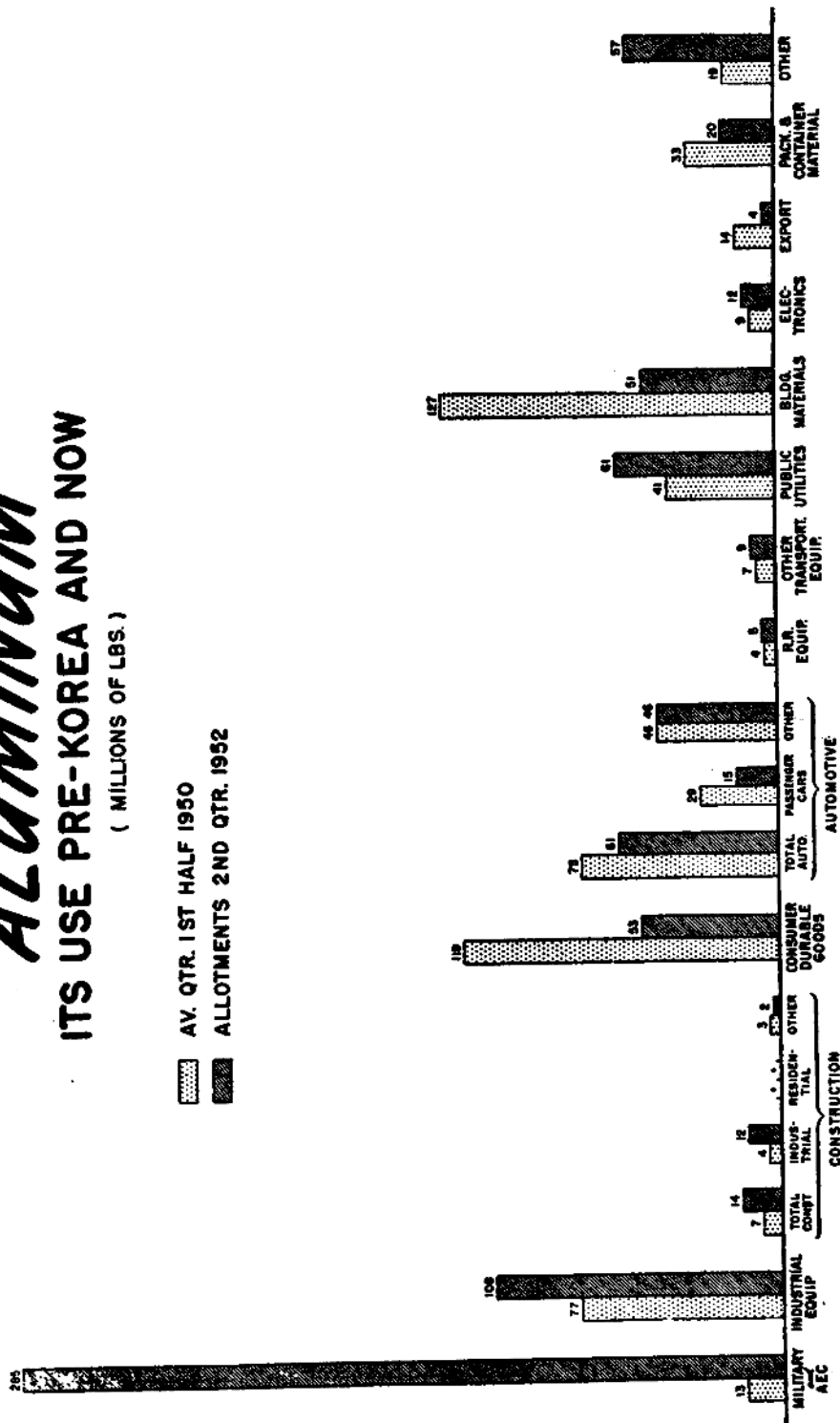
- 1 Coordination and liaison.
- 2 Membership.
- 3 Coordination, liaison and military requirements.
- 4 (a) "In performing its functions, the Board shall utilize to the maximum extent the facilities and resources of the departments and agencies of the Government." (Section 103 (d), National Security Act of 1947.)
 (b) "Pursuant to requests by the Board, all Federal departments and agencies shall furnish the Board such information, reports, statistics and other data or documents in their possession or under their control or obtainable by them, all in the performance of their normal and lawful functions, and make for the Board such studies, investigations and reports, as are, in the judgment of the Board, necessary or desirable to fulfill the duties and accomplish the functions and purposes of the Board as prescribed by the National Security Act of 1947." (Paragraph 3, Executive Order No. 9905.)

