

CORONAVIRUS: IMPACTS TO THE U.S. DEFENSE INDUSTRIAL BASE

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ABSTRACT

Coronavirus has presented U.S. national security with unprecedented obstacles creating distress and uncertainty for the future. Despite efforts made by state and federal government, the U.S. death toll continues to climb putting significant strain on communities and the U.S. economy. While every sector, industry, and person is facing unique challenges during this period, small businesses are suffering most leaving many concerned with the impact a damaged economy has to national security. Economic impact aside, national security rests on the Defense Industrial Base (DIB) supply chain's ability to operate through periods of crisis, which is now hindered by domestic health and economic impacts as well as voluntary and involuntary closures around the globe. This paper seeks to examine potential impacts Coronavirus may have on the DIB by examining current and historic recession data, ongoing trends within supply chains, and recent stimulus legislation.

IMPACT TO SMALL BUSINESSES

Small businesses account for more than a third of U.S. businesses and employ a quarter of the U.S. workforce. A survey produced April 3rd by the U.S. Chamber in conjunction with MetLife polled approximately 500 small businesses between March 25-28, 2020 and found that 25% report having temporarily shut down and 40% expect to shut down by the end of April 2020.¹ In response to Coronavirus's impact on business' ability to operate, many are opting to shorten hours and adjust salaries to slow down financial hemorrhaging. According to the findings of the survey, the majority of small businesses (employing less than 100) predict they will close permanently within 6-months. On May 5, the U.S Chamber of Commerce released a second poll reporting 29% of the 500 polled had shut down temporarily during this period, which excludes the 24% of businesses closed during the initial poll.² Additionally, the survey found that more than one in five small businesses (22%) claim they are two months or less from closing permanently. Not surprisingly, 47% of small businesses believe the Small Business Administration's (SBA) Paycheck Protection Program (PPP) funding is critical to the survival of their business. Approximately one-third of those surveyed have already applied for the loan while an additional 13% are in the process or planning to apply. Key to the survey's findings is that larger small businesses, those employing more than 20, are most likely to apply and receive the loan.

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The success of small business has a direct impact on U.S. security by weakening the economy, however the survival of small businesses making up the DIB impacts both economic security and the U.S.' defense

¹ MetLife & U.S. Chamber of Commerce [Special Report on Coronavirus and Small Business](#), 3 April 2020.

² MetLife & U.S. Chamber of Commerce Small Business Coronavirus Impact Poll: [Small Businesses Adopt New Practices Due to Coronavirus Closures](#), 5 May 2020.

readiness, which is why it was named in the U.S.'s list of 16 Critical Infrastructure Sectors.³ By definition, the DIB enables research and development, as well as design, production, delivery, and maintenance of military weapons systems, subsystems, and components or parts, to meet U.S. military requirements. Roughly 50,000 small businesses are woven into the DIB's supply chain providing critical links to DOD's legacy systems.⁴ Government data and analytics firm Govini raised concerns on the pandemic's impact to the DIB supply chain stating, "These vendors are not just critical links in the DoD supply chain important for immediate purposes. They are also vital for the development of both next-generation systems in the midterm and revolutionary capabilities that will shape the competitive landscape for decades into the future."⁵

The U.S. Department of Defense (DOD) established the Joint Acquisition Task Force (JATF) on March 25, 2020 in response to Coronavirus to assess and respond to new obstacles presented by this crisis. On March 17, the Department of Defense (DoD) published a deviation on progress payments memo issuing an increase to progress payment rates for both large and small businesses. The progress payment rates at Defense Federal Acquisition Regulation Supplement (DFARS) 232.501-1 are now increased to 90 percent for large businesses and 95 percent for small businesses. Significant closures in the supply chain is another discouraging forecast to where our readiness stands. The Office of the Secretary of Defense (OSD) is working on a heat map for the U.S. Coronavirus over DIB domestic and international supply chain to predict disruptions.

Jobs declined 10.4 percent in industries with fewer than 50 employees compared to 7.5 percent in businesses with more than 50.