Prepared by the National Security Resources Board, February 12, 1948

ALUMINUM

ITS USE PRE-KOREA AND NOW

(MILLIONS OF LBS.)



* 4/15/52

TOTAL

AV. QTR. 1ST HALF 1950 USE ... 545 MILLION LBS.

ALLOTMENTS 2ND QTR. 1952 ... 740 MILLION LBS.

Appendix 4: Stockpile Locations 1957

OFFICE OF DEFENSE AND CIVILIAN MOBILIZATION

Stockpiling costs, 1951-57

Total obligated (excluding transfers and returns to Treasury) ---- \$213,360,000

<i>Location</i>	<i>Value of stockpile by location</i>	<i>Value</i>
Alaska	-----	\$52,300
Anniston, Ala	-----	2,353,900
Atlanta, Ga	-----	111,300
Bastrop, Tex	-----	4,458,300
Bremen, Ind	-----	7,011,200
Clearfield, Utah	-----	6,083,600
Columbus, Ohio	-----	1,532,200
Crab Orchard, Ill	-----	3,358,500
Decatur, Ill	-----	770,500
Ellenville, N. Y	-----	3,842,700
Gilbertville, Mass	-----	5,940,100
Granite City, Ill	-----	480,600
Hampton, Iowa	-----	3,825,800
Hawaii	-----	250,000
Horseheads, N. Y	-----	2,946,300
Jeffersonville, Ind	-----	1,555,700
Lake Charles, La	-----	4,620,300
Lathrop, Calif	-----	5,219,000
Lebanon, Pa	-----	3,132,400
Lexington, Ky	-----	447,900
Marion, Ohio	-----	3,097,200
Marshall, Mich	-----	5,015,000
Mechanicsburgh, Pa	-----	11,821,500
Mira Loma, Calif	-----	2,828,200
Montoursville, Pa	-----	1,909,900
Neosho, Mo	-----	4,256,600
New Castle, Pa	-----	6,175,900
New Cumberland, Pa	-----	797,600
Puerto Rico	-----	363,700
Richmond, Va	-----	468,300
Rockwood, Tenn	-----	2,700,300
Romulus, N. Y	-----	7,996,200
San Jose, Calif	-----	4,815,000
Seneca, Ill	-----	5,169,100
Shamokin, Pa	-----	3,498,500
Sidney, Nebr	-----	3,028,800
Somerville, N. J	-----	24,911,600
Spokane, Wash	-----	1,537,900

<i>Location</i>	<i>Value of stockpile by location—Continued</i>	<i>Value</i>
Springfield, Mo.....		\$7, 275, 100
Stockton, Calif.....		2, 179, 100
Tacoma, Wash.....		341, 300
Tobyhanna, Pa.....		524, 400
Williamsburg, Va.....		5, 046, 100
Yakima, Wash.....		2, 896, 000
Zanesville, Ohio.....		3, 495, 800
Engineering stockpile (various locations).....		6, 210, 000
Vaccines, antibiotics and blood derivatives in various manufacturers' storage locations.....		6, 117, 900
Radiological and chemical warfare equipment—		
On loan to States.....		362, 100
On loan to foreign governments.....		800
On loan to other Federal agencies.....		48, 500
Civil defense emergency hospitals—		
On loan to States.....		1, 333, 100
Prepositioned.....		7, 128, 800
On display at national headquarters.....		26, 100
Test equipment at Robert A. Taft Engineering Center.....		84, 300
Material at regional offices.....		122, 500
Material at national headquarters.....		81, 400
Material at classified location.....		3, 000
Material at staff college (Olney).....		13, 900
Medical material loaned to State.....		1, 200
Radiological equipment grants to States.....		907, 400
Radiological equipment transferred to other Federal agencies.....		342, 100
Biological equipment transferred to Department of Agriculture.....		117, 200
Disposition of deteriorated and unserviceable items.....		250, 000
Delivery of material not included by warehouse in above listing.....		2, 724, 000
Subtotal.....		196, 023, 000
Undelivered orders.....		11, 582, 000
Warehousing costs (overhead and administration).....		5, 755, 000
Total value of stockpile.....		213, 360, 000
<i>Types of material procured for the stockpile</i>		
Medical supplies and equipment.....		\$191, 373, 000
Engineering supplies and equipment.....		6, 210, 000
Radiological supplies and equipment.....		10, 022, 000
Subtotal.....		207, 605, 000
Overhead and administration of warehouse stockpile.....		5, 755, 000
Total.....		213, 360, 000

Appendix 5: Stockpile Materials

STOCKPILE OBJECTIVES
(as of June 30, 1973)

Commodity	Unit	Quantity
1. Aluminum	ST	0
2. Aluminum oxide, abrasive grain	ST	17,200
3. Aluminum oxide, fused, crude	ST	0
4. Antimony	ST	0
5. Asbestos, amosite	ST	0
6. Asbestos, chrysotile	ST	1,100
7. Bauxite, metal grade, Jamaica	LDT	4,638,000
8. Bauxite, metal grade, Surinam	LDT	0
9. Bauxite, refractory	LCT	0
10. Beryl ore	ST	0
11. Beryllium Copper Master Alloy	LB	0
12. Beryllium metal	ST	88
13. Bismuth	LB	95,900
14. Cadmium	LB	4,446,500
15. Castor oil	LB	0
16. Chromite, chemical grade	SDT	8,400
17. Chromite, metallurgical	SDT	444,710
18. Chromite, refractory	SDT	54,000
19. Chromium, ferro, high carbon	ST	11,476
20. Chromium, ferro, low carbon	ST	0
21. Chromium, ferro, silicon	ST	0
22. Chromium, metal	ST	0
23. Cobalt	LB	11,945,000
24. Columbium carbide-powder	LB	16,000
25. Columbium concentrates	LB	0
26. Columbium, ferro	LB	748,000
27. Columbium, metal	LB	36,000
28. Copper	ST	0
29. Cordage fibers, abaca	LB	0
30. Cordage fibers, sisal	LB	0
31. Diamond dies, small	PC	7,900
32. Diamond, industrial, crushing bort	KT	0
33. Diamond, industrial, stones	KT	0
34. Feathers and Down	LB	1,938,000
35. Fluorspar, acid grade	SDT	0
36. Fluorspar, metallurgical grade	SDT	159,000
37. Graphite, natural, Ceylon	ST	3,100
38. Graphite, natural, Malagasy	ST	8,200