EVOLVING TO MEET NEW CHALLENGES

Innovation and adaptation have long been key to the success and survival of businesses within the DIB given its reliance on research and development. This rings true now more than ever as companies struggle to adapt to the rapid needs of the DoD in light of the pandemic. From developing life-saving antivirals to manufacturing N95 masks and respirators, U.S. companies are stepping up to maintain operations. The DIB is not the only group rising to the occasion. The Joint Artificial Intelligence Center (JAIC) has released an AI prototype it is using to predict supply chain vulnerabilities in Coronavirus hotspots.⁶ In its first deployment, the prototype, called Salus, is interacting with information systems of Northern Command and the U.S. National Guard, which are supporting FEMA's coronavirus response.

³ [Identifying Critical Infrastructure during COVID-19](#), Cybersecurity & Infrastructure Security Agency, Department of Homeland Security (2020).

⁴ [COVID-19 IMPACTS ON THE DEPARTMENT OF DEFENSE SMALL BUSINESS VENDOR BASE](#). Govini. April 2020.

⁵ Insinna, Valerie and Mehta, Aaron. [The Pentagon's supply chain faces and economy under siege](#). DefenseNews. 8 April 2020.

⁶ Tucker, Patrick. [The Pentagon Will Use AI to Predict Panic Buying, COVID-19 Hotspots](#). Defense One. 22 April 2020.

The U.S. Chamber of Commerce has been tracking the creative ways small businesses are fighting Coronavirus with innovative solutions. The following testimonies illustrate the agile efforts U.S. companies are putting forth to meet the country's current needs.

FACE MASKS & PPE

Kitsbow, a cycling apparel business in North Carolina, pivoted their production teams from making jerseys to PPE. "We have a computer-controlled fabric cutter, and computer-controlled laser cutter, and are able to make all the parts in just a few hours for a thousand face shields," said Kitsbow CEO David Billstrom. Production of 26,000 face shields and face masks began in March, and they had have a backlog of orders before April.⁷ Altress, an apparel company transitioned from dressmaking to producing 1000 masks per week at the request from a local New York hospital.⁸ The Bayer Corporation's Technical Discovery Center, which produces agricultural products, has partnered with Stratasys, a leader in 3D equipment, to produce 500 face shields for healthcare workers per day. Boeing announced it would be activating its additive manufacturing network to 3d-print face shields for healthcare workers targeting a production rate of several thousands shields per week. Boeing is also offering use of the Boeing Dreamlifter, one of the world's largest cargo carriers, to transport critical supplies to hospitals.⁹

HAND SANITIZER

Garb2Art owner Dawn Andrews changed her company's production process from cosmetic production to hand sanitizer by expanding her staff from 5 to 25 selling 50,000 bottles within the first week of production.¹⁰ DC's local coffee shop, Compass Coffee, has partnered with Republic Restore under DC Mayor Muriel Bowser's guidance to produce two thousand gallons of hand sanitizer.¹¹ These small businesses are in good company as the Distilled Spirits Council tracked more than 500 distilleries nationwide currently producing hand sanitizer. The Council also created a portal to connect distilleries with needed supplies to produce and distribute it, such as glycerol, containers, and labels.¹² Global Hardware company True Value Co. allocated a portion of its paint manufacturing plant to produce hand sanitizer and other essential cleaning products for both their employees and the general public.

VENTILATORS

Bloom Energy, a fuel-cell company in California, sought to alleviate the state's shortage of ventilators. The company picked up 24 old ventilators, stockpiled by the state in the mid-2000s, and assembled a team within 24 hours to refurbish each of them for hospital use. Kaas Tailored, a furniture manufacturer in Washington, transitioned production lines to produce surgical masks. According to Jeff Kaas, owner of Kaas Tailored, 50 of his staff made 5,600 masks in two days as part of a 100 million mask challenge

⁷ Cates, Lindsay. [How 10 Small Businesses are Fighting Coronavirus in Creative Ways](#). U.S. Chamber of Commerce. 27 March 2020.

⁸ [Tracker: How Businesses Are Accelerating Production of Critical Medical Supplies to Combat the Coronavirus](#). U.S. Chamber of Commerce. 26 May 2020.

⁹ Ibid.