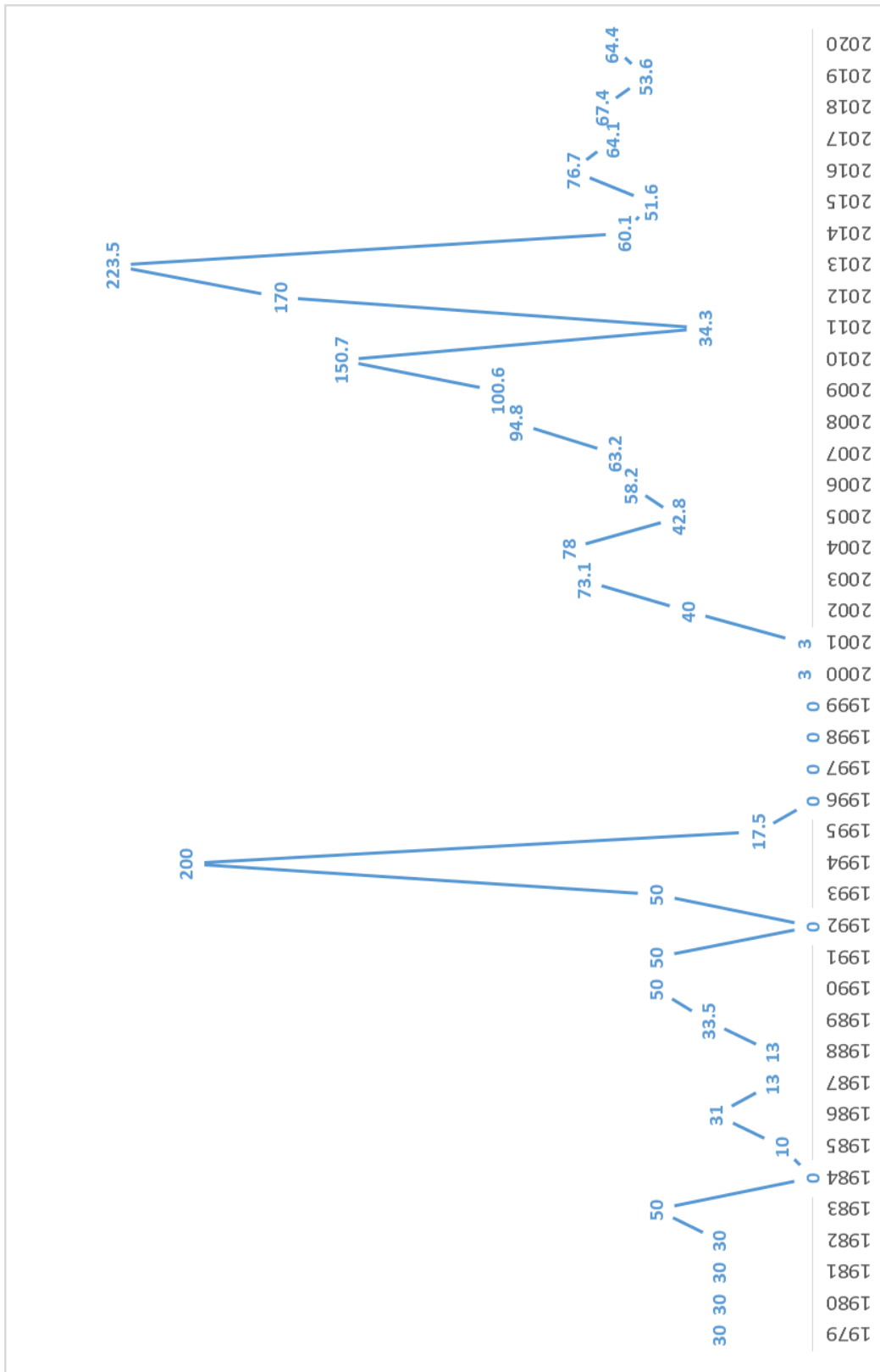
Commodity	Unit	Quantity
39. Graphite, natural, other than C&M crystalline	ST	0
40. Iodine	LB	0
41. Jewel Bearings	PC	62,740,000
42. Lead	ST	65,100
43. Manganese, battery grade, natural ore	SDT	10,700
44. Manganese, battery grade, synthetic dioxide	SDT	0
45. Manganese ore, chemical grade, type A	SDT	12,800
46. Manganese ore, chemical grade, type B	SDT	12,800
47. Manganese, ferro, high carbon	ST	200,000
48. Manganese, ferro, low carbon	ST	0
49. Manganese, ferro, medium carbon	ST	10,500
50. Manganese metal, electrolytic	ST	4,750
51. Manganese ore, metallurgical	SDT	750,500
52. Manganese, silicon	ST	15,900
53. Mercury	FL	42,700
54. Mica, muscovite block, stained and better	LB	1,600,000
55. Mica, muscovite film, first and second qualities	LB	413,000
56. Mica, muscovite splittings	LB	2,200,000
57. Mica, phlogopite block	LB	51,000
58. Mica, phlogopite splittings	LB	200,000
59. Molybdenum	LB	0
60. Nickel	ST	0
61. Opium	LB	0
62. Platinum group metals, iridium	TrOz	1,800
63. Platinum group metals, palladium	TrOz	328,500
64. Platinum group metals, platinum	TrOz	187,500
65. Pyrethrum	LB	0
66. Quartz crystals	LB	209,000
67. Quinidine	Oz	1,059,000
68. Quinine	Oz	779,500
69. Rubber	LT	0
70. Rutile	SDT	0
71. Sapphire and Ruby	KT	0
72. Shellac	LB	0
73. Silicon carbide	ST	0
74. Silver	TrOz	21,663,000

Commodity	Unit	Quantity
75. Talc, steatite block and lump	ST	0
76. Tantalum carbide powder	LB	2,900
77. Tantalum metal	LB	45,000
78. Tantalum minerals	LB	312,000
79. Thorium oxide	ST	0
80. Tin	LT	40,500
81. Titanium sponge	ST	0
82. Tungsten carbide powder	LB	0
83. Tungsten, ferro	LB	0
84. Tungsten, metal powder, carbon reduced	LB	0
85. Tungsten, metal powder, hydrogen reduced	LB	0
86. Tungsten ores and concentrates	LB	4,234,000
87. Vanadium	ST	0
88. Vegetable tannin extract, chestnut	LT	4,400
89. Vegetable tannin extract, quebracho	LT	0
90. Vegetable tannin extract, wattle	LT	0
91. Zinc	ST	202,700

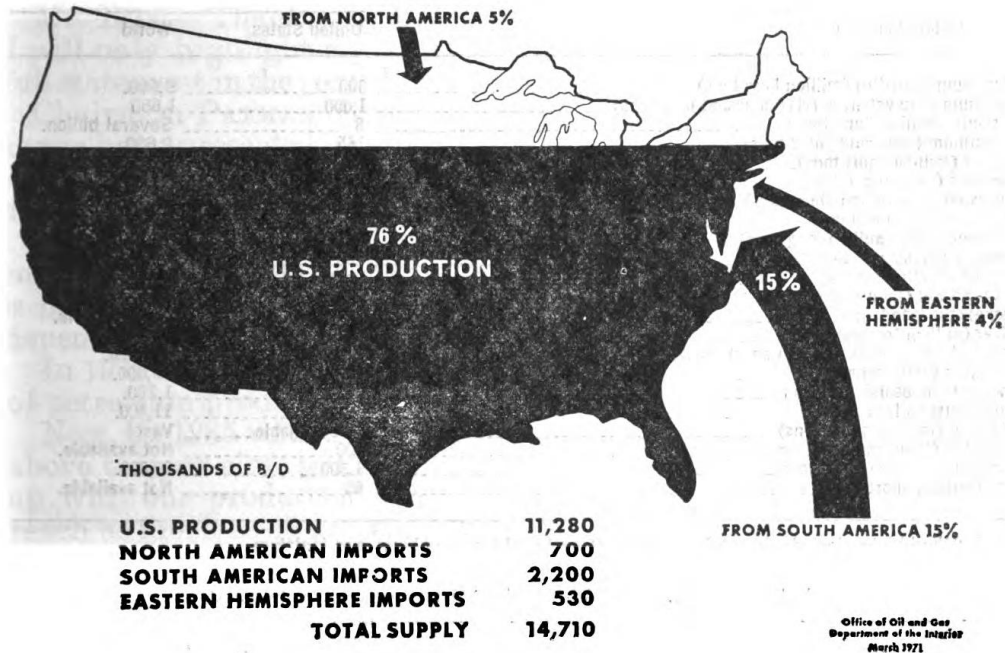
ABBREVIATIONS

FL - Flask	OZ - Ounce
KT - Carat	PC - Piece
LB - Pound	SDT - Short Dry Ton
LCT - Long Calcined Ton	ST - Short Ton
LDT - Long Dry Ton	TrOz - Troy Ounce
LT - Long Ton	

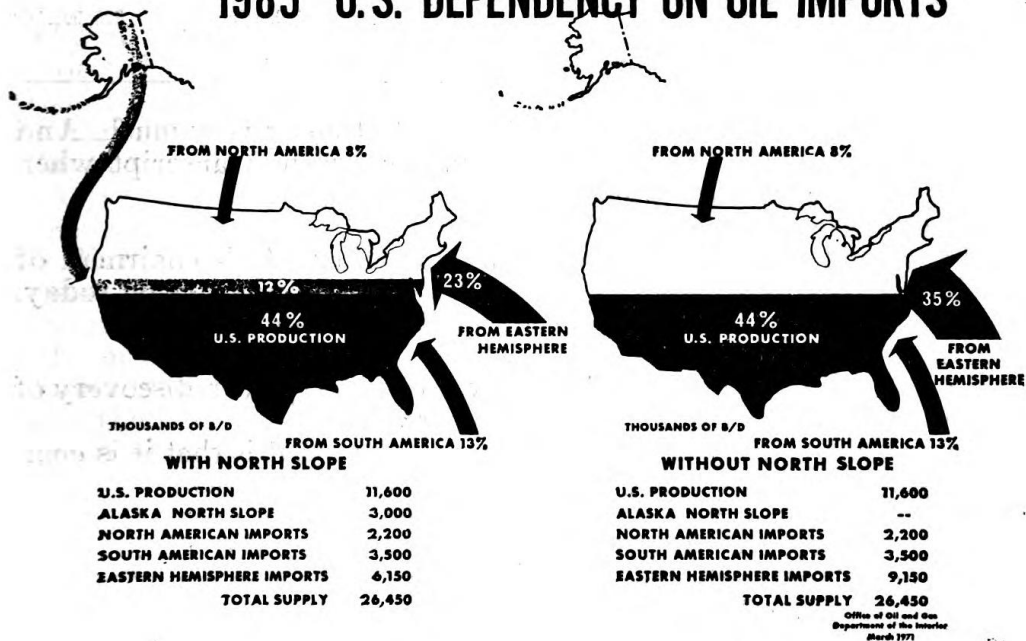
Appendix 6: DPA Appropriations in Millions of Dollars



1970 U.S. DEPENDENCY ON OIL IMPORTS



1985 U.S. DEPENDENCY ON OIL IMPORTS





US Army Heritage and Education
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<http://ahec.armywarcollege.edu>