¹⁰ Cates, Lindsay. [How 10 Small Businesses are Fighting Coronavirus in Creative Ways](#). U.S. Chamber of Commerce. 27 March 2020.

¹¹ [Tracker: How Businesses Are Accelerating Production of Critical Medical Supplies to Combat the Coronavirus](#). U.S. Chamber of Commerce. 26 May 2020.

¹² Ibid.

he initiated with manufacturers in 25 other states.¹³ 3M has partnered with Ford to produce more than 100,000 air-purifying respirators with the help of 90 staff from the United Auto Workers union. Ford has also partnered with GE Healthcare to produce ventilators. Ford is leveraging its manufacturing capabilities to speed up production, while GE Healthcare is utilizing clinical expertise. FEMA contracted GM and Ventec to produce 30,000 ventilators for the national stockpile by the end of August, which will take place on GM's plant in Indiana.

ECONOMIC CONSEQUENCES: THEN AND NOW

Evidence from previous economic downturns can be used to predict the depth of financial scarring Coronavirus may have on the U.S. economy. Widespread and long-term unemployment alone will have a debilitating effect on the workforce as witnessed during the string of job losses in 2007-09's Great Recession. A study on this period produced by the Federal Reserve Bank of New York found that poor sales and economic uncertainty within small firms made for weak performance and sluggish recovery.¹⁴ Extreme deterioration in labor market conditions was demonstrated by the 8.4 million decline in nonfarm payroll employment—the traditional measure of U.S. jobs – from December 2007 to December 2009. This drop is unparalleled in the entire postwar period. Perhaps the most significant finding in this report was the disproportionate impact the recession had on small businesses. Jobs declined 10.4 percent in industries with fewer than 50 employees compared to 7.5 percent in businesses with more than 50. Just as small firms are experiencing restricted access to credit today, as did the small firms effected most during this period. Data pulled from a 1996 study by the *Review of Economics and Statistics* suggests that small businesses typically rely on credit obtained through banks and other intermediaries, while larger businesses have a variety of sources for potential financing, such as the issuance of equity and corporate bonds.¹⁵ However, the largest impact to small business during the 2007-09 recession appeared to be the significant drop in demand for the small businesses' products and services by reducing revenue and diminishing new investment spending.¹⁶ There is also the growing pressure for more government spending and subsequent stimulus packages to add to the U.S.' ever-expanding bubble of debt. When the federal government looks for ways to recoup, will they implement higher taxes? What about State-incurred debt?

This is not the first economic downturn the U.S. has suffered at the hands of a pandemic. In 1968, H3N2 killed over a million people worldwide, and over 100,000 in the U.S. alone.¹⁷ Like the Coronavirus outbreak, H3N2 proved more fatal in the 65+ population and is known by most today as the seasonal flu. Despite the critical death toll, this pandemic is overlooked by most historians because of the ongoing

¹³ Cates, Lindsay. [How 10 Small Businesses are Fighting Coronavirus in Creative Ways](#). U.S. Chamber of Commerce. 27 March 2020.

¹⁴ Şahin, Ayşegül et. al. Why Small Businesses Were Hit Harder by the Recent Recession. [Current Issues in Economics and Finance](#). Federal Reserve Bank of New York Vol 17, 4.

¹⁵ Bernanke, Ben, Mark Gertler, and Simon Gilchrist. 1996. "[The Financial Accelerator and the Flight to Quality](#)." *Review of Economics and Statistics* 78, no. 1 (February): 1-15.

¹⁶ Şahin, Ayşegül et. al. Why Small Businesses Were Hit Harder by the Recent Recession. [Current Issues in Economics and Finance](#). Federal Reserve Bank of New York Vol 17, 4.

¹⁷ [1968 Pandemic \(H3N2 virus\)](#). Centers for Disease Control and Prevention. 2 January 2019.

Vietnam War (1954-1975), but as of late April 2020, the 1968 pandemic was more costly in human life than the ongoing pandemic.¹⁸ However, the damage and financial turmoil caused by H3N2 pales in comparison to the devastating impact Coronavirus has had on small businesses. In July 1968, unemployment rates in the U.S. were 3.7 percent, as compared to the U.S.' current 17 percent unemployment rate.¹⁹ A TIME Magazine article published in December of 1968 described the U.S. economy as one that "lately has been expanding too rapidly for its own good," an absolute paradox to today's economy.²⁰ Despite the rise in job creation and employment rates across the U.S., 1968 is also recognized by many as the most serious economic crisis since the Great Depression. According to Robert Collins, a historian published in the American Historical Review, 1968 "marked the beginning of the end of America's postwar economic boom."²¹ In light of the Vietnam War and H3N2 pandemic, the U.S. economy benefited from the largest gold rush in history, which prompted a rapid, albeit brief, economic sugar high. Significant factors that brought on the crisis included increased spending overseas, as well as increased imports from Europe, which produced a mass exodus of the U.S. dollars to foreign markets. The Johnson Administration was advised to increase individual and corporate income taxes to cool down the economy and resist inflation, which was stalled in Congress. As global confidence in the dollar weakened, foreigners traded dollars in for gold, showcasing the weaknesses of an international system based on a gold-backed dollar.ⁱ According to the World Trade Organization, the Coronavirus pandemic could cause the largest collapse of international trade flows in the postwar era predicting global trade to shrink by a third.²²



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Concerned about the U.S. Government's spending? As was President Franklin Roosevelt during the Great Depression of 1929, which proved to be a costly mistake. Looking back to the U.S.' most devastating economic crisis, unemployment shot up to 25% by 1933, international trade shrunk by 65% and it took the stock market over two decades to recover.²³ The gross domestic product of the U.S. economy in 1929

¹⁸ Moir, Nathaniel L. [The Virus is Tough, but History Provides Perspective: The 1968 Pandemic and the Vietnam War](#). RealClear Defense. 24 April 2020.

¹⁹ Geewax Marilyn. The Economy and Politics of 1968: Now Playing in Reruns. 29 July 2016.

²⁰ Business: [The Economy in 1968: An Expansion That Would Not Quit](#). TIME. 27 December 1968.

²¹ Collins, Robert M. "[The Economic Crisis of 1968 and the Waning of the 'American Century'](#)". American Historical Review (Apr. 1996), 914 Atwater, Bloomington, Ind. 47401.

²² Murray, Brendan and Monteiro, Ana. [A Wild Ride for Global Supply Chains Captured in Seven Charts](#). Bloomberg. 18 April 2020.

²³ Amadeo, Kimberly. [International Trade: Pros, Cons, and Effect on the Economy](#). The Balance. 22 April 2020.

illustrates an economic output of \$105 billion, which shrank 50% within the first five years. Roosevelt was elected into office because of his Keynesian economics beliefs held during a time when capitalism was losing confidence.ⁱⁱ Before raising concern for the practice, Roosevelt argued that government spending would lift the U.S. Economy out of the Depression. At first this effort worked; government spending on the New Deal boosted GDP growth by 17% in 1934 and continued to grow until 1937.²⁴ However Roosevelt grew concerned that adding \$5 trillion to the U.S. debt bubble would be detrimental and cut back on government spending in 1938, which sent the U.S. back into the Depression. In 1939 the Great Depression subsided as the U.S. increased spending on preparation for World War II. As the second largest item in the federal budget behind Social Security, this historical depiction speaks to the stimulating effects of the federal government's Defense spending.

SUPPLY CHAIN DISRUPTIONS

Regardless of sectoral alignment, the immediate focus for businesses must be on improving visibility to supply chain risks. Vulnerabilities to the supply chain are being amplified by the current pandemic as industries battle new obstacles in procuring items critical to U.S. national security. Supply chain disruptions within the DIB due to absentee workforce, lack of mobility, and travel restrictions will impede the recovery time for industry the longer they are in place. In turn, this will have dire impacts to the research, development, and production of critical infrastructure and weapons systems the U.S. relies on to curtail threats. Industry is now forced to prepare for increased absenteeism, IT systems to support remote working conditions, channel shifts as markets shut down, plant closures, in addition to countless other factors. While the majority of layoffs in retail and the restaurant industry have occurred, there will be further collateral damage as other sectors faced with weakened demand lay off workers, says Jay Bryson, acting chief economist at Wells Fargo & Co.²⁵

TRAVEL RESTRICTIONS

Border delays and closures aimed at containing the pandemic have dire effects on the trucking industry's ability to deliver goods. At the start of the pandemic, panic-buying frenzies increased the demands for truck transportation giving way to "recessionary pressures" according to Bloomberg Analyst Lee Klaskow.²⁶ This surge has been seen in most shipping routes, including air, rail, and sea as we see air-freight rates soar and curfews and lockdowns hamper operations at ports. Due to Coronavirus-related travel restrictions in mid-March, General Dynamic's Aerospace/Gulfstream Sector was unable to deliver 11 business jets to new customers.²⁷

GLOBAL ESSENTIALITY CONCERNS

²⁴ Ibid.

²⁵ Pickert, Reade. [U.S. Unemployment Waves Keep Hitting with Millions More Claims](#). Bloomberg. 23 April 2020.

²⁶ Murray, Brendan and Monteiro, Ana. [A Wild Ride for Global Supply Chains Captured in Seven Charts](#). Bloomberg. 18 April 2020.

²⁷ [General Dynamics Corp. Q1 Earnings Call Transcript](#). Motley Fool Transcribers. 29 April 2020.

While the U.S. has identified the DIB as a critical sector, Mexico has not, and closures in the southern nation are harming U.S. defense firms. Hon. Ellen Lord, Undersecretary of Defense for Acquisition and Sustainment, wrote a letter to Mexican Foreign Affairs Minister Marcelo Ebrard urging that he reopen international suppliers. “These companies are especially important for our U.S. airframe production,” Hon. Lord said to reporters at the Pentagon.²⁸ In April, the U.S. Chamber engaged heavily with the Mexican government to align their critical business identifications with the U.S. Cyber and Infrastructure Security Agency (CISA). With the help of several U.S. cabinet agencies and Mexico’s private sector, the U.S. Chamber has made substantial progress in this regard learning after the medical field, the defense sector is Mexico’s next top priority. Issues in Mexico are just one of “several pockets of closure” Lord links to “international dependencies.”

As Hon. Lord claims, Mexico is only one of several global hubs struggling to keep open businesses deemed essential by the U.S. government. The U.S. Chamber of Commerce is echoing the U.S. government’s efforts at socializing this issue with foreign governments to restore essential operations by delivering the latest resources, information and advice to both members and governments. To provide a consistent approach for global audiences to identify essential economic functions, the U.S. Chamber developed a set of “[International Principles for Safeguarding Essential Economic Functions in the Covid-19 Pandemic](#).” The Chamber encourages foreign governments to take the following guidance: 1) clearly and comprehensively define essential infrastructure, services and workers; 2) emphasize open, transparent, and ongoing industry, 3) ensure sub-central governments follow the same rules; 4) provide frequent updates to this guidance based on incoming input; and finally, foreign governments should 5) coordinate with international partners to align access and movement policies. In an age of heightened globalization, it is critical that countries align their efforts at combatting the pandemic. “Governments and companies should acknowledge the inevitable tension between social distancing and the need to allow for essential economic activity to continue,” said John Murphy, Senior Vice President of International Policy. “These principles are intended to help guide decision makers as they seek to protect public health while maintaining core economic functions.”

CLOSURES

General Dynamics Chief Executive Officer Phebe Novakovic raised concern over the impact Coronavirus regulations are having to the company during a call with investors stating they will not be able to effectively increase sales until their DOD and Intel customers fully re-open their worksites.²⁹ General Dynamics cited “deterioration in efficiency, driven by absenteeism,” in addition to the additional cost to sanitize facilities and provide personal protective equipment as largescale inhibitors to their efficiency. For smaller firms, the consequences of shutdowns and absenteeism is even more dire. Martijn Rasser, a senior fellow at the Center for a New American Security, claims for small business, “a shutdown would be extremely difficult to get through because even with bailouts and economic stimulus, once those businesses close up, its really hard to get those started again.”

²⁸ Gould, Joe. [COVID closed Mexican factories that supply US defense industry. The Pentagon wants them opened.](#) DefenseNews. 21 April 2020.

²⁹ [General Dynamics Corp. Q1 Earnings Call Transcript](#). Motley Fool Transcribers. 29 April 2020.

ACCESS TO RAW MATERIALS

The heightened demand of products has forced companies to redesign production strategies. According to experts examined by the Wall Street Journal, producing a smaller array of goods can ensure output at factories facing efficiency pressure given the higher rates of absenteeism and need to increase sanitation.³⁰ Even for companies who are able to maintain the bulk of their operations, businesses will continue facing issues across their supply chains, which will add more cost across an even more complex supply chain. One trend surfacing within businesses is the hoarding of raw materials to keep a higher inventory of products for their customer base to protect against future shocks. Hershey Co. took this approach in the first quarter according to the company's chief Executive, Michele Buck, who said as the pandemic began to unfold, "we built inventory in both raw materials and finished goods to mitigate the risk and to help us to continue meeting demand," she recalls.³¹

AEROSPACE: COMMERCIAL v. DEFENSE

The lion's share of Coronavirus' impact to DIB is not to defense production, but to commercial aerospace sales, seeing as air carriers have either suspended all flights or suffered a flight schedule reduction of 60-95 percent.³² The pending decrease or outright cancelation of aircraft orders by the commercial airline industry as a result will affect the OEMS and cause damaging ripples down the supply chain.³³ Unlike the commercial sector, supply chains within U.S. Defense companies will be less vulnerable to global disruptions due to existing regulations and controls.

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Like many industries within the DIB, Lockheed Martin is absorbing the impacts of Coronavirus. In the company's post earnings call with investors, CEO Marilyn Hewson claimed the company was experiencing "some issues" in the production and supply chain shutdowns, especially within the aeronautics sector.³⁴ Despite the impacts, Lockheed Martin activated a \$6.5 million employee disaster relief fund to assist their employees and retirees impacted by the virus. Hewson acknowledged the importance of providing jobs during the ongoing economic downturn and reports the company hired close to 1,000 new staff members in the month of April and is currently advertising 5,000 vacancies they are rapidly looking to fill. The company is also accelerating payments of over \$150 million to their small and medium-sized (SME) supply chain partners. According to Hewson, they have already flowed the first \$50 million of an additional \$50 million in accelerated payments to their global supply base in response to the DOD's change to progress payment policy. Lockheed Martin's response to the pandemic includes a four-part strategy: (1) Prior to Q2's cash-advance to SME supply chain partners, they slowed

³⁰ Maidenbergh, Micah. [Fewer Products, Localized Production – Companies Seek Supply Chain Solutions](#). Wall Street Journal. 26 April 2020.

³¹ Ibid.

³² Oestergaard, J. [COVID-19 Status and Impact on Aerospace and Defense Manufacturing and Air Travel in Europe](#). Defense & Security Monitor. 30 March 2020.

³³ Brady, Glenn et. all. [COVID-19: What it means for the aerospace and defense industry](#). PWC.

³⁴ Lockheed Martin Corp (LMT) Q1 2020 Earnings Call Transcript. [Motley Fool Transcribers](#). 21 April 2020.

payment to suppliers in Q1,ⁱⁱⁱ (2) accelerated collection of amounts owed to the company, (3) slashed inventory, and (4) utilized DOD's cash advances. On April 21, Hewson said virus-related disruptions caused Lockheed to reduce its 2020 sales expectation, as production and supply-chain activities have recently slowed in the company's aeronautics business.³⁵

CARES ACT

As a lifeline to the economy, the U.S. administration passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act on March 25. The bipartisan deal, enacted in three separate packages, is the largest aid package in history, allocating more than \$2 trillion in effort to curve the fallout from the Coronavirus pandemic. This legislation pauses the payment of payroll taxes, lends grants for small businesses, and establishes a bridge loan facility that will enable businesses to continue paying employees.³⁶ The CARES Act also provides \$560 billion in relief to individuals in the form of direct checks, \$340B to state and local governments, \$153B towards public health, and offers temporary student loan relief with deferred loan and interest payments until September 30.

The first round of the CARES ACT's Paycheck Protection Program (PPP) entitled small businesses to \$349 billion in loans through the Small Business Administration (SBA).³⁷ The purpose of this program was to provide businesses with the ability to cover monthly payroll costs for 2 ½ months up to \$10 million that may be forgiven. Unfortunately, it was a matter of days before the funding ran dry and the U.S. Chamber of Commerce immediately lobbied for Congress to take "urgent action" to replenish the \$349 billion small-business relief program.

On April 24, the president signed into law a new \$484 billion Coronavirus aid package that included \$310 billion in additional funding for the PPP.³⁸ In the first wave of loans, interested borrowers were required to find a loan provider that participated in the program, yet participating providers were receiving conflicting guidance from the federal government.³⁹ Businesses whose current lender was not participating in the program found difficulty applying since many lenders only accepted applications from existing customers. Fortunately, the recent bill set aside \$60 billion reserved for small businesses without existing banking relationships.

Eligibility is not the only concern businesses are facing. Section 3610 of the CARES Act allows federal agencies to modify the terms and conditions of an existing contract to reimburse the contractor for leave tied to Coronavirus, however utilization of such is subject to available funds. Section 3610 is meant to protect unique and not easily replaced skills, such as those in the Aviation sector, but leaves many to question if this effort is sufficient. Another significant issue faced by small businesses applying for these loans is the competition they face with large chains taking advantage of these loans, even when the need is small. Shake Shack has publicly claimed intent to return the \$10 million loan it received after

³⁵ Maidenberg, Micah. [Fewer Products, Localized Production – Companies Seek Supply Chain Solutions](#). Wall Street Journal. 26 April 2020.

³⁶ U.S. Chamber of Commerce [How Small Businesses will Benefit from the Coronavirus Aid, Relief, and Economic Security \(CARES\) Act](#) March 26, 2020

³⁷ [Coronavirus Aid, Relief, and Economic Security \(CARES\) Act](#) of 2020 (2020).

³⁸ Hansen, Sarah. [Trump Signs \\$484 Billion Coronavirus Relief Bill](#). Forbes. 24 April 2020.

³⁹ Leiber, Nick. [Frustrated Business Owners Struggle to Access Rescue Dollars](#), Bloomberg, 14 April 2020.

earning more than \$150 million in the week prior.⁴⁰ Many companies are finding this loan program an unattractive solution given the requirements to qualify. Other larger companies, such as airlines, were asked to give up three percent of the company to the U.S. Government.

DEFENSE SPENDING

Logistical concerns aside, the DIB supply chain is somewhat siloed from impacts incurred by other sectors. National Security has and will be the nation's number one priority, which means the DOD should be funded to whatever level is necessary to ensure the ability of our armed forces to protect U.S. soil. Retired Army Lt. Gen. Thomas Spoehr echoes this ideology in a recent article he co-authored arguing that defense spending should be exempt from the financial strain imposed by coronavirus stimulus bills.⁴¹ According to Lt. Gen. Spoehr, the U.S. military remains in a years-long "freefall," which "can't be fixed in a year or even four."⁴² Despite the bipartisan National Defense Strategy Commission's advisement of a 2-5 percent increase to the U.S.' defense budget to implement the 2018 National Defense Strategy, the administration has projected a flat or declining budget. Federal relief packages mean budget cuts elsewhere, but if the U.S. wants to stimulate the economy, cutting defense spending, one of the most stimulating forms of federal spending, could heighten the economic downturn for the U.S. economy.⁴³

EXTERNALITIES FOR LOCAL COMMUNITIES

A Congressional Report released in 1992 assesses the nationwide impacts of defense budget cuts proposed in February 1991 forecasted by the Congressional Budget Office (CBO) to determine if the U.S. could afford to spend federal spending earmarked for national security on other national needs. Findings in the report point to an adverse effect on the economy by eliminating 800,000 jobs within the defense sector alone.⁴⁴ Further, the study forecasted that firms within the DIB could face sales declines as low as 50 percent, most notably within Aircraft manufacturers. Not only do the industries within the DIB stand to suffer from reduced government spending, so do the local communities. To assess impacts included in the 1992 Congressional Report, the CBO examined three communities heavily dependent on defense spending at the time: Monterey, CA (former home of the Army's Fort Ord, which closed in 1994); coastal south of Maine (location for Bath Iron Works, a leading builder of cruisers and destroyers now owned by General Dynamics); and St. Louis, MO (home of the McDonnell Douglas Corporation, a leading defense contractor of the time). An astonishing 31 percent of total wages in Monterey, CA were tied to the defense budget. In Maine, the CBO predicted unemployment could rise an additional 7 percent, and in St. Louis, 2 percent. More significant findings of the report found that the negative

⁴⁰ Warmbrodt, Zachary. Shake Shack to return small business loan after uproar. POLITICO. 20 April 2020.

⁴¹ Davis, Lt. Col. Daniel L. [COVID-19's fiscal impact might ironically strengthen national defense](#). Defense News. 22 April 2020.

⁴² Ibid.

⁴³ Mahnken, Thomas G. [Six ways the US can maximize its strategic benefit from defense spending](#). Defense News. 24 April 2020.

⁴⁴ [The Economic Effects of Reduced Defense Spending](#). Congressional Budget Office. Feb 1992.

economic impacts from cuts to defense spending would persist until the late 90s because “defense spending continues to be cut and hence continues to depress economic activity.”⁴⁵

In conjunction with the Library of Congress’ Federal Reserve Division, the Department of Defense’s Office of Economic Adjustment conducted a state-by-state analysis of DoD spending in Fiscal 2017. According to their findings, the Defense sector is most prominent in California, Virginia, and Texas. At this time, defense spending accounted for \$49 billion in California, \$46.2 billion in Virginia, and \$37.7 billion in Texas.⁴⁶ This report found that the leading counties for nationwide defense contract spending were Fairfax County, VA, Tarrant County, TX and San Diego, CA and that each state spent per resident \$5,459; \$1,331; and \$1,238 on defense investments respectively. Reduced defense spending would have significant implications for the economies in these communities and states. While further research is needed to forecast the impacts reduced defense spending would bring, a variety of predictions can be drawn from CBO’s 1992 finding, to include heightened unemployment in these communities.

CONCLUSION

Coronavirus is the largest threat to U.S. small businesses the U.S. Economy has ever encountered. Among those small businesses are those that make up the Defense Industrial Base sector, which the DOD relies on to produce warfighting capabilities. The Defense and Aerospace Export Council (DAEC) is actively advocating for actions that support the DIB by working with the OSD to exempt the DIB from state, local, and when possible, foreign closures; to shape policy regarding companies’ access to Personal Protection Equipment (PPE); and to ensure Defense and Aerospace industries are informed of all regulatory changes that effect their current and future business. While CISA works to encourage foreign governments to align their essentiality designations to the U.S., DIB continues to fight closures, both domestic and abroad. Additionally, firms have diminished access to raw materials, higher rates of absenteeism, and impaired mobility for trusted shipping routes and personnel. Given the magnitude of DIB’s influence in specific communities, such as Fairfax, VA and San Diego, CA, the externalities of diminished DIB operations will depress local and state-wide economic activity across the United States—not just those select communities we have noted. While the implications of Coronavirus will potentially be devastating to the DIB, it will inherently be devastating to the U.S. Economy and National Security without responsive guidance, management and innovative thinking by both Government and industries.

ⁱ The U.S. dollar was tied to the gold standard, while foreign currencies were tied to the U.S. dollar.

ⁱⁱ Keynesian economics is a theory founded on the belief that the government should increase demand to boost growth. This theory supports government spending on infrastructure, unemployment benefits, and education, however in abundance this practice will increase inflation.

⁴⁵ Ibid, p 13.

⁴⁶ [Defense Spending by State. Fiscal Year 2017](#). U.S. Department of Defense Office of Economic Adjustment. March 2019.

ⁱⁱⁱ Lockheed claimed a number of their suppliers were late in their invoicing to the company, which allowed for the later pay-dates